

# Moreno Valley Trade Center E-COMMERCE Noise Impact Analysis City of Moreno Valley

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# **LIST OF ABBREVIATED TERMS**

(1) Reference

ADT Average Daily Traffic

ANSI American National Standards Institute

Calveno California Vehicle Noise

CEQA California Environmental Quality Act
CNEL Community Noise Equivalent Level

dBA A-weighted decibels

EPA Environmental Protection Agency
FHWA Federal Highway Administration
FTA Federal Transit Administration

Hz Hertz

INCE Institute of Noise Control Engineering

 $\begin{array}{lll} L_{eq} & & \text{Equivalent continuous (average) sound level} \\ L_{max} & & \text{Maximum level measured over the time interval} \\ L_{min} & & \text{Minimum level measured over the time interval} \\ \text{MARB/IPA} & & \text{March Air Reserve Base / Inland Port Airport} \\ \end{array}$ 

mph Miles per hour

OPR Office of Planning and Research

PPV Peak particle velocity

Project Moreno Valley Trade Center

REMEL Reference Energy Mean Emission Level

RMS Root-mean-square VdB Vibration Decibels



# **EXECUTIVE SUMMARY**

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Moreno Valley Trade Center development ("Project"). As shown on Exhibit 1-A, the Project site is bounded to the north by Eucalyptus Avenue, the west by Quincy Avenue (the Quincy channel), the south by Encilia Avenue and the east by Redlands Boulevard. The Project is proposed to consist of 1,332,380 square feet of E-Commerce warehouse uses. The Project is anticipated to be constructed in a single phase by the year 2024. At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown, and therefore, this noise study includes a conservative analysis of the proposed Project uses. This study has been prepared to satisfy applicable City of Moreno Valley standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

#### **OFF-SITE TRAFFIC NOISE ANALYSIS**

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 36 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *Moreno Valley Trade Center Traffic Impact Analysis*. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year (2024), and General Plan Build-Out (2040) traffic conditions. The analysis shows that the Project-related traffic noise level increases under all "with Project" traffic scenarios would result in *less than significant* impacts at receiving land uses adjacent to the study area roadway segments. This finding includes the following project design feature that will be included as a condition of approval.

• Rubberized asphalt shall be provided on the full cross-section width on Encilia Avenue between Essen Lane and Shubert Street (Segments 31 and 32).

#### **OPERATIONAL NOISE ANALYSIS**

Using reference noise levels to represent the expected noise sources from the Moreno Valley Trade Center site, the operational analysis estimates the Project-related stationary-source noise hourly average  $L_{eq}$  levels at nearby sensitive receiver locations. The typical activities associated with the proposed Moreno Valley Trade Center are anticipated to include cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity. The operational noise analysis shows that the Project will satisfy the City of Moreno Valley stationary-source exterior hourly average  $L_{eq}$  noise levels of 65 dBA  $L_{eq}$  daytime and 60 dBA  $L_{eq}$  nighttime noise level standards at all nearby receiver locations and at 200 feet from the property line of the source. Therefore, the Project-related operational noise level impacts are considered *less than significant*.



# **OPERATIONAL VIBRATION ANALYSIS**

The operation of the Project site will include heavy trucks moving on site to and from the loading dock areas. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. According to the FTA *Transit Noise and Vibration Impact Assessment Manual*, (3 p. 113) trucks rarely create vibration that exceeds 70 VdB (unless there are bumps due to frequent potholes in the road). Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the FTA maximum-acceptable 78 VdB for daytime and 72 VdB for nighttime vibration criteria for residential uses, and therefore, will be *less than significant* 

#### **CONSTRUCTION NOISE ANALYSIS**

Using sample reference noise levels to represent the typical planned construction activities of the Moreno Valley Trade Center site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. The Project-related short-term construction noise levels are expected to range from 58.6 to 64.7 dBA  $L_{eq}$  and will satisfy the City of Moreno Valley daytime 65 dBA  $L_{eq}$  significance threshold during Project construction activities. Therefore, the noise impacts due to Project construction noise is considered *less than significant* at all receiver locations and at 200 feet from the property line of the source.

# **CONSTRUCTION VIBRATION ANALYSIS**

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. At distances ranging from 118 feet to 1,651 feet from typical Project construction activities (at the Project site boundary), construction vibration levels are estimated to range from 32.4 to 66.8 VdB and will remain below the FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria of 78 VdB for daytime residential uses at all receiver locations and at 200 feet from the property line of the source. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

#### SHEET PILE SYSTEM CONSTRUCTION NOISE ANALYSIS

An additional analysis was completed to assess potential impacts due to sheet pile drilling activities planned near the western project site boundary. According to the applicant, the sheet pile system will be installed using and ABI drill rig, forklift and rigging crane. It is expected that the contractor will be using the ABI drill rig to drive piles 8 hours per day for approximately 25 days. Sheet pile system methods can include different equipment types, such as impact or drilling, and as such, noise levels will vary depending on the method used. Non-impact pile driving equipment (e.g., drilling or other non-impact alternatives) such as the planned ABI drill rig shall be required to reduce the pile driving equipment noise levels at adjacent receiver locations. The sheet pile system construction noise levels are estimated and expected to range



from 57.4 to 64.1 dBA  $L_{eq}$  at the receiver locations near the planned sheet pile area. The sheet pile system construction noise analysis shows that the nearby receiver locations will satisfy the City of Moreno Valley daytime 65 dBA  $L_{eq}$  significance threshold. Therefore, the noise impacts due to the Project sheet pile construction noise is considered *less than significant* at all receiver locations and at 200 feet from the property line of the source.

#### SHEET PILE SYSTEM CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 124 feet to 250 feet from the sheet pile construction activities (at the Project site boundary), construction vibration levels are estimated to range from 63.0 to 72.1 VdB and will remain below the FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria of 78 VdB for daytime residential uses at all receiver locations and at 200 feet from the property line of the source. Therefore, the Project-related sheet pile system vibration impacts are considered *less than significant* during the construction activities at the Project site.

# **SUMMARY OF CEQA SIGNIFICANCE FINDINGS**

The results of this Moreno Valley Trade Center Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1). Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS** 

Amakusia	Report Section	Significance Findings		
Analysis		Unmitigated	Mitigated	
Off-Site Traffic Noise	7	Less Than Significant	-	
Operational Noise	9	Less Than Significant	-	
Operational Vibration	9	Less Than Significant	-	
Construction Noise		Less Than Significant	-	
Construction Vibration	40	Less Than Significant	-	
Sheet Pile System Noise	10	Less Than Significant	-	
Sheet Pile System Vibration		Less Than Significant	-	



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# 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Moreno Valley Trade Center ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

#### 1.1 SITE LOCATION

The proposed project is located in the eastern portion of the City of Moreno Valley in the County of Riverside. The project is 80 gross acres and is bounded to the north by Eucalyptus Avenue, the west by Quincy Street (the Quincy channel), the south by Encilia Avenue and the east by Redlands Boulevard. The Project location is shown on Exhibit 1-A.

The project is surrounded by varied land uses. To the north the properties are zoned for Industrial uses and the Aldi's logistics building was recently constructed and is in operation. To the east the properties are within the approved World Logistics Center Specific Plan and are planned for logistics use. To the south the properties are zoned for residential use, most of which are already developed with houses. To the west the zone is for residential uses and is vacant.

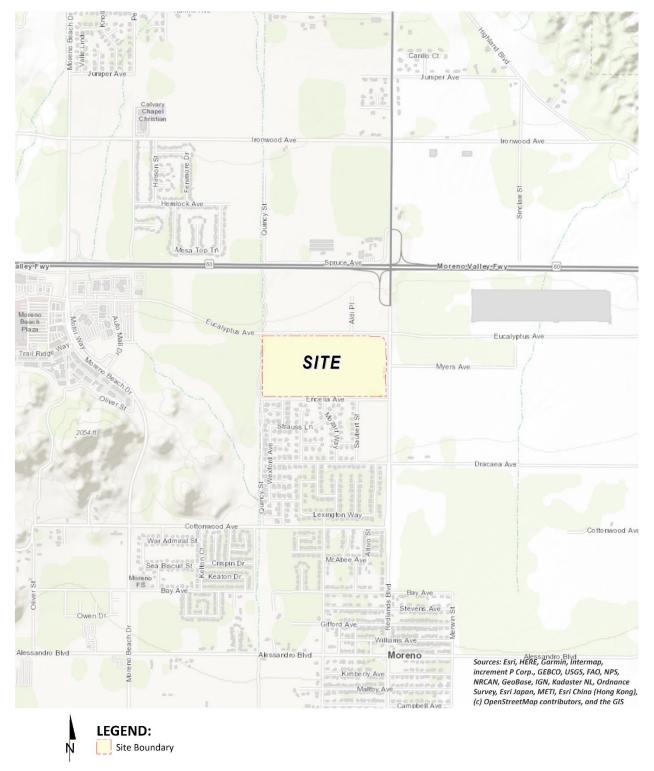
#### 1.2 PROJECT DESCRIPTION

The project envisions the development of the site for 1,332,380 square feet of E-Commerce warehouse uses. The project opening year is 2024. Truck access to and from the project site will be restricted to three project driveways. These driveways include the two driveways on Eucalyptus Avenue, and the southern driveway on Redlands Boulevard. The western driveway will include inbound/outbound access for autos/trucks and the eastern driveway will be restricted to outbound truck traffic only. The southern driveway on Redlands Boulevard will allow inbound truck traffic, but will restrict outbound truck traffic via onsite features such as a pork-chop designed driveway, signage posted at the driveway exit prohibiting outbound truck traffic, or other measures based on discussion with City staff. The two driveways on Redlands Boulevard will be restricted to right-in/right-out access only for autos and the three driveways on Encilia Avenue will be full-access for autos. The Project includes a planned 14-foot high screen wall surrounding the loading dock areas.

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown; the building is designed to accommodate one tenant or be divisible to accommodate two tenants. The on-site Project-related noise sources are expected to include: cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project will operate 24-hours daily for seven days per week.

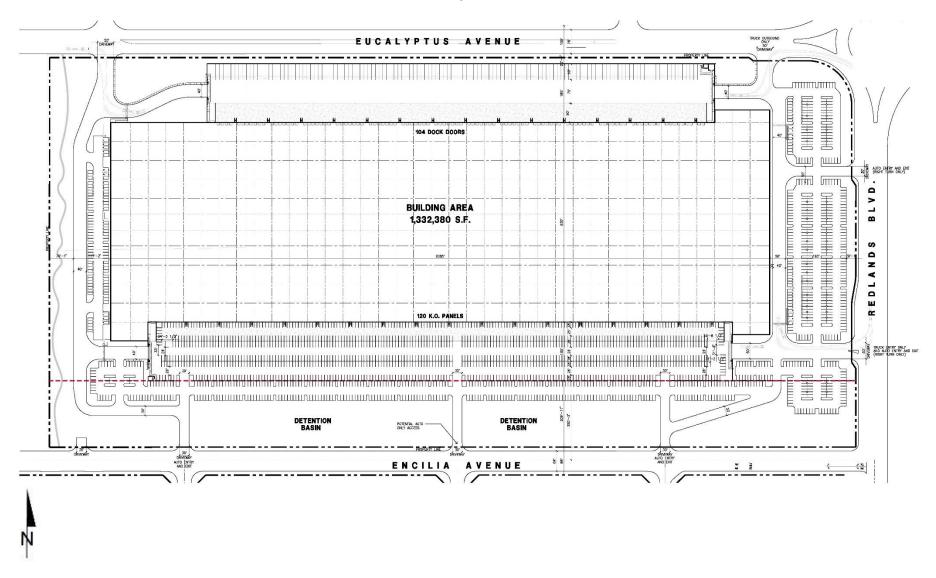


EXHIBIT 1-A: LOCATION MAP





**EXHIBIT 1-B: SITE PLAN** 





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# 2 FUNDAMENTALS

Noise is simply 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. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to 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. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

**EXHIBIT 2-A: TYPICAL NOISE LEVELS** 

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140			
NEAR JET ENGINE		130	INTOLERABLE OR		
		120	DEAFENING	HEARING LOSS	
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110			
LOUD AUTO HORN		100			
GAS LAWN MOWER AT 1m (3 ft)		90	VERY NOISY		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80	VERT NOIST		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	1000	INTERPERENCE	
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	CUEED	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE	
QUIET SUBURBAN NIGHTTIME	LIBRARY	30			
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VERT FAINT		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

# 2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (4) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 100 feet, which can cause serious discomfort. (5) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

#### 2.2 Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used figure is the equivalent level ( $L_{eq}$ ). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in Aweighted decibels (dBA). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period (typically one hour) and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL 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 5 decibels to dBA L<sub>eq</sub> sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L<sub>eq</sub> sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Moreno Valley relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

# 2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

### 2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (4)

#### 2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

#### 2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (4)

#### 2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (6)

# 2.3.5 REFLECTION

Field studies conducted by the FHWA have shown that the reflection from barriers and buildings does not substantially increase noise levels. (6) If all the noise striking a structure was reflected back to a given receiving point, the increase would be theoretically limited to 3 dBA. Further, not all the acoustical energy is reflected back to same point. Some of the energy would go over the structure, some is reflected to points other than the given receiving point, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by intervening structures and/or obstacles (e.g., the noise source itself). Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify reflective increases in traffic noise have not shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear.

# 2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This



concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

#### 2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by up to 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (6)

# 2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (7)

#### 2.7 COMMUNITY RESPONSE TO NOISE

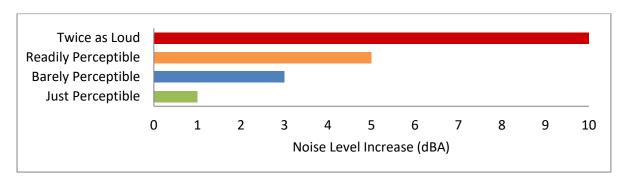
Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of



3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)



**EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION** 

# 2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (9)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area.

# 2.9 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (3), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction



equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.



Velocity Typical Sources Level\* (50 ft from source) Human/Structural Response 100 Threshold, minor cosmetic damage Blasting from construction projects fragile buildings Bulldozers and other heavy tracked construction equipment Difficulty with tasks such as 90 reading a VDT screen Commuter rail, upper range 80 Residential annoyance, infrequent Rapid transit, upper range events (e.g. commuter rail) Commuter rail, typical Residential annoyance, frequent Bus or truck over bump events (e.g. rapid transit) Rapid transit, typical Limit for vibration sensitive equipment. Approx. threshold for Bus or truck, typical human perception of vibration 60 Typical background vibration 50

**EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION** 

\* RMS Vibration Velocity Level in VdB relative to 10-6 inches/second

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.



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# 3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

# 3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (10) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

#### 3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (11) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA L<sub>eq</sub> for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).



# 3.3 CITY OF MORENO VALLEY GENERAL PLAN NOISE ELEMENT

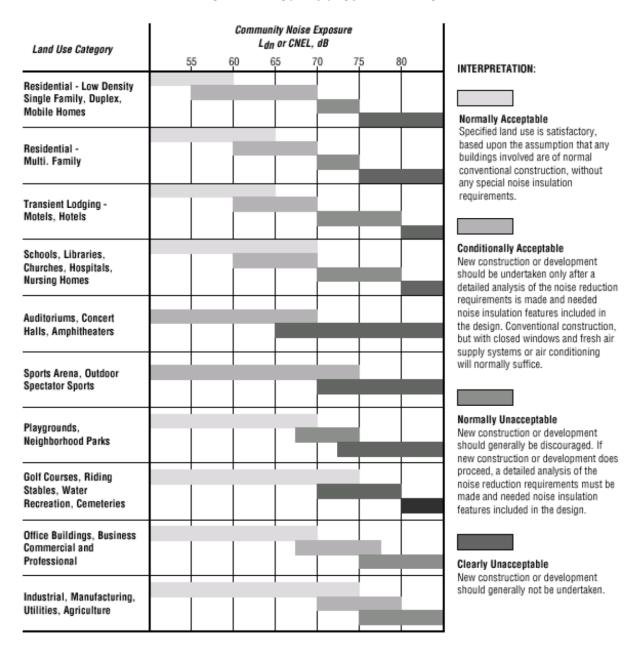
The City of Moreno Valley Noise Element typically provides the standards for land use compatibility for community noise exposure. However, the City of Moreno Valley General Plan does not include a noise element or specific transportation-related noise standards. Rather, noise is considered in the Environmental Safety section of the General Plan Safety Element. (12) While the General Plan provides background and noise fundamentals, it does not identify criteria to assess the impacts associated with off-site transportation-related noise impacts. Therefore, for this analysis, the transportation noise criteria are derived from standards contained in the California Office of Planning and Research (OPR) *General Plan Guidelines*. (10)

The OPR land use/noise compatibility standards are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources. The OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines, Appendix D: Noise Element Guidelines,* identify the criteria for industrial land uses such as the Project, as shown on Exhibit 3-A. When the unmitigated exterior noise levels approach 70 dBA CNEL industrial land use is considered *normally acceptable*. With exterior noise levels ranging from 70 to 80 dBA CNEL, industrial land uses are considered *conditionally acceptable*, and with exterior noise levels greater than 80 dBA CNEL, they are considered *normally unacceptable*. For *normally unacceptable* land use, *new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. (10) For the purposes of this analysis, industrial land use such as the Project does not contain outdoor living areas requiring exterior noise mitigation as outlined in the OPR <i>General Plan Guidelines*, and therefore, only the interior noise levels experienced by employees at the Project site are evaluated against the appropriate noise level standards.

The purpose of the transportation noise criteria is to protect, create, and maintain an environment free from noise and vibration that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. City General Policies (City of Moreno Valley General Plan, pp.9-31, 9-32) act to ensure that when exterior noise levels exceed 65 dBA CNEL at sensitive receivers, mitigation is provided to ensure that interior noise levels of 45 dBA CNEL are maintained. General Plan Policies in this regard are consistent with, and support, the California Building Code interior noise standards.



**EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA** 



Source: OPR General Plan Guidelines, Appendix D: Noise Element Guidelines, Figure 2.



# 3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Moreno Valley Trade Center Project, stationary-source (operational) noise such as the expected cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity are typically evaluated against standards established under a City's Municipal Code.

The City of Moreno Valley Municipal Code, Chapter 11.80 *Noise Regulation*, provides performance standards and noise control guidelines for determining and mitigating nontransportation or stationary-source noise impacts from operations at private properties. The City of Moreno Valley Municipal Code defines *Maximum Sound Levels* (in dB(A)) for Source Land Uses in Table 11.80.030-2 for *Residential* and *Commercial* land uses. As defined by the Municipal Code, Section 11.80.020 *Definitions*, *Commercial* land use *means all uses of land not otherwise classified as residential*, and *Residential* land use *means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.* (13) For the purpose of this analysis, the Moreno Valley Trade Center Project is considered *Commercial* land use since it is not classified as residential. Based on this standard, the operational noise level limits for commercial land use, from Table 11.80.030-2, of 65 dBA Leq during the daytime (8:00 a.m. to 10:00 p.m.) hours and 60 dBA Leq during the nighttime (10:01 p.m. to 7:59 a.m.) hours shall apply to the operational noise source activities from the Project.

Further, Section 11.80.030 (C) *Prohibited Acts, Nonimpulsive Sound Decibel Limits,* states: *No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on a privately owned property... (13) Therefore, at a distance of 200 feet from the property line, the Project's operational noise levels shall not exceed the 65 dBA Leq daytime and 60 dBA Leq nighttime noise level standards for commercial land uses, as shown on Table 3-1.* 

The City of Moreno Valley Municipal Code also identifies continuous sound level limits in Table 11.80.030-1 based on the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health (NIOSH) noise exposure guidelines. A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The City of Moreno Valley noise level threshold starts at 90 dBA for more than eight hours per day, and for every increase, the exposure time is reduced. The City of Moreno Valley identifies noise level thresholds of 92 dBA for more than 6 hours per day, 95 dBA for more than 4 hour per day, 97 dBA for more than 3 hours per day, and up to 100 dBA for more than 2 hours per day. However, this noise study uses the more restrictive City of Moreno Valley commercial noise level limits identified on Table 11.80.030-2 for source land uses in the Municipal Code, shown on Table 3-1 of this report, to evaluate the potential operational noise levels due to the operation of the Project.



TABLE 3-1: OPERATIONAL NOISE STANDARDS AT 200 FEET FROM THE SOURCE

City	Source	Noise Level Standards (dBA Leq) <sup>1</sup>		
City	Land use	Daytime	Nighttime	
Moreno Valley	Commercial	65	60	

<sup>&</sup>lt;sup>1</sup> City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation, Table 11.80.030-2 Maximum Sound Levels (in dB(A)) for Source Land Uses when measured at a distance of 200 feet from the property line of the source land use (Appendix 3.1). Leq represents a steady state sound level containing the same total energy as a time varying signal over a given period. "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

# 3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Moreno Valley Trade Center site, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. The Municipal Code noise standards for construction are described below for the City of Moreno Valley to determine the potential noise impacts at nearby receiver locations. The construction-related noise standards are shown on Table 3-2.

The Municipal Code noise standards for construction are described below for the City of Moreno Valley to determine the potential noise impacts at nearby sensitive receiver locations. As a subset of its stationary-source noise regulations, the City Municipal Code establishes permitted hours of construction activity. More specifically, Municipal Code Section 11.80.030 (D)(7), Construction and Demolition, provides the following:

No person shall operate, or cause operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.

Therefore, based on the Section 11.80.030 (D)(7) construction regulations, a construction-related *noise disturbance* occurs if Project construction activity occurs outside of the permitted hours. However, for this analysis, the stationary-source noise level limits of 65 dBA L<sub>eq</sub> during the daytime hours and 60 dBA L<sub>eq</sub> during the nighttime hours are used as appropriate thresholds for the nearby sensitive land uses (e.g. residential homes) in the Project study area. In addition, grading operations shall be limited to the hours identified in Section 8.21.050 (O) of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 4:00 p.m. on weekends and holidays or as approved by the City Engineer. The City of Moreno Valley construction noise standards are shown on Table 3-2 and included in Appendix 3.1. As previously discussed in Section 3.4, the construction noise level threshold used in this noise study represents a conservative approach, since it is more restrictive than the continuous sound level limits of Table 11.80.030-1 of the City of Moreno Valley Municipal Code.



TABLE 3-2: CONSTRUCTION NOISE STANDARDS FROM THE SOURCE LAND USE

City	Permitted Hours of Construction Activity	Construction Noise Level Standard (dBA L <sub>eq</sub> ) <sup>2</sup>		
	Construction Activity	Daytime	Nighttime	
Moreno Valley <sup>1</sup>	General Activity: 7:00 a.m. to 8:00 p.m. on any day. Grading is limited to 7:00 a.m. to 6:00 p.m. Monday to Friday; 8:00 a.m. to 4:00 p.m. on weekends and holidays.	65	60 <sup>3</sup>	

<sup>&</sup>lt;sup>1</sup> Source: City of Moreno Valley Municipal Code, Section 11.80.030 (D)(7) and Section 8.21.050 (O) (Appendix 3.1).

# 3.5 VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (3)

To analyze vibration impacts originating from the operation and construction of the Moreno Valley Trade Center, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Moreno Valley does not identify specific vibration level limits and instead relies on the Federal Transit Administration (FTA) methodology. The FTA *Transit Noise and Vibration Impact Assessment* Manual methodology provides guidelines for the maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 90 VdB for industrial (workshop) use, 84 VdB for office use and 78 VdB for daytime residential uses and 72 VdB for nighttime uses in buildings where people normally sleep. (3)



<sup>&</sup>lt;sup>2</sup> Acceptable threshold for determining the relative significance of short-term Project construction noise levels, based on the City of Moreno Valley stationary noise standards shown on Table 3-1.

<sup>&</sup>lt;sup>3</sup> Any nighttime construction activity requires an exemption from the City of Moreno Valley Municipal Code as indicated in Section 11.80.030 (E)(8) for a special event permit (Section 11.80.040). The special event permit application shall be submitted to the City of Moreno Valley Planning Department for approval and meet the requirements of Municipal Code Section 11.80.040.

<sup>&</sup>quot;Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

# 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- A. 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?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. 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?

While the City of Moreno Valley General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Guideline A. CEQA Appendix G Guideline C applies to nearby public and private airports, if any, and the Project's land use compatibility.

# 4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

The Project site is not located within two miles of a public airport or within an airport land use plan. The closest airport is the March Air Reserve Base/Inland Port Airport (MARB/IPA) located over 5 miles west of the Project site. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Guideline C.

#### 4.2 Noise-Sensitive Receivers

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (14)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (15) developed guidance to be used for the assessment



of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (Leq.).

As previously stated, the approach used in this noise study recognizes that there is no single noise increase that renders the noise impact significant, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (14) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance.

The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (6 p. 9) and Caltrans (16 p. 2 48).

# 4.3 Non-Noise-Sensitive Receivers

Since the City of Moreno Valley General Plan Safety Element does not identify criteria to assess the impacts associated with off-site transportation-related noise impacts, the OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines*, *Appendix D: Noise Element Guidelines* is used to determine potential impacts at adjacent land uses. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land use, such as industrial use, is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* according to the *Land Use Compatibility Criteria*. (10)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise



level increase thresholds for noise-sensitive land uses but instead rely on the OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines*, *Appendix D: Noise Element Guidelines normally acceptable* 70 dBA CNEL exterior noise level criteria.

#### 4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix.

#### **OFF-SITE TRAFFIC NOISE**

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
  - are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase; or
  - range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase; or
  - o already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g., office, commercial, industrial):
  - are greater than the OPR General Plan Guidelines, Figure 2, normally acceptable 75 dBA
     CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase.

#### **OPERATIONAL NOISE & VIBRATION**

- If Project-related operational (stationary source) noise levels:
  - exceed the 65 dBA L<sub>eq</sub> daytime or 60 dBA L<sub>eq</sub> nighttime noise level standards at 200 feet from the property line of the noise source (City of Moreno Valley Municipal Code, Table 11.80.030-2); or
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
  - are less than 60 dBA L<sub>eq</sub> and the Project creates a readily perceptible 5 dBA L<sub>eq</sub> or greater
     Project-related noise level increase; or
  - range from 60 to 65 dBA L<sub>eq</sub> and the Project creates a barely perceptible 3 dBA L<sub>eq</sub> or greater Project-related noise level increase; or
  - already exceed 65 dBA L<sub>eq</sub>, and the Project creates a community noise level increase of greater than 1.5 dBA L<sub>eq</sub> (FICON, 1992).
  - If Project generated operational vibration levels exceed the FTA's acceptable vibration thresholds of 78 VdB for daytime residential use and 72 VdB for nighttime uses in buildings where people normally sleep. (FTA Transit Noise and Vibration Impact Assessment Manual).

#### **CONSTRUCTION NOISE & VIBRATION**

• If Project-related construction activities create noise levels at 200 feet from the property line of the noise source in the City of Moreno Valley which exceed the construction noise level threshold of 65 dBA Leq during the daytime hours, or 60 dBA Leq during the nighttime hours, (City of Moreno Valley Municipal Code, Table 11.80.030-2).



• If Project generated operational vibration levels exceed the FTA's acceptable vibration thresholds of 78 VdB for daytime residential use and buildings where people normally sleep. (FTA Transit Noise and Vibration Impact Assessment Manual).

**TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY** 

Analysis	Receiving Land Use	Condition(s)	Significance Criteria		
	Land OSE		Daytime	Nighttime	
	Noise- Sensitive <sup>1</sup>	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL P	roject increase	
Off-Site	Sensitive	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	roject increase	
	Non-Noise- Sensitive <sup>2</sup>	if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase		
	al Noise- Sensitive <sup>1</sup>	At 200' from the property line of the source <sup>3</sup>	65 dBA L <sub>eq</sub>	60 dBA L <sub>eq</sub>	
Onomaticas		if ambient is < 60 dBA L <sub>eq</sub> <sup>1</sup>	≥ 5 dBA L <sub>eq</sub> Project increase		
Operational		if ambient is 60 - 65 dBA L <sub>eq</sub> 1	≥ 3 dBA L <sub>eq</sub> Project increase		
		if ambient is > 65 dBA L <sub>eq</sub> <sup>1</sup>	≥ 1.5 dBA L <sub>eq</sub> P	oject increase	
		Vibration Level Threshold <sup>4</sup>	78 VdB	72 VdB	
Construction	Noise	At 200' from the property line of the source3	65 dBA L <sub>eq</sub>	60 dBA L <sub>eq</sub>	
	Jensitive	Vibration Level Threshold <sup>4</sup>	78 VdB	n/a	

<sup>&</sup>lt;sup>1</sup> FICON, 1992



<sup>&</sup>lt;sup>2</sup> OPR General Plan Guidelines, Figure 2 Land Use Compatibility Criteria.

<sup>&</sup>lt;sup>3</sup> City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation (Appendix 3.1).

<sup>&</sup>lt;sup>4</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

<sup>&</sup>quot;Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 a.m.

# 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at three locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, December 12<sup>th</sup>, 2019. Appendix 5.1 includes study area photos.

# 5.1 Measurement Procedure and Criteria

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (17)

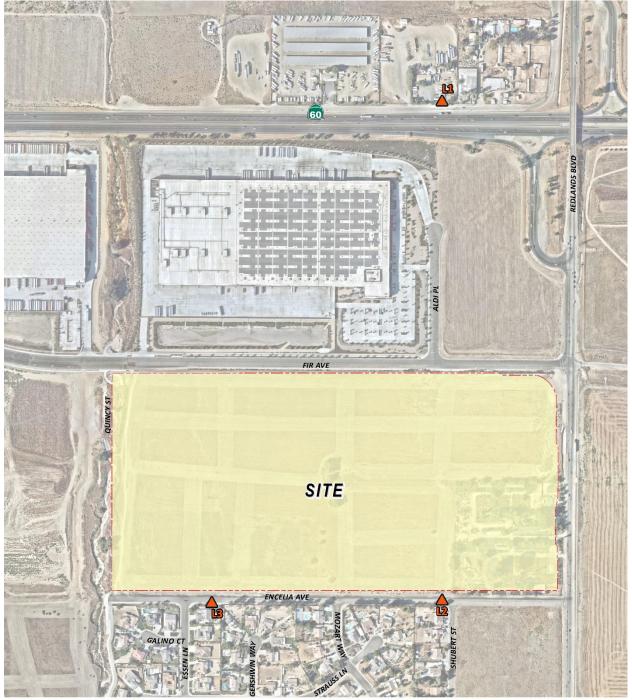
# **5.2** Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (4) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (3)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (3) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels



and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.



**EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS** 





# **5.3** Noise Measurement Results

The noise measurements presented below focus on the average or equivalent sound levels ( $L_{eq}$ ). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (8:00 a.m. to 10:00 p.m.) and nighttime (10:01 p.m. to 7:59 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels north of the project site near existing residential home and the Moreno Valley Freeway. The noise levels at this location consist primarily of traffic noise from the Moreno Valley Freeway. The noise level measurements collected show an overall 24-hour exterior noise level of 80.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 75.3 dBA L<sub>eq</sub> with an average nighttime noise level of 73.8 dBA L<sub>eq</sub>.
- Location L2 represents the noise levels south of the Project site near existing single-family residential homes by Encelia Avenue and Shubert Street. The noise level measurements collected show an overall 24-hour exterior noise level of 61.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 54.2 dBA L<sub>eq</sub> with an average nighttime noise level of 54.6 dBA L<sub>eq</sub>. The noise levels at this location consist primarily of traffic noise from Encelia Avenue and Shubert Street.
- Location L3 represents the noise levels south of the Project site on Encelia Avenue next to
  existing single-family residential homes. The 24-hour CNEL indicates that the overall exterior
  noise level is 56.8 dBA CNEL. The energy (logarithmic) average daytime noise level was
  calculated at 51.0 dBA L<sub>eq</sub> with an average nighttime noise level of 50.4 dBA L<sub>eq</sub>. Traffic on
  Encelia Avenue represents the primary source of noise at this location.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L<sub>1</sub>, L<sub>2</sub>, L<sub>5</sub>, L<sub>8</sub>, L<sub>25</sub>, L<sub>50</sub>, L<sub>90</sub>, L<sub>95</sub>, and L<sub>99</sub> percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with California State Route 60, and surrounding surface streets in addition to background industrial land use activities. The 24-hour existing noise level measurement results are shown on Table 5-1.



**TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS** 

Location <sup>1</sup> Description		Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>		CNEL
		Daytime	Nighttime	
L1	Located north of the project site near existing residential home and the Moreno Valley Freeway.	75.3	73.8	80.5
L2	Located south of the Project site near existing single-family residential homes by Encelia Avenue and Shubert Street.	54.2	54.6	61.0
L3	Located south of the Project site on Encelia Avenue next to existing single-family residential homes.	51.0	50.4	56.8

<sup>&</sup>lt;sup>1</sup> See Exhibit 5-A for the noise level measurement locations.



<sup>&</sup>lt;sup>2</sup> Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

# 6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment. Consistent with the *Land Use Compatibility Criteria*, all transportation related noise levels are presented in terms of the 24-hour CNEL's.

#### 6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (18) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (19) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), 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), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (20)

#### 6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site dBA CNEL transportation noise impacts. Table 6-1 identifies the 36 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Moreno Valley General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on the *Moreno Valley Trade Center Traffic Impact Analysis* for E-Commerce warehousing use, prepared by Translutions, Inc. for the following traffic scenarios under both Without and With Project alternatives: Existing, Opening Year (2024), and General Plan Build-Out (2040). (21)

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts, without and with project ADT traffic volumes from the Project traffic study.



**TABLE 6-1: OFF-SITE ROADWAY PARAMETERS** 

ID	Roadway	Segment	Receiving Existing Land Use <sup>1</sup>	Distance from Centerline to Receiving Land Use (Feet) <sup>2</sup>	Vehicle Speed (mph) <sup>3</sup>
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	36'	45
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	55'	55
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	55'	55
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	55'	50
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	55'	50
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	55'	50
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	55'	50
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	55'	50
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	55'	50
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	55'	50
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	55'	50
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	55'	50
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	55'	50
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	44'	45
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	50'	40
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	67'	50
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	67'	50
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	67'	50
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	67'	50
20	Iris Av.	e/o Nason St.	Sensitive	67'	50
21	Iris Av.	e/o Lasselle St.	Sensitive	67'	50
22	Iris Av.	e/o Kitching St.	Sensitive	67'	50
23	Eucalyptus Av.	e/o Nason St.	Sensitive	50'	40
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	50'	40
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	50'	40
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	50'	40
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	50'	40
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	50'	40
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	50'	40
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	50'	40
31	Encilia Av.	e/o Essen Lane	Sensitive	44'	45
32	Encilia Av.	e/o Mozart Wy.	Sensitive	44'	45
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	44'	45
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	67'	45
35	Alessandro Blvd.	e/o Nason St.	Sensitive	55'	45
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	55'	45

 $<sup>^{\</sup>mathrm{1}}$  Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses.



 $<sup>^{\</sup>rm 2}\,{\rm Distance}$  to receiving land use is based upon the right-of-way distances.

<sup>&</sup>lt;sup>3</sup> Source: Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.

**TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES** 

Box   Part					Avera	age Daily T	raffic Volu	ımes¹	
San Timoteo Cyn. Rd.   n/o Alessandro Rd.   13,775   14,005   15,849   16,079   21,100   21,330   3   Redlands Blvd.   s/o Live Oak Canyon Rd.   17,208   17,611   19,852   20,255   24,137   24,540   3   Redlands Blvd.   s/o San Timoteo Cyn. Rd.   17,452   17,452   20,216   20,216   25,853   25,853   4   Redlands Blvd.   n/o Ironwood Av.   18,086   18,546   21,242   21,702   23,883   24,343   5   Redlands Blvd.   s/o Ironwood Av.   15,092   15,552   17,625   18,085   22,667   23,127   7   Redlands Blvd.   n/o Eucalyptus Av.   12,290   14,472   16,324   18,506   26,068   28,250   8   Redlands Blvd.   n/o Eucalyptus Av.   12,290   14,472   16,324   18,506   26,068   28,250   8   Redlands Blvd.   s/o Eucalyptus Av.   12,253   15,755   15,044   18,264   25,275   28,495   18   Redlands Blvd.   s/o Eucalyptus Av.   12,535   15,755   15,044   18,897   25,275   29,128   18   Redlands Blvd.   s/o Eucalyptus Av.   12,535   16,503   15,044   19,012   25,275   29,428   18   Redlands Blvd.   s/o Encelia Av.   10,585   11,965   12,891   14,271   16,675   18,055   12,841   14,271   16,675   18,055   13,641   14,271   16,675   16,012   13,861   14,271   16,675   16,012   14,271   16,675   16,012   14,271   16,675   16,012   14,271   14,271   14,271   15,667   16,012   14,271   14,271   14,271   14,271   15,667   16,012   14,271   14,271   14,271   14,271   15,667   16,012   14,271	ID	Roadway	Segment	Exis	ting	-	_		
2         San Timoteo Cyn. Rd.         s/o Live Oak Canyon Rd.         17,208         17,611         19,852         20,255         24,137         24,540           3         Redlands Blvd.         s/o San Timoteo Cyn. Rd.         17,452         17,452         12,0216         20,216         22,1702         23,883         24,343           5         Redlands Blvd.         s/o Ironwood Av.         15,092         15,552         17,625         18,085         22,667         23,127           6         Redlands Blvd.         s/o SR-60 Westbound Ramps         14,403         15,925         18,155         19,677         25,690         27,212           7         Redlands Blvd.         n/o Euclyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           9         Redlands Blvd.         n/o Dwy. 7         12,535         15,755         15,044         18,897         25,275         29,128           10         Redlands Blvd.         n/o Dwy. 7         12,535         16,503         15,044         18,897         25,275         29,243           11         Redlands Blvd.         s/o Encelia Av.         10,585         11,969         10,426         10,675         16,075           12         <									
3         Redlands Blvd.         s/o San Timoteo Cyn. Rd.         17,452         20,216         20,216         25,853         25,853           4         Redlands Blvd.         n/o Ironwood Av.         18,086         18,346         21,242         21,702         23,883         24,343           5         Redlands Blvd.         s/o SR-60 Westbound Ramps         15,552         17,625         18,085         22,667         23,127           7         Redlands Blvd.         n/o Eucalyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           8         Redlands Blvd.         s/o Eucalyptus Av.         12,535         15,755         15,044         18,264         25,275         28,495           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,388         15,044         18,897         25,275         29,212           10         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           12         Redlands Blvd.         s/o Cactus Av. <td>1</td> <td>San Timoteo Cyn. Rd.</td> <td>n/o Alessandro Rd.</td> <td>13,775</td> <td>14,005</td> <td>15,849</td> <td>16,079</td> <td>21,100</td> <td>21,330</td>	1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	13,775	14,005	15,849	16,079	21,100	21,330
4         Redlands Blvd.         n/o Ironwood Av.         18,086         18,546         21,242         21,702         23,883         24,343           5         Redlands Blvd.         s/o Ironwood Av.         15,092         15,552         17,625         18,085         22,667         23,127           6         Redlands Blvd.         s/o SR-60 Westbound Ramps         14,403         15,925         18,155         19,677         25,690         27,212           7         Redlands Blvd.         n/o Eucalyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           8         Redlands Blvd.         n/o Dwy. 7         12,535         15,755         15,044         18,897         25,275         28,495           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,503         15,044         18,897         25,275         29,243           11         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,2891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd. </td <td>2</td> <td>San Timoteo Cyn. Rd.</td> <td>s/o Live Oak Canyon Rd.</td> <td>17,208</td> <td>17,611</td> <td>19,852</td> <td>20,255</td> <td>24,137</td> <td>24,540</td>	2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	17,208	17,611	19,852	20,255	24,137	24,540
5         Redlands Blvd.         s/o Ironwood Av.         15,092         15,552         17,625         18,085         22,667         23,127           6         Redlands Blvd.         s/o SR-60 Westbound Ramps         14,403         15,925         18,155         19,677         25,690         27,212           7         Redlands Blvd.         n/o Eucalyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,388         15,044         18,264         25,275         29,128           10         Redlands Blvd.         s/o Dwy. 7         12,535         16,503         15,044         18,971         16,675         18,055           11         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,771         16,675         18,055           12         Redlands Blvd.         s/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kenned	3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	17,452	17,452	20,216	20,216	25,853	25,853
6         Redlands Blvd.         s/o SR-60 Westbound Ramps         14,403         15,925         18,155         19,677         25,690         27,212           7         Redlands Blvd.         n/o Eucalyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           8         Redlands Blvd.         s/o Eucalyptus Av.         12,535         15,755         15,044         18,897         25,275         28,495           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,503         15,044         18,897         25,275         29,243           10         Redlands Blvd.         s/o Encella Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         16,012           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno	4	Redlands Blvd.	n/o Ironwood Av.	18,086	18,546	21,242	21,702	23,883	24,343
7         Redlands Blvd.         n/o Eucalyptus Av.         12,290         14,472         16,324         18,506         26,068         28,250           8         Redlands Blvd.         s/o Eucalyptus Av.         12,535         15,755         15,044         18,264         25,275         28,495           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,388         15,044         18,897         25,275         29,128           10         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,673         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         More	5	Redlands Blvd.	s/o Ironwood Av.	15,092	15,552	17,625	18,085	22,667	23,127
8         Redlands Blvd.         s/o Eucalyptus Av.         12,535         15,755         15,044         18,264         25,275         28,495           9         Redlands Blvd.         n/o Dwy. 7         12,535         16,388         15,044         18,897         25,275         29,128           10         Redlands Blvd.         s/o Dwy. 7         12,535         16,503         15,044         19,012         25,275         29,243           11         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beac	6	Redlands Blvd.	s/o SR-60 Westbound Ramps	14,403	15,925	18,155	19,677	25,690	27,212
9         Redlands Blvd.         n/o Dwy. 7         12,535         16,388         15,044         18,897         25,275         29,128           10         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         19,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         13,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         s/o Acessandro Blvd.         18,862         19,265         25,697         26,100         32,569         32,997           18	7	Redlands Blvd.	n/o Eucalyptus Av.	12,290	14,472	16,324	18,506	26,068	28,250
10         Redlands Blvd.         s/o Dwy. 7         12,535         16,503         15,044         19,012         25,275         29,243           11         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         s/o Cactus Av.         15,452         15,855         22,022         22,425         25,486         25,889           19	8	Redlands Blvd.	s/o Eucalyptus Av.	12,535	15,755	15,044	18,264	25,275	28,495
11         Redlands Blvd.         s/o Encelia Av.         10,585         11,965         12,891         14,271         16,675         18,055           12         Redlands Blvd.         n/o Alessandro Blvd.         9,391         9,736         11,794         12,139         15,667         16,012           13         Redlands Blvd.         s/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o Alessandro Blvd.         18,862         19,265         25,697         26,100         32,569         32,972           18         Moreno Beach Dr.         s/o John F Kennedy Dr.         15,898         16,531         26,091         26,724         33,716         34,349	9	Redlands Blvd.	n/o Dwy. 7	12,535	16,388	15,044	18,897	25,275	29,128
12       Redlands Blvd.       n/o Alessandro Blvd.       9,391       9,736       11,794       12,139       15,667       16,012         13       Redlands Blvd.       s/o Alessandro Blvd.       8,501       8,731       10,196       10,426       10,706       10,936         14       John F Kennedy Dr.       s/o Cactus Av.       5,797       6,027       7,080       7,310       12,915       13,145         15       Moreno Beach Dr.       n/o SR-60 Westbound Ramps       12,724       12,897       18,159       18,332       24,982       25,155         16       Moreno Beach Dr.       s/o SR-60 Eastbound Ramps       23,934       25,945       32,941       34,952       44,511       46,522         17       Moreno Beach Dr.       s/o Alessandro Blvd.       18,862       19,265       25,697       26,100       32,569       32,972         18       Moreno Beach Dr.       s/o John F Kennedy Dr.       15,489       16,531       26,091       26,724       33,716       34,349         20       Iris Av.       e/o Nason St.       19,248       19,766       29,723       30,241       45,638       46,156         21       Iris Av.       e/o Lasselle St.       30,134       30,422       42,358 <t< td=""><td>10</td><td>Redlands Blvd.</td><td>s/o Dwy. 7</td><td>12,535</td><td>16,503</td><td>15,044</td><td>19,012</td><td>25,275</td><td>29,243</td></t<>	10	Redlands Blvd.	s/o Dwy. 7	12,535	16,503	15,044	19,012	25,275	29,243
13         Redlands Blvd.         \$/o Alessandro Blvd.         8,501         8,731         10,196         10,426         10,706         10,936           14         John F Kennedy Dr.         \$/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         \$/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         \$/o Cactus Av.         15,452         15,855         22,022         22,425         25,486         25,889           19         Moreno Beach Dr.         \$/o John F Kennedy Dr.         15,898         16,531         26,091         26,724         33,716         34,349           20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23	11	Redlands Blvd.	s/o Encelia Av.	10,585	11,965	12,891	14,271	16,675	18,055
14         John F Kennedy Dr.         s/o Cactus Av.         5,797         6,027         7,080         7,310         12,915         13,145           15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         s/o Cactus Av.         18,862         19,265         25,697         26,100         32,569         32,972           18         Moreno Beach Dr.         s/o Cactus Av.         15,452         15,855         22,022         22,425         25,486         25,889           19         Moreno Beach Dr.         s/o John F Kennedy Dr.         15,898         16,531         26,001         26,724         33,716         34,349           20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23 <t< td=""><td>12</td><td>Redlands Blvd.</td><td>n/o Alessandro Blvd.</td><td>9,391</td><td>9,736</td><td>11,794</td><td>12,139</td><td>15,667</td><td>16,012</td></t<>	12	Redlands Blvd.	n/o Alessandro Blvd.	9,391	9,736	11,794	12,139	15,667	16,012
15         Moreno Beach Dr.         n/o SR-60 Westbound Ramps         12,724         12,897         18,159         18,332         24,982         25,155           16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         s/o Alessandro Blvd.         18,862         19,265         25,697         26,100         32,569         32,972           18         Moreno Beach Dr.         s/o Cactus Av.         15,452         15,855         22,022         22,425         25,486         25,889           19         Moreno Beach Dr.         s/o John F Kennedy Dr.         15,898         16,531         26,091         26,724         33,716         34,349           20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Lasselle St.         30,134         30,422         42,358         42,646         61,514         61,802           21         Iris Av.         e/o Nason St.         9,376         9,606         11,434         11,664         26,165         26,395           24         E	13	Redlands Blvd.	s/o Alessandro Blvd.	8,501	8,731	10,196	10,426	10,706	10,936
16         Moreno Beach Dr.         s/o SR-60 Eastbound Ramps         23,934         25,945         32,941         34,952         44,511         46,522           17         Moreno Beach Dr.         s/o Alessandro Blvd.         18,862         19,265         25,697         26,100         32,569         32,972           18         Moreno Beach Dr.         s/o Cactus Av.         15,452         15,855         22,022         22,425         25,486         25,889           19         Moreno Beach Dr.         s/o John F Kennedy Dr.         15,898         16,531         26,091         26,724         33,716         34,349           20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Lasselle St.         30,134         30,422         42,358         42,646         61,514         61,802           22         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23         Eucalyptus Av.         e/o Fir Av.         14,002         14,290         17,687         17,975         28,783         29,071           25         Eucalyptus A	14	John F Kennedy Dr.	s/o Cactus Av.	5,797	6,027	7,080	7,310	12,915	13,145
17       Moreno Beach Dr.       s/o Alessandro Blvd.       18,862       19,265       25,697       26,100       32,569       32,972         18       Moreno Beach Dr.       s/o Cactus Av.       15,452       15,855       22,022       22,425       25,486       25,889         19       Moreno Beach Dr.       s/o John F Kennedy Dr.       15,898       16,531       26,091       26,724       33,716       34,349         20       Iris Av.       e/o Nason St.       19,248       19,766       29,723       30,241       45,638       46,156         21       Iris Av.       e/o Lasselle St.       30,134       30,422       42,358       42,646       61,514       61,802         22       Iris Av.       e/o Kitching St.       26,472       26,530       36,225       36,283       50,410       50,468         23       Eucalyptus Av.       e/o Nason St.       9,376       9,606       11,434       11,664       26,165       26,395         24       Eucalyptus Av.       e/o Fir Av.       14,002       14,290       17,687       17,975       28,783       29,071         25       Eucalyptus Av.       e/o Auto Mall Dr.       1,617       4,088       2,943       5,414       8,251 <t< td=""><td>15</td><td>Moreno Beach Dr.</td><td>n/o SR-60 Westbound Ramps</td><td>12,724</td><td>12,897</td><td>18,159</td><td>18,332</td><td>24,982</td><td>25,155</td></t<>	15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	12,724	12,897	18,159	18,332	24,982	25,155
18         Moreno Beach Dr.         \$\sigma \text{Cactus Av.}\$         15,452         15,855         22,022         22,425         25,486         25,889           19         Moreno Beach Dr.         \$\sigma \text{John F Kennedy Dr.}\$         15,898         16,531         26,091         26,724         33,716         34,349           20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Lasselle St.         30,134         30,422         42,358         42,646         61,514         61,802           22         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23         Eucalyptus Av.         e/o Nason St.         9,376         9,606         11,434         11,664         26,165         26,395           24         Eucalyptus Av.         e/o Fir Av.         14,002         14,290         17,687         17,975         28,783         29,071           25         Eucalyptus Av.         e/o Auto Mall Dr.         1,617         4,088         2,943         5,414         8,251         10,722           27         Eucalyptus Av.	16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	23,934	25,945	32,941	34,952	44,511	46,522
19       Moreno Beach Dr.       s/o John F Kennedy Dr.       15,898       16,531       26,091       26,724       33,716       34,349         20       Iris Av.       e/o Nason St.       19,248       19,766       29,723       30,241       45,638       46,156         21       Iris Av.       e/o Lasselle St.       30,134       30,422       42,358       42,646       61,514       61,802         22       Iris Av.       e/o Kitching St.       26,472       26,530       36,225       36,283       50,410       50,468         23       Eucalyptus Av.       e/o Nason St.       9,376       9,606       11,434       11,664       26,165       26,395         24       Eucalyptus Av.       e/o Fir Av.       14,002       14,290       17,687       17,975       28,783       29,071         25       Eucalyptus Av.       e/o Auto Mall Dr.       3,673       6,836       6,371       9,534       12,586       15,749         26       Eucalyptus Av.       e/o Dwy. 1       1,507       5,441       2,822       6,756       7,912       11,846         28       Eucalyptus Av.       e/o Dwy. 5       2,424       5,066       3,834       6,476       9,978       12,620	17	Moreno Beach Dr.	s/o Alessandro Blvd.	18,862	19,265	25,697	26,100	32,569	32,972
20         Iris Av.         e/o Nason St.         19,248         19,766         29,723         30,241         45,638         46,156           21         Iris Av.         e/o Lasselle St.         30,134         30,422         42,358         42,646         61,514         61,802           22         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23         Eucalyptus Av.         e/o Nason St.         9,376         9,606         11,434         11,664         26,165         26,395           24         Eucalyptus Av.         e/o Fir Av.         14,002         14,290         17,687         17,975         28,783         29,071           25         Eucalyptus Av.         e/o Auto Mall Dr.         3,673         6,836         6,371         9,534         12,586         15,749           26         Eucalyptus Av.         e/o Auto Mall Dr.         1,617         4,088         2,943         5,414         8,251         10,722           27         Eucalyptus Av.         e/o Dwy. 1         1,507         5,441         2,822         6,756         7,912         11,846           28         Eucalyptus Av.         e/o Dwy. 5	18	Moreno Beach Dr.	s/o Cactus Av.	15,452	15,855	22,022	22,425	25,486	25,889
21       Iris Av.       e/o Lasselle St.       30,134       30,422       42,358       42,646       61,514       61,802         22       Iris Av.       e/o Kitching St.       26,472       26,530       36,225       36,283       50,410       50,468         23       Eucalyptus Av.       e/o Nason St.       9,376       9,606       11,434       11,664       26,165       26,395         24       Eucalyptus Av.       e/o Fir Av.       14,002       14,290       17,687       17,975       28,783       29,071         25       Eucalyptus Av.       w/o Moreno Beach Dr.       3,673       6,836       6,371       9,534       12,586       15,749         26       Eucalyptus Av.       e/o Auto Mall Dr.       1,617       4,088       2,943       5,414       8,251       10,722         27       Eucalyptus Av.       e/o Dwy. 1       1,507       5,441       2,822       6,756       7,912       11,846         28       Eucalyptus Av.       w/o Redlands Blvd.       2,424       5,066       3,834       6,476       9,978       12,620         29       Eucalyptus Av.       e/o Redlands Blvd.       2,612       6,042       6,042       19,426       19,426 <td< td=""><td>19</td><td>Moreno Beach Dr.</td><td>s/o John F Kennedy Dr.</td><td>15,898</td><td>16,531</td><td>26,091</td><td>26,724</td><td>33,716</td><td>34,349</td></td<>	19	Moreno Beach Dr.	s/o John F Kennedy Dr.	15,898	16,531	26,091	26,724	33,716	34,349
22         Iris Av.         e/o Kitching St.         26,472         26,530         36,225         36,283         50,410         50,468           23         Eucalyptus Av.         e/o Nason St.         9,376         9,606         11,434         11,664         26,165         26,395           24         Eucalyptus Av.         e/o Fir Av.         14,002         14,290         17,687         17,975         28,783         29,071           25         Eucalyptus Av.         w/o Moreno Beach Dr.         3,673         6,836         6,371         9,534         12,586         15,749           26         Eucalyptus Av.         e/o Auto Mall Dr.         1,617         4,088         2,943         5,414         8,251         10,722           27         Eucalyptus Av.         e/o Dwy. 1         1,507         5,441         2,822         6,756         7,912         11,846           28         Eucalyptus Av.         w/o Redlands Blvd.         2,424         5,066         3,834         6,476         9,978         12,620           29         Eucalyptus Av.         w/o Redlands Blvd.         2,424         4,034         3,834         5,444         9,978         11,588           30         Eucalyptus Av.         e/o Redlands Blv	20	Iris Av.	e/o Nason St.	19,248	19,766	29,723	30,241	45,638	46,156
23         Eucalyptus Av.         e/o Nason St.         9,376         9,606         11,434         11,664         26,165         26,395           24         Eucalyptus Av.         e/o Fir Av.         14,002         14,290         17,687         17,975         28,783         29,071           25         Eucalyptus Av.         w/o Moreno Beach Dr.         3,673         6,836         6,371         9,534         12,586         15,749           26         Eucalyptus Av.         e/o Auto Mall Dr.         1,617         4,088         2,943         5,414         8,251         10,722           27         Eucalyptus Av.         e/o Dwy. 1         1,507         5,441         2,822         6,756         7,912         11,846           28         Eucalyptus Av.         w/o Redlands Blvd.         2,424         5,066         3,834         6,476         9,978         12,620           29         Eucalyptus Av.         w/o Redlands Blvd.         2,424         4,034         3,834         5,444         9,978         11,588           30         Eucalyptus Av.         e/o Redlands Blvd.         2,612         6,042         6,042         19,426         19,426           31         Encilia Av.         e/o Mozart Wy.         217 <td>21</td> <td>Iris Av.</td> <td>e/o Lasselle St.</td> <td>30,134</td> <td>30,422</td> <td>42,358</td> <td>42,646</td> <td>61,514</td> <td>61,802</td>	21	Iris Av.	e/o Lasselle St.	30,134	30,422	42,358	42,646	61,514	61,802
24Eucalyptus Av.e/o Fir Av.14,00214,29017,68717,97528,78329,07125Eucalyptus Av.w/o Moreno Beach Dr.3,6736,8366,3719,53412,58615,74926Eucalyptus Av.e/o Auto Mall Dr.1,6174,0882,9435,4148,25110,72227Eucalyptus Av.e/o Dwy. 11,5075,4412,8226,7567,91211,84628Eucalyptus Av.w/o Dwy. 52,4245,0663,8346,4769,97812,62029Eucalyptus Av.w/o Redlands Blvd.2,4244,0343,8345,4449,97811,58830Eucalyptus Av.e/o Redlands Blvd.2,6122,6126,0426,04219,42619,42631Encilia Av.e/o Essen Lane2178502408733,9964,62932Encilia Av.e/o Mozart Wy.2171,6552401,6783,9965,43433Encilia Av.w/o Redlands Blvd.4753,0635243,1124,3126,90034Alessandro Blvd.e/o Lasselle St.10,74510,97518,16418,39436,21236,44235Alessandro Blvd.e/o Nason St.9,5539,84117,49817,78626,98427,272	22	Iris Av.	e/o Kitching St.	26,472	26,530	36,225	36,283	50,410	50,468
25       Eucalyptus Av.       w/o Moreno Beach Dr.       3,673       6,836       6,371       9,534       12,586       15,749         26       Eucalyptus Av.       e/o Auto Mall Dr.       1,617       4,088       2,943       5,414       8,251       10,722         27       Eucalyptus Av.       e/o Dwy. 1       1,507       5,441       2,822       6,756       7,912       11,846         28       Eucalyptus Av.       w/o Dwy. 5       2,424       5,066       3,834       6,476       9,978       12,620         29       Eucalyptus Av.       w/o Redlands Blvd.       2,424       4,034       3,834       5,444       9,978       11,588         30       Eucalyptus Av.       e/o Redlands Blvd.       2,612       2,612       6,042       6,042       19,426       19,426         31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34	23	Eucalyptus Av.	e/o Nason St.	9,376	9,606	11,434	11,664	26,165	26,395
26Eucalyptus Av.e/o Auto Mall Dr.1,6174,0882,9435,4148,25110,72227Eucalyptus Av.e/o Dwy. 11,5075,4412,8226,7567,91211,84628Eucalyptus Av.w/o Dwy. 52,4245,0663,8346,4769,97812,62029Eucalyptus Av.w/o Redlands Blvd.2,4244,0343,8345,4449,97811,58830Eucalyptus Av.e/o Redlands Blvd.2,6122,6126,0426,04219,42619,42631Encilia Av.e/o Essen Lane2178502408733,9964,62932Encilia Av.e/o Mozart Wy.2171,6552401,6783,9965,43433Encilia Av.w/o Redlands Blvd.4753,0635243,1124,3126,90034Alessandro Blvd.e/o Lasselle St.10,74510,97518,16418,39436,21236,44235Alessandro Blvd.e/o Nason St.9,5539,84117,49817,78626,98427,272	24	Eucalyptus Av.	e/o Fir Av.	14,002	14,290	17,687	17,975	28,783	29,071
27       Eucalyptus Av.       e/o Dwy. 1       1,507       5,441       2,822       6,756       7,912       11,846         28       Eucalyptus Av.       w/o Dwy. 5       2,424       5,066       3,834       6,476       9,978       12,620         29       Eucalyptus Av.       w/o Redlands Blvd.       2,424       4,034       3,834       5,444       9,978       11,588         30       Eucalyptus Av.       e/o Redlands Blvd.       2,612       2,612       6,042       6,042       19,426       19,426         31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	25	Eucalyptus Av.	w/o Moreno Beach Dr.	3,673	6,836	6,371	9,534	12,586	15,749
28       Eucalyptus Av.       w/o Dwy. 5       2,424       5,066       3,834       6,476       9,978       12,620         29       Eucalyptus Av.       w/o Redlands Blvd.       2,424       4,034       3,834       5,444       9,978       11,588         30       Eucalyptus Av.       e/o Redlands Blvd.       2,612       2,612       6,042       6,042       19,426       19,426         31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	26	Eucalyptus Av.	e/o Auto Mall Dr.	1,617	4,088	2,943	5,414	8,251	10,722
29       Eucalyptus Av.       w/o Redlands Blvd.       2,424       4,034       3,834       5,444       9,978       11,588         30       Eucalyptus Av.       e/o Redlands Blvd.       2,612       2,612       6,042       6,042       19,426       19,426         31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	27	Eucalyptus Av.	e/o Dwy. 1	1,507	5,441	2,822	6,756	7,912	11,846
30       Eucalyptus Av.       e/o Redlands Blvd.       2,612       2,612       6,042       19,426       19,426         31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	28	Eucalyptus Av.	w/o Dwy. 5	2,424	5,066	3,834	6,476	9,978	12,620
31       Encilia Av.       e/o Essen Lane       217       850       240       873       3,996       4,629         32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	29	Eucalyptus Av.	w/o Redlands Blvd.	2,424	4,034	3,834	5,444	9,978	11,588
32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	30	Eucalyptus Av.	e/o Redlands Blvd.	2,612	2,612	6,042	6,042	19,426	19,426
32       Encilia Av.       e/o Mozart Wy.       217       1,655       240       1,678       3,996       5,434         33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	31	• •	e/o Essen Lane	217					
33       Encilia Av.       w/o Redlands Blvd.       475       3,063       524       3,112       4,312       6,900         34       Alessandro Blvd.       e/o Lasselle St.       10,745       10,975       18,164       18,394       36,212       36,442         35       Alessandro Blvd.       e/o Nason St.       9,553       9,841       17,498       17,786       26,984       27,272	32			217	1,655	240	1,678		
34 Alessandro Blvd.     e/o Lasselle St.     10,745     10,975     18,164     18,394     36,212     36,442       35 Alessandro Blvd.     e/o Nason St.     9,553     9,841     17,498     17,786     26,984     27,272	33		w/o Redlands Blvd.						
35 Alessandro Blvd. e/o Nason St. 9,553 9,841 17,498 17,786 26,984 27,272	34		e/o Lasselle St.	10,745					
	35	Alessandro Blvd.	e/o Nason St.						

 $<sup>^{\</sup>rm 1}$  Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.



To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

**TABLE 6-3: TIME OF DAY VEHICLE SPLITS** 

Vahiala Tura		Time of Day Splits <sup>1</sup>		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	71.98%	14.56%	13.46%	100.00%
Medium Trucks	76.23%	9.38%	14.39%	100.00%
Heavy Trucks	81.79%	7.65%	10.55%	100.00%

<sup>&</sup>lt;sup>1</sup> Source: Based on a 24-hour count taken at Iris Avenue between Lasselle Street and Nason Street (Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.). Values rounded to the nearest one-hundredth.

**TABLE 6-4: WITHOUT PROJECT VEHICLE MIX** 

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	94.24%	4.44%	1.32%	100.00%

Based on a 24-hour count taken at Iris Avenue between Lasselle Street and Nason Street (Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.



<sup>&</sup>quot;Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

**TABLE 6-5: EXISTING WITH PROJECT VEHICLE MIX** 

			With Project <sup>1</sup>				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>	
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	94.34%	4.37%	1.29%	100.00%	
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	94.38%	4.34%	1.29%	100.00%	
3	Redlands Blvd.	s/o San Timoteo Canyon Rd.	94.24%	4.44%	1.32%	100.00%	
4	Redlands Blvd.	n/o Ironwood Av.	94.39%	4.33%	1.28%	100.00%	
5	Redlands Blvd.	s/o Ironwood Av.	94.41%	4.31%	1.28%	100.00%	
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	92.10%	4.57%	3.33%	100.00%	
7	Redlands Blvd.	n/o Eucalyptus Av.	91.56%	4.50%	3.94%	100.00%	
8	Redlands Blvd.	s/o Eucalyptus Av.	95.42%	3.53%	1.05%	100.00%	
9	Redlands Blvd.	n/o Dwy. 7	95.60%	3.40%	1.01%	100.00%	
10	Redlands Blvd.	s/o Dwy. 7	95.63%	3.37%	1.00%	100.00%	
11	Redlands Blvd.	s/o Encelia Av.	94.91%	3.93%	1.16%	100.00%	
12	Redlands Blvd.	n/o Alessandro Blvd.	94.45%	4.28%	1.27%	100.00%	
13	Redlands Blvd.	s/o Alessandro Blvd.	94.40%	4.32%	1.28%	100.00%	
14	John F Kennedy Dr.	s/o Cactus Av.	94.46%	4.27%	1.27%	100.00%	
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	94.32%	4.38%	1.30%	100.00%	
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	93.37%	4.37%	2.26%	100.00%	
17	Moreno Beach Dr.	s/o Alessandro Blvd.	94.36%	4.35%	1.29%	100.00%	
18	Moreno Beach Dr.	s/o Cactus Av.	94.39%	4.33%	1.28%	100.00%	
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	94.46%	4.27%	1.27%	100.00%	
20	Iris Av.	e/o Nason St.	94.39%	4.32%	1.28%	100.00%	
21	Iris Av.	e/o Lasselle St.	94.30%	4.40%	1.30%	100.00%	
22	Iris Av.	e/o Kitching St.	94.26%	4.43%	1.31%	100.00%	
23	Eucalyptus Av.	e/o Nason St.	94.38%	4.33%	1.28%	100.00%	
24	Eucalyptus Av.	e/o Fir Av.	94.36%	4.35%	1.29%	100.00%	
25	Eucalyptus Av.	w/o Moreno Beach Dr.	96.91%	2.39%	0.71%	100.00%	
26	Eucalyptus Av.	e/o Auto Mall Dr.	89.33%	3.49%	7.18%	100.00%	
27	Eucalyptus Av.	e/o Dwy. 1	84.23%	4.15%	11.61%	100.00%	
28	Eucalyptus Av.	w/o Dwy. 5	87.10%	4.22%	8.68%	100.00%	
29	Eucalyptus Av.	w/o Redlands Blvd.	96.54%	2.67%	0.79%	100.00%	
30	Eucalyptus Av.	e/o Redlands Blvd.	94.24%	4.44%	1.32%	100.00%	
31	Encilia Av.	e/o Essen Lane	98.53%	1.13%	0.34%	100.00%	
32	Encilia Av.	e/o Mozart Wy.	99.25%	0.58%	0.17%	100.00%	
33	Encilia Av.	w/o Redlands Blvd.	99.11%	0.69%	0.20%	100.00%	
34	Alessandro Blvd.	e/o Lasselle St.	94.36%	4.35%	1.29%	100.00%	
35	Alessandro Blvd.	e/o Nason St.	94.41%	4.31%	1.28%	100.00%	
36	Alessandro Blvd.	e/o Moreno Beach Dr.	94.74%	4.06%	1.20%	100.00%	



 $<sup>^{1}</sup>$  Source: Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.  $^{2}$  Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-6: OPENING YEAR (2024) WITH PROJECT VEHICLE MIX

				With P	roject¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	94.33%	4.38%	1.30%	100.00%
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	94.36%	4.35%	1.29%	100.00%
3	Redlands Blvd.	s/o San Timoteo Canyon Rd.	94.24%	4.44%	1.32%	100.00%
4	Redlands Blvd.	n/o Ironwood Av.	94.37%	4.35%	1.29%	100.00%
5	Redlands Blvd.	s/o Ironwood Av.	94.39%	4.33%	1.28%	100.00%
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	92.51%	4.55%	2.94%	100.00%
7	Redlands Blvd.	n/o Eucalyptus Av.	92.14%	4.49%	3.37%	100.00%
8	Redlands Blvd.	s/o Eucalyptus Av.	95.26%	3.66%	1.08%	100.00%
9	Redlands Blvd.	n/o Dwy. 7	95.42%	3.53%	1.05%	100.00%
10	Redlands Blvd.	s/o Dwy. 7	95.45%	3.51%	1.04%	100.00%
11	Redlands Blvd.	s/o Encelia Av.	94.80%	4.01%	1.19%	100.00%
12	Redlands Blvd.	n/o Alessandro Blvd.	94.41%	4.31%	1.28%	100.00%
13	Redlands Blvd.	s/o Alessandro Blvd.	94.37%	4.34%	1.29%	100.00%
14	John F Kennedy Dr.	s/o Cactus Av.	94.43%	4.30%	1.27%	100.00%
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	94.30%	4.40%	1.30%	100.00%
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	93.59%	4.39%	2.02%	100.00%
17	Moreno Beach Dr.	s/o Alessandro Blvd.	94.33%	4.37%	1.30%	100.00%
18	Moreno Beach Dr.	s/o Cactus Av.	94.35%	4.36%	1.29%	100.00%
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	94.38%	4.33%	1.28%	100.00%
20	Iris Av.	e/o Nason St.	94.34%	4.36%	1.29%	100.00%
21	Iris Av.	e/o Lasselle St.	94.28%	4.41%	1.31%	100.00%
22	Iris Av.	e/o Kitching St.	94.25%	4.43%	1.31%	100.00%
23	Eucalyptus Av.	e/o Nason St.	94.36%	4.35%	1.29%	100.00%
24	Eucalyptus Av.	e/o Fir Av.	94.34%	4.37%	1.29%	100.00%
25	Eucalyptus Av.	w/o Moreno Beach Dr.	96.15%	2.97%	0.88%	100.00%
26	Eucalyptus Av.	e/o Auto Mall Dr.	90.53%	3.73%	5.74%	100.00%
27	Eucalyptus Av.	e/o Dwy. 1	86.18%	4.21%	9.61%	100.00%
28	Eucalyptus Av.	w/o Dwy. 5	88.65%	4.27%	7.08%	100.00%
29	Eucalyptus Av.	w/o Redlands Blvd.	95.95%	3.13%	0.93%	100.00%
30	Eucalyptus Av.	e/o Redlands Blvd.	94.24%	4.44%	1.32%	100.00%
31	Encilia Av.	e/o Essen Lane	98.42%	1.22%	0.36%	100.00%
32	Encilia Av.	e/o Mozart Wy.	99.18%	0.64%	0.19%	100.00%
33	Encilia Av.	w/o Redlands Blvd.	99.03%	0.75%	0.22%	100.00%
34	Alessandro Blvd.	e/o Lasselle St.	94.32%	4.38%	1.30%	100.00%
35	Alessandro Blvd.	e/o Nason St.	94.34%	4.37%	1.29%	100.00%
36	Alessandro Blvd.	e/o Moreno Beach Dr.	94.61%	4.16%	1.23%	100.00%



 $<sup>^{1}</sup>$  Source: Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.  $^{2}$  Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-7: GENERAL PLAN BUILD-OUT (2040) WITH PROJECT VEHICLE MIX

				With Pr	oject <sup>1</sup>	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	94.31%	4.39%	1.30%	100.00%
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	94.34%	4.37%	1.29%	100.00%
3	Redlands Blvd.	s/o San Timoteo Canyon Rd.	94.24%	4.44%	1.32%	100.00%
4	Redlands Blvd.	n/o Ironwood Av.	94.35%	4.36%	1.29%	100.00%
5	Redlands Blvd.	s/o Ironwood Av.	94.36%	4.35%	1.29%	100.00%
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	93.01%	4.52%	2.47%	100.00%
7	Redlands Blvd.	n/o Eucalyptus Av.	92.89%	4.47%	2.63%	100.00%
8	Redlands Blvd.	s/o Eucalyptus Av.	94.88%	3.95%	1.17%	100.00%
9	Redlands Blvd.	n/o Dwy. 7	94.99%	3.86%	1.14%	100.00%
10	Redlands Blvd.	s/o Dwy. 7	95.01%	3.85%	1.14%	100.00%
11	Redlands Blvd.	s/o Encelia Av.	94.68%	4.10%	1.22%	100.00%
12	Redlands Blvd.	n/o Alessandro Blvd.	94.37%	4.35%	1.29%	100.00%
13	Redlands Blvd.	s/o Alessandro Blvd.	94.37%	4.35%	1.29%	100.00%
14	John F Kennedy Dr.	s/o Cactus Av.	94.34%	4.36%	1.29%	100.00%
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	94.28%	4.41%	1.31%	100.00%
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	93.76%	4.40%	1.84%	100.00%
17	Moreno Beach Dr.	s/o Alessandro Blvd.	94.31%	4.39%	1.30%	100.00%
18	Moreno Beach Dr.	s/o Cactus Av.	94.33%	4.37%	1.30%	100.00%
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	94.35%	4.36%	1.29%	100.00%
20	Iris Av.	e/o Nason St.	94.31%	4.39%	1.30%	100.00%
21	Iris Av.	e/o Lasselle St.	94.27%	4.42%	1.31%	100.00%
22	Iris Av.	e/o Kitching St.	94.25%	4.44%	1.31%	100.00%
23	Eucalyptus Av.	e/o Nason St.	94.29%	4.40%	1.30%	100.00%
24	Eucalyptus Av.	e/o Fir Av.	94.30%	4.40%	1.30%	100.00%
25	Eucalyptus Av.	w/o Moreno Beach Dr.	95.38%	3.57%	1.06%	100.00%
26	Eucalyptus Av.	e/o Auto Mall Dr.	92.41%	4.09%	3.50%	100.00%
27	Eucalyptus Av.	e/o Dwy. 1	89.74%	4.31%	5.95%	100.00%
28	Eucalyptus Av.	w/o Dwy. 5	91.44%	4.35%	4.21%	100.00%
29	Eucalyptus Av.	w/o Redlands Blvd.	95.02%	3.84%	1.14%	100.00%
30	Eucalyptus Av.	e/o Redlands Blvd.	94.24%	4.44%	1.32%	100.00%
31	Encilia Av.	e/o Essen Lane	95.01%	3.85%	1.14%	100.00%
32	Encilia Av.	e/o Mozart Wy.	95.73%	3.29%	0.98%	100.00%
33	Encilia Av.	w/o Redlands Blvd.	96.36%	2.81%	0.83%	100.00%
34	Alessandro Blvd.	e/o Lasselle St.	94.28%	4.41%	1.31%	100.00%
35	Alessandro Blvd.	e/o Nason St.	94.30%	4.39%	1.30%	100.00%
36	Alessandro Blvd.	e/o Moreno Beach Dr.	94.35%	4.36%	1.29%	100.00%



 $<sup>^{\</sup>rm 1}$  Source: Moreno Valley Trade Center Traffic Impact Analysis, translutions, inc.  $^{\rm 2}$  Total of vehicle mix percentage values rounded to the nearest one-hundredth.

## **6.3** VIBRATION ASSESSMENT

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-8. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation:  $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) - 30 \log(D/25)$ 

TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Decibels (VdB) at 25 feet
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87
Pile Driver	93

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual



# 7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the *Moreno Valley Trade Center Traffic Impact Analysis*. (21) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

#### 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 7-1 through 7-6 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation. Roadway segments are analyzed from the without Project to the with Project conditions in each of the following timeframes: Existing, Opening Year (2024), and General Plan Build-Out (2040). Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.



**TABLE 7-1: EXISTING WITHOUT PROJECT NOISE CONTOURS** 

			Receiving	CNEL at		Distance to Contour from Centerline (Feet)		
ID	Road	Segment	Existing Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	73.3	60	130	279	
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	72.6	81	175	378	
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	72.6	82	177	381	
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	72.4	80	173	372	
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	71.7	71	153	329	
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	71.5	69	148	319	
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	70.8	62	133	287	
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	70.9	63	135	291	
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	70.9	63	135	291	
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	70.9	63	135	291	
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	70.1	56	121	260	
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	69.6	RW	111	240	
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	69.2	RW	104	225	
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	67.4	RW	63	137	
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	69.0	RW	93	199	
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	72.9	104	224	482	
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	71.8	89	191	411	
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	71.0	78	167	360	
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	71.1	79	170	367	
20	Iris Av.	e/o Nason St.	Sensitive	71.9	90	193	417	
21	Iris Av.	e/o Lasselle St.	Sensitive	73.9	121	261	562	
22	Iris Av.	e/o Kitching St.	Sensitive	73.3	111	239	515	
23	Eucalyptus Av.	e/o Nason St.	Sensitive	67.7	RW	76	163	
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	69.4	RW	99	213	
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	63.6	RW	RW	87	
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	60.1	RW	RW	50	
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	59.7	RW	RW	RW	
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	61.8	RW	RW	66	
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	61.8	RW	RW	66	
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	62.1	RW	RW	69	
31	Encilia Av.	e/o Essen Lane	Sensitive	53.1	RW	RW	RW	
32	Encilia Av.	e/o Mozart Wy.	Sensitive	53.1	RW	RW	RW	
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	56.5	RW	RW	RW	
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	69.4	RW	131	282	
35	Alessandro Blvd.	e/o Nason St.	Sensitive	69.7	RW	113	243	
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	67.3	RW	78	169	

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses, non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

**TABLE 7-2: EXISTING WITH PROJECT NOISE CONTOURS** 

			Receiving	CNEL at		nce to Co enterline	
ID	Road	Segment	Existing Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	73.4	61	130	281
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	72.6	82	177	381
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	72.6	82	177	381
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	72.5	81	174	375
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	71.7	72	155	333
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	73.0	88	189	407
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	72.9	86	185	398
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	71.4	68	147	318
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	71.5	70	150	323
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	71.5	70	150	324
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	70.4	59	126	272
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	69.7	RW	113	243
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	69.2	RW	105	227
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	67.5	RW	64	139
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	69.0	RW	93	200
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	73.7	119	256	553
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	71.9	89	192	414
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	71.0	78	169	363
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	71.2	80	173	372
20	Iris Av.	e/o Nason St.	Sensitive	72.0	91	195	421
21	Iris Av.	e/o Lasselle St.	Sensitive	73.9	121	262	564
22	Iris Av.	e/o Kitching St.	Sensitive	73.3	111	239	516
23	Eucalyptus Av.	e/o Nason St.	Sensitive	67.7	RW	76	164
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	69.5	RW	99	214
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	65.2	RW	51	110
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	67.1	RW	69	149
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	69.9	RW	105	227
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	68.7	RW	88	189
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	63.0	RW	RW	80
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	62.1	RW	RW	69
31	Encilia Av.	e/o Essen Lane	Sensitive	57.1	RW	RW	RW
32	Encilia Av.	e/o Mozart Wy.	Sensitive	59.6	RW	RW	RW
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	62.4	RW	RW	63
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	69.4	RW	132	285
35	Alessandro Blvd.	e/o Nason St.	Sensitive	69.7	RW	114	246
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	67.5	RW	81	175

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR (2024) PROJECT NOISE CONTOURS

			Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Road	Segment	Existing Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	74.0	66	142	307
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	73.2	90	193	415
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	73.3	91	195	421
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.1	89	192	414
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	72.3	79	170	365
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	72.5	80	173	373
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	72.0	75	161	347
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	71.6	71	153	329
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	71.6	71	153	329
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	71.6	71	153	329
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	71.0	64	138	297
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	70.6	60	130	280
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.0	55	118	254
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	68.3	RW	73	156
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	70.6	54	117	253
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	74.2	128	277	596
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	73.2	109	234	505
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	72.5	98	212	456
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	73.2	110	237	510
20	Iris Av.	e/o Nason St.	Sensitive	73.8	120	258	557
21	Iris Av.	e/o Lasselle St.	Sensitive	75.3	152	327	705
22	Iris Av.	e/o Kitching St.	Sensitive	74.7	137	295	635
23	Eucalyptus Av.	e/o Nason St.	Sensitive	68.5	RW	86	186
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	70.4	54	115	248
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	66.0	RW	58	126
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	62.7	RW	RW	75
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	62.5	RW	RW	73
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	63.8	RW	RW	90
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	63.8	RW	RW	90
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	65.8	RW	56	121
31	Encilia Av.	e/o Essen Lane	Sensitive	53.6	RW	RW	RW
32	Encilia Av.	e/o Mozart Wy.	Sensitive	53.6	RW	RW	RW
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	56.9	RW	RW	RW
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	71.7	86	186	401
35	Alessandro Blvd.	e/o Nason St.	Sensitive	72.3	78	169	364
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	68.7	RW	97	210

<sup>&</sup>lt;sup>1</sup>Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: OPENING YEAR (2024) WITH PROJECT NOISE CONTOURS

			Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Road	Segment	Existing Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1 !	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	74.0	66	143	308
2 !	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	73.2	90	194	419
3 1	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	73.3	91	195	421
4 1	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.2	90	194	417
5 1	Redlands Blvd.	s/o Ironwood Av.	Sensitive	72.4	79	171	369
6 I	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	73.8	98	211	455
7 1	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	73.7	97	209	450
8 1	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	72.1	76	164	354
9 1	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	72.2	77	166	359
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	72.2	77	167	360
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	71.2	66	143	308
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	70.7	61	131	282
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.0	55	119	256
14 .	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	68.3	RW	73	158
15 I	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	70.6	55	118	254
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	74.9	142	307	660
17 I	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	73.2	109	236	508
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	72.5	99	213	459
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	73.3	111	239	515
20 I	Iris Av.	e/o Nason St.	Sensitive	73.8	121	260	560
21	Iris Av.	e/o Lasselle St.	Sensitive	75.3	152	328	707
22	Iris Av.	e/o Kitching St.	Sensitive	74.7	137	295	635
23	Eucalyptus Av.	e/o Nason St.	Sensitive	68.6	RW	87	187
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	70.5	54	116	250
25 I	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	67.0	RW	68	146
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	67.7	RW	76	164
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	70.2	52	111	240
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	69.2	RW	95	204
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	64.6	RW	RW	102
30 I	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	65.8	RW	56	121
31 I	Encilia Av.	e/o Essen Lane	Sensitive	57.3	RW	RW	RW
32	Encilia Av.	e/o Mozart Wy.	Sensitive	59.7	RW	RW	RW
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	62.5	RW	RW	64
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	71.7	87	187	403
35	Alessandro Blvd.	e/o Nason St.	Sensitive	72.3	79	170	366
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	68.9	RW	100	215

<sup>&</sup>lt;sup>1</sup>Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5: GENERAL PLAN BUILD-OUT (2040) WITHOUT PROJECT NOISE CONTOURS

			Non-Sensitive Non-Sensitive Non-Sensitive Non-Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive	CNEL at		nce to Co enterline	
ID	Road	Segment	_	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	San Timoteo Canyon Rd.	n/o Alessandro Rd.	Non-Sensitive	75.2	80	172	371
2	San Timoteo Canyon Rd.	s/o Live Oak Canyon Rd.	Sensitive	74.0	102	220	473
3	Redlands Blvd.	s/o San Timoteo Canyon Rd.	Sensitive	74.3	107	230	495
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.7	96	208	447
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	73.4	93	201	432
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	74.0	101	218	470
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	74.0	102	220	474
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	73.9	100	216	465
9	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	73.9	100	216	465
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	73.9	100	216	465
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	72.1	76	163	352
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	71.8	73	157	338
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.2	56	122	262
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	70.9	50	108	233
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	71.9	67	145	313
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	75.5	157	338	729
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	74.2	127	275	592
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	73.1	108	233	502
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	74.3	130	281	605
20	Iris Av.	e/o Nason St.	Sensitive	75.7	160	344	741
21	Iris Av.	e/o Lasselle St.	Sensitive	77.0	195	420	904
22	Iris Av.	e/o Kitching St.	Sensitive	76.1	171	367	792
23	Eucalyptus Av.	e/o Nason St.	Sensitive	72.1	69	150	323
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	72.6	74	160	344
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	69.0	RW	92	198
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	67.1	RW	69	149
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	67.0	RW	67	145
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	68.0	RW	79	170
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	68.0	RW	79	170
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	70.9	57	123	264
31	Encilia Av.	e/o Essen Lane	Sensitive	65.8	RW	50	107
32	Encilia Av.	e/o Mozart Wy.	Sensitive	65.8	RW	50	107
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	66.1	RW	52	112
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	74.6	137	295	635
35	Alessandro Blvd.	e/o Nason St.	Sensitive	74.2	105	225	485
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	74.2	105	226	487

<sup>&</sup>lt;sup>1</sup>Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: GENERAL PLAN BUILD-OUT (2040) WITH PROJECT NOISE CONTOURS

			Receiving	CNEL at		nce to Co enterline	
ID	Road	Segment	Existing Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	San Timoteo Canyon Rd.	n/o Alessandro Rd.	Non-Sensitive	75.2	80	173	373
2	San Timoteo Canyon Rd.	s/o Live Oak Canyon Rd.	Sensitive	74.1	103	221	476
3	Redlands Blvd.	s/o San Timoteo Canyon Rd.	Sensitive	74.3	107	230	495
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.7	97	209	451
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	73.5	94	202	435
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	74.9	117	252	544
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	75.2	122	262	564
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	74.2	105	226	486
9	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	74.2	106	227	490
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	74.3	106	228	491
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	72.3	78	168	363
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	71.9	73	158	340
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.2	57	123	264
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	70.9	51	109	235
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	72.0	68	145	313
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	76.0	170	365	787
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	74.2	128	276	594
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	73.2	109	235	505
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	74.4	131	283	610
20	Iris Av.	e/o Nason St.	Sensitive	75.7	160	345	744
21	Iris Av.	e/o Lasselle St.	Sensitive	77.0	195	420	905
22	Iris Av.	e/o Kitching St.	Sensitive	76.1	171	368	792
23	Eucalyptus Av.	e/o Nason St.	Sensitive	72.2	70	150	323
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	72.6	74	160	345
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	69.5	RW	99	214
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	69.7	RW	102	221
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	71.4	62	133	286
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	70.8	57	122	263
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	68.3	RW	83	179
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	70.9	57	123	264
31	Encilia Av.	e/o Essen Lane	Sensitive	66.1	RW	52	112
32	Encilia Av.	e/o Mozart Wy.	Sensitive	66.5	RW	56	120
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	67.3	RW	62	135
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	74.7	137	295	636
35	Alessandro Blvd.	e/o Nason St.	Sensitive	74.2	105	226	487
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	74.3	106	228	491

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive areas limited to existing residential land uses non-sensitive uses include office, commercial and industrial.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

## 7.2 EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report to fully analyze all the existing traffic scenarios identified in the *Moreno Valley Trade Center Traffic Impact Analysis*. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 53.1 to 73.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 57.1 to 73.9 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level impacts will range from 0.0 to 10.1 dBA CNEL.

In order for an off-site traffic noise level impact to be considered significant, receivers need to perceive an increase of traffic noise levels over time. Therefore, off-site traffic impacts are generally limited to noise sensitive residential receivers that are likely to perceive this increase. While the analysis shows that the non-sensitive industrial uses will experience an off-site traffic noise level increase of 10.1 dBA CNEL, this is not considered a significant noise level impact since there are no adjacent receivers that will experience this increase over time. In addition, the Project-related off-site traffic noise level increase are largely due to the low traffic volumes that currently exist. This finding is consistent with the off-site traffic increase significance criteria outlined in Section 4.

Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic. This finding includes the following project design feature that will be included as a condition of approval.

• Rubberized asphalt shall be provided on the full cross-section width on Encilia Avenue between Essen Lane and Shubert Street (Segments 31 and 32).

Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement. (4) According to research conducted by Caltrans (22) and the Canadian Ministry of Transportation and Highways (23) a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

# 7.3 OPENING YEAR (2024) PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Opening Year (2024) without Project conditions CNEL noise levels. The Opening Year (2024) without Project exterior noise levels are expected to range from 53.6 to 75.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year (2024) with Project conditions will range from



57.3 to 75.3 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases will range from 0.0 to 7.7 dBA CNEL.

In order for an off-site traffic noise level impact to be considered significant, receivers need to perceive an increase of traffic noise levels over time. Therefore, off-site traffic impacts are generally limited to noise sensitive residential receivers that are likely to perceive this increase. While the analysis shows that the non-sensitive industrial uses will experience an off-site traffic noise level increase of 7.7 dBA CNEL, this is not considered a significant noise level impact since there are no adjacent receivers that will experience this increase over time. In addition, the Project-related off-site traffic noise level increase are largely due to the low traffic volumes that currently exist. This finding is consistent with the off-site traffic increase significance criteria outlined in Section 4.

Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic. This finding includes the following project design feature that will be included as a condition of approval.

• Rubberized asphalt shall be provided on the full cross-section width on Encilia Avenue between Essen Lane and Shubert Street (Segments 31 and 32).

Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement. (4) According to research conducted by Caltrans (22) and the Canadian Ministry of Transportation and Highways (23) a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

# 7.4 GENERAL PLAN BUILD-OUT (2040) PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the General Plan Build-Out (2040) without Project conditions CNEL noise levels. The General Plan Build-Out (2040) without Project exterior noise levels are expected to range from 65.8 to 77.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the General Plan Build-Out (2040) with Project conditions will range from 66.1 to 77.0 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases will range from 0.0 to 4.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.



TABLE 7-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Existing		EL at Receind Use (dE	_	Noise Incremental Level Incre Sensitive Threshold		Increase
			Land Use <sup>1</sup>	No Project	With Project	Project Addition	Land Use?	Limit	Exceeded?
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	73.3	73.4	0.0	No	3.0	No
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	72.6	72.6	0.1	Yes	1.5	No
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	72.6	72.6	0.0	Yes	1.5	No
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	72.4	72.5	0.1	Yes	1.5	No
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	71.7	71.7	0.1	Yes	1.5	No
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	71.5	73.0	1.6	No	3.0	No
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	70.8	72.9	2.1	No	3.0	No
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	70.9	71.4	0.6	No	3.0	No
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	70.9	71.5	0.7	No	3.0	No
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	70.9	71.5	0.7	No	3.0	No
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	70.1	70.4	0.3	Yes	1.5	No
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	69.6	69.7	0.1	Yes	1.5	No
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	69.2	69.2	0.1	Yes	1.5	No
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	67.4	67.5	0.1	Yes	1.5	No
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	69.0	69.0	0.0	No	n/a	No
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	72.9	73.7	0.9	No	3.0	No
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	71.8	71.9	0.1	Yes	1.5	No
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	71.0	71.0	0.1	Yes	1.5	No
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	71.1	71.2	0.1	Yes	1.5	No
20	Iris Av.	e/o Nason St.	Sensitive	71.9	72.0	0.1	Yes	1.5	No
21	Iris Av.	e/o Lasselle St.	Sensitive	73.9	73.9	0.0	Yes	1.5	No
22	Iris Av.	e/o Kitching St.	Sensitive	73.3	73.3	0.0	Yes	1.5	No
23	Eucalyptus Av.	e/o Nason St.	Sensitive	67.7	67.7	0.1	Yes	1.5	No



ID	Road	Segment	Receiving Existing		EL at Receind Use (dB		Noise Sensitive	Level	ental Noise Increase eshold <sup>3</sup>
			Land Use <sup>1</sup>	No Project	With Project	Project Addition	Land Use?	Limit	Exceeded?
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	69.4	69.5	0.0	Yes	1.5	No
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	63.6	65.2	1.5	No	n/a	No
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	60.1	67.1	7.0	No	n/a	No
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	59.7	69.9	10.1	No	n/a	No
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	61.8	68.7	6.9	No	n/a	No
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	61.8	63.0	1.2	No	n/a	No
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	62.1	62.1	0.0	No	n/a	No
31	Encilia Av.	e/o Essen Lane	Sensitive	53.1	57.1	0.0	Yes	5.0	No <sup>4</sup>
32	Encilia Av.	e/o Mozart Wy.	Sensitive	53.1	59.6	2.5	Yes	5.0	No <sup>4</sup>
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	56.5	62.4	5.8	No	n/a	No
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	69.4	69.4	0.1	Yes	1.5	No
35	Alessandro Blvd.	e/o Nason St.	Sensitive	69.7	69.7	0.1	Yes	1.5	No
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	67.3	67.5	0.2	Yes	1.5	No

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses, non-sensitive uses include office, commercial and industrial.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

<sup>&</sup>lt;sup>4</sup> The rubberized asphalt pavement project design feature will reduce the project related traffic noise increase by an estimated 4 dBA.

TABLE 7-8: OPENING YEAR (2024) WITH PROJECT TRAFFIC NOISE INCREASES

ID	Road	Segment	Receiving Existing		EL at Receind Use (dE	_	Noise Sensitive	Level	ental Noise Increase eshold <sup>3</sup>
			Land Use <sup>1</sup>	No Project	No   With   Project		Land Use?	Limit	Exceeded?
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	74.0	74.0	0.0	No	3.0	No
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	73.2	73.2	0.0	Yes	1.5	No
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	73.3	73.3	0.0	Yes	1.5	No
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.1	73.2	0.1	Yes	1.5	No
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	72.3	72.4	0.1	Yes	1.5	No
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	72.5	73.8	1.3	No	3.0	No
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	72.0	73.7	1.7	No	3.0	No
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	71.6	72.1	0.5	No	3.0	No
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	71.6	72.2	0.6	No	3.0	No
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	71.6	72.2	0.6	No	3.0	No
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	71.0	71.2	0.2	Yes	1.5	No
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	70.6	70.7	0.1	Yes	1.5	No
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.0	70.0	0.1	Yes	1.5	No
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	68.3	68.3	0.1	Yes	1.5	No
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	70.6	70.6	0.0	No	3.0	No
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	74.2	74.9	0.7	No	3.0	No
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	73.2	73.2	0.0	Yes	1.5	No
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	72.5	72.5	0.0	Yes	1.5	No
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	73.2	73.3	0.1	Yes	1.5	No
20	Iris Av.	e/o Nason St.	Sensitive	73.8	73.8	0.0	Yes	1.5	No
21	Iris Av.	e/o Lasselle St.	Sensitive	75.3	75.3	0.0	Yes	1.5	No
22	Iris Av.	e/o Kitching St.	Sensitive	74.7	74.7	0.0	Yes	1.5	No
23	Eucalyptus Av.	e/o Nason St.	Sensitive	68.5	68.6	0.0	Yes	1.5	No



ID	Road	Segment	Receiving Existing		EL at Receind Use (dE	_	Noise Sensitive	Level	ental Noise Increase eshold <sup>3</sup>
			Land Use <sup>1</sup>	No Project	With Project Addit		Land Use?	Limit	Exceeded?
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	70.4	70.5	0.0	Yes	1.5	No
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	66.0	67.0	1.0	No	n/a	No
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	62.7	67.7	5.1	No	n/a	No
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	62.5	70.2	7.7	No	n/a	No
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	63.8	69.2	5.4	No	n/a	No
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	63.8	64.6	0.8	No	n/a	No
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	65.8	65.8	0.0	No	n/a	No
31	Encilia Av.	e/o Essen Lane	Sensitive	53.6	57.3	0.0	Yes	5.0	No <sup>4</sup>
32	Encilia Av.	e/o Mozart Wy.	Sensitive	53.6	59.7	2.1	Yes	5.0	No <sup>4</sup>
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	56.9	62.5	5.5	No	n/a	No
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	71.7	71.7	0.0	Yes	1.5	No
35	Alessandro Blvd.	e/o Nason St.	Sensitive	72.3	72.3	0.0	Yes	1.5	No
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	68.7	68.9	0.2	Yes	1.5	No

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses, non-sensitive uses include office, commercial and industrial.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

<sup>&</sup>lt;sup>4</sup> The rubberized asphalt pavement project design feature will reduce the project related traffic noise level increase by an estimated 4 dBA.

TABLE 7-9: GENERAL PLAN BUILD-OUT (2040) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Existing		EL at Receind Use (dE	_	Noise Sensitive	Level	ental Noise Increase eshold <sup>3</sup>
			Land Use <sup>1</sup>	No Project	With Project	Project Addition	Land Use?	Limit	Exceeded?
1	San Timoteo Cyn. Rd.	n/o Alessandro Rd.	Non-Sensitive	75.2	75.2	0.0	No	3.0	No
2	San Timoteo Cyn. Rd.	s/o Live Oak Canyon Rd.	Sensitive	74.0	74.1	0.0	Yes	1.5	No
3	Redlands Blvd.	s/o San Timoteo Cyn. Rd.	Sensitive	74.3	74.3	0.0	Yes	1.5	No
4	Redlands Blvd.	n/o Ironwood Av.	Sensitive	73.7	73.7	0.0	Yes	1.5	No
5	Redlands Blvd.	s/o Ironwood Av.	Sensitive	73.4	73.5	0.0	Yes	1.5	No
6	Redlands Blvd.	s/o SR-60 Westbound Ramps	Non-Sensitive	74.0	74.9	1.0	No	3.0	No
7	Redlands Blvd.	n/o Eucalyptus Av.	Non-Sensitive	74.0	75.2	1.1	No	3.0	No
8	Redlands Blvd.	s/o Eucalyptus Av.	Non-Sensitive	73.9	74.2	0.3	No	3.0	No
9	Redlands Blvd.	n/o Dwy. 7	Non-Sensitive	73.9	74.2	0.3	No	3.0	No
10	Redlands Blvd.	s/o Dwy. 7	Non-Sensitive	73.9	74.3	0.4	No	3.0	No
11	Redlands Blvd.	s/o Encelia Av.	Sensitive	72.1	72.3	0.2	Yes	1.5	No
12	Redlands Blvd.	n/o Alessandro Blvd.	Sensitive	71.8	71.9	0.1	Yes	1.5	No
13	Redlands Blvd.	s/o Alessandro Blvd.	Sensitive	70.2	70.2	0.1	Yes	1.5	No
14	John F Kennedy Dr.	s/o Cactus Av.	Sensitive	70.9	70.9	0.0	Yes	1.5	No
15	Moreno Beach Dr.	n/o SR-60 Westbound Ramps	Non-Sensitive	71.9	72.0	0.0	No	3.0	No
16	Moreno Beach Dr.	s/o SR-60 Eastbound Ramps	Non-Sensitive	75.5	76.0	0.5	No	3.0	No
17	Moreno Beach Dr.	s/o Alessandro Blvd.	Sensitive	74.2	74.2	0.0	Yes	1.5	No
18	Moreno Beach Dr.	s/o Cactus Av.	Sensitive	73.1	73.2	0.0	Yes	1.5	No
19	Moreno Beach Dr.	s/o John F Kennedy Dr.	Sensitive	74.3	74.4	0.0	Yes	1.5	No
20	Iris Av.	e/o Nason St.	Sensitive	75.7	75.7	0.0	Yes	1.5	No
21	Iris Av.	e/o Lasselle St.	Sensitive	77.0	77.0	0.0	Yes	1.5	No
22	Iris Av.	e/o Kitching St.	Sensitive	76.1	76.1	0.0	Yes	1.5	No
23	Eucalyptus Av.	e/o Nason St.	Sensitive	72.1	72.2	0.0	Yes	1.5	No



ID	Road	Segment	Receiving Existing		EL at Receind Use (dE	_	Noise Sensitive	Level	ental Noise Increase eshold <sup>3</sup>
			Land Use <sup>1</sup>	No Project	With Project	Project Addition	Land Use?	Limit	Exceeded?
24	Eucalyptus Av.	e/o Fir Av.	Sensitive	72.6	72.6	0.0	Yes	1.5	No
25	Eucalyptus Av.	w/o Moreno Beach Dr.	Non-Sensitive	69.0	69.5	0.5	No	5.0	No
26	Eucalyptus Av.	e/o Auto Mall Dr.	Non-Sensitive	67.1	69.7	2.5	No	5.0	No
27	Eucalyptus Av.	e/o Dwy. 1	Non-Sensitive	67.0	71.4	4.4	No	5.0	No
28	Eucalyptus Av.	w/o Dwy. 5	Non-Sensitive	68.0	70.8	2.9	No	5.0	No
29	Eucalyptus Av.	w/o Redlands Blvd.	Non-Sensitive	68.0	68.3	0.3	No	5.0	No
30	Eucalyptus Av.	e/o Redlands Blvd.	Non-Sensitive	70.9	70.9	0.0	No	3.0	No
31	Encilia Av.	e/o Essen Lane	Sensitive	65.8	66.1	0.3	Yes	1.5	No
32	Encilia Av.	e/o Mozart Wy.	Sensitive	65.8	66.5	0.7	Yes	1.5	No
33	Encilia Av.	w/o Redlands Blvd.	Non-Sensitive	66.1	67.3	1.2	No	5.0	No
34	Alessandro Blvd.	e/o Lasselle St.	Sensitive	74.6	74.7	0.0	Yes	1.5	No
35	Alessandro Blvd.	e/o Nason St.	Sensitive	74.2	74.2	0.0	Yes	1.5	No
36	Alessandro Blvd.	e/o Moreno Beach Dr.	Sensitive	74.2	74.3	0.0	Yes	1.5	No

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses, non-sensitive uses include office, commercial and industrial.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

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# 8 SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, three receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 21969 Spruce Avenue, approximately 1,621 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the residential building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 13031 Shubert Street, approximately 126 feet south of the Project site. Receiver R2 is placed behind the existing 4-foot high noise barrier in the private outdoor living area (backyard). A 24-hour noise measurement near this location, L2, is used to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 13020 Essen Lane, approximately 118 feet south of the Project site. Receiver R3 is placed behind the existing 4-foot high noise barrier in the private outdoor living area (backyard). A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.



SITE LEGEND: Site Boundary Receiver Locations

**EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS** 



Existing Barrier

6' Existing Barrier Height (in feet)

Distance from receiver to Project site boundary (in feet)

# 9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from the operation of the proposed Moreno Valley Trade Center Project. Exhibit 9-A identifies the representative noise source locations used to assess the operational noise levels.

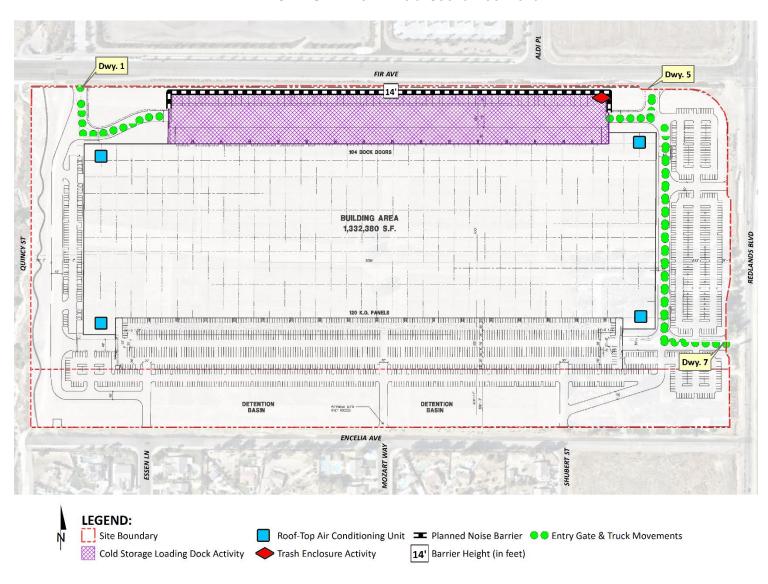
## 9.1 OPERATIONAL NOISE SOURCES

At the time this noise analysis was prepared the future tenants of the proposed Project were unknown. Therefore, this operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity.

## 9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity all operating continuously. These sources of noise activity will likely vary throughout the day.





**EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS** 



**TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS** 

Noise Source <sup>1</sup>	Noise Source	Min.	/Hour²	Reference Noise	Sound Power
Noise Source-	Height (Feet)	Day	Night	Level (dBA L <sub>eq</sub> ) @ 50 Feet	Level (dBA)³
Cold Storage Loading Dock Activity	8'	60	60	65.7	111.5
Entry Gate & Truck Movements	8'	_4	_4	58.0	89.7
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	5	5	57.3	89.0

<sup>&</sup>lt;sup>1</sup> As measured by Urban Crossroads, Inc.

#### **9.2.1** MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (17)

#### 9.2.2 COLD STORAGE LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities.

The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L<sub>eq</sub> at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

<sup>&</sup>lt;sup>2</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 a.m.

<sup>&</sup>lt;sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

<sup>&</sup>lt;sup>4</sup> Entry Gate & Truck Movements are calculate based on the number of events by time of day (See Table 9-2).

#### 9.2.3 ENTRY GATE & TRUCK MOVEMENTS

An entry gate and truck movements reference noise level measurement were taken at the southern entry gate of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino over a 15-minute period and represents multiple noise sources producing a reference noise level of 58.0 dBA Leq at 50 feet. The noise sources included at this measurement location account for the rattling and squeaking during normal opening and closing operations, the gate closure equipment, truck engines idling outside the entry gate, truck movements through the entry gate, and background truck court activities and forklift backup alarm noise.

Consistent with the *Moreno Valley Trade Center Traffic Impact Analysis*, the Project is expected to generate a total of approximately 6,607 trip-ends per day (actual vehicles) and includes 857 truck trip-ends per day. (21) This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network. Using the estimated number of truck trips in combination with time of day vehicle splits, the number of entry gate and truck movements by driveway location were calculated. As shown on Table 9-2, this information is then used to calculate the entry gate and truck movements operational noise source activity based on the number of events by time of day.

**TABLE 9-2: ENTRY GATE & TRUCK MOVEMENTS BY LOCATION** 

Entry Gate &	Total	Trip	Dist. <sup>3</sup>	Truck	Time of Day Vehicle Splits <sup>5</sup>			Truc	k Moveme	ents <sup>6</sup>
Truck Movement Location <sup>1</sup>	Project Truck Trips <sup>2</sup>	In	Out	Trips by Location <sup>4</sup>	Day	Evening	Night	Day	Evening	Night
Driveway 1		70%	90%	686	81.79%	7.65%	10.55%	561	52	72
Driveway 5	857	0%	10%	43	81.79%	7.65%	10.55%	35	3	5
Driveway 7		30%	0%	129	81.79%	7.65%	10.55%	106	10	14

<sup>&</sup>lt;sup>1</sup> Driveway locations as shown on Exhibit 9-A.

#### 9.2.4 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units within the planned commercial retail land uses within the Project site, reference noise levels measurements were taken at the Santee Walmart. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a single mechanical roof-top air conditioning unit on the roof of the existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At 5 feet from the roof-top air conditioning unit, the exterior noise levels were measured at 77.2 dBA L<sub>eq</sub>. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L<sub>eq</sub>. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated

<sup>&</sup>lt;sup>2</sup> Total Project truck trips according to Table A of the Moreno Valley Trade Center TIA.

<sup>&</sup>lt;sup>3</sup> Project truck trip distribution according to Figure 6 of the Moreno Valley Trade Center TIA.

<sup>&</sup>lt;sup>4</sup> Calculated trip trucks per location represents the product of the total (inbound and outbound) project truck trips and the trip distribution.

<sup>&</sup>lt;sup>5</sup> Heavy truck time of day vehicle splits as shown on Table 6-3.

<sup>&</sup>lt;sup>6</sup> Calculated time of day entry gate and truck movements by location.

to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings. The noise attenuation provided by the existing parapet wall is not reflected in this reference noise level measurement.

## 9.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure, Urban Crossroads collected a reference noise level measurement at an existing commercial and office park trash enclosure within a parking lot on the northeast corner of Baker Street and Red Hill Avenue. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L<sub>eq</sub> for the trash enclosure activity. The trash enclosure activity noise levels include two metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster, and background parking lot vehicle movements. Noise associated with trash enclosure activities is conservatively expected to occur for 5 minutes per hour.

## 9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (PWL) to describe individual noise sources. While sound pressure levels (e.g. Leq) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (PWL) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish as a result of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs including the planned 14-foot high screen wall used to estimate the Project operational noise levels presented in this section.

## 9.4 Project Operational Noise Levels

Trash Enclosure Activity

**Total (All Noise Sources)** 

Using the reference noise levels to represent the proposed Project operations that include cold storage loading dock activity, entry gate & truck movements, roof-top air conditioning units, and trash enclosure activity, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations and at 200 feet from the property line of the source. Tables 9-3 shows the Project operational noise levels during the daytime hours of 8:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 29.1 to 44.3 dBA Leq.

Operational Noise Levels by Receiver Location (dBA Leq) Noise Source<sup>1</sup> at 200' R1 R2 R3 Cold Storage Loading Dock Activity 44.1 25.9 25.7 25.6 **Entry Gate & Truck Movements** 29.6 25.4 18.5 19.1 **Roof-Top Air Conditioning Units** 22.1 26.9 27.5 25.7

0.0

30.9

0.0

30.0

0.0

29.1

**TABLE 9-3: DAYTIME PROJECT OPERATIONAL NOISE LEVELS** 

0.0

44.3

Table 9-4 shows the Project operational noise levels during the nighttime hours of 10:01 p.m. to 7:59 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 27.7 to 44.1 dBA  $L_{eq}$ . The differences between the daytime and nighttime noise levels is largely related to the duration of noise activity (Table 9-1).

Noise Source <sup>1</sup>	Operational	Noise Levels by	Receiver Location	on (dBA Leq)
Noise Source-	R1	R2	R3	at 200'
Cold Storage Loading Dock Activity	44.1	25.9	25.7	25.6
Entry Gate & Truck Movements	20.8	16.6	9.7	10.3
Roof-Top Air Conditioning Units	19.7	24.5	25.1	23.3
Trash Enclosure Activity	0.0	0.0	0.0	0.0
Total (All Noise Sources)	44.1	28.6	28.5	27.7

**TABLE 9-4: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS** 

## 9.5 Project Operational Noise Level Compliance

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Moreno Valley exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-5 shows the operational noise levels associated with Moreno Valley Trade Center Project will satisfy the City of Moreno Valley 65 dBA Leq daytime and 60 dBA Leq nighttime exterior noise level standards at

<sup>&</sup>lt;sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

<sup>&</sup>lt;sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

all nearby receiver locations and at 200 feet from the property line of the source. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

**TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE** 

Receiver Location <sup>1</sup>	Project Op Noise Level	perational s (dBA Leq)²		l Standards Leq) <sup>3</sup>	Noise Level Standards Exceeded? <sup>4</sup> Daytime Nighttime  No No No No	
Location	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	44.3	44.1	65	60	No	No
R2	30.9	28.6	65	60	No	No
R3	30.0	28.5	65	60	No	No
at 200'	29.1	27.7	65	60	No	No

<sup>&</sup>lt;sup>1</sup> See Exhibit 8-A for the receiver locations.

## 9.6 Project Operational Noise Level Increases

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (4) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10log_{10}[10^{SPL1/10} + 10^{SPL2/10} + ... 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-6 and 9-7, the Project is not expected to generate a measurable daytime and nighttime operational noise level increase dBA L<sub>eq</sub> at the nearby receiver locations and at 200 feet from the property line of the source. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

# 9.7 OPERATIONAL VIBRATION IMPACTS

To assess the potential vibration impacts from truck haul trips associated with operational activities the FTA *Transit Noise and Vibration Impact Assessment Manual* maximum-acceptable vibration criteria of 78 VdB for daytime residential uses and 72 VdB for nighttime uses in buildings where people normally sleep is used. However, trucks rarely create vibration that exceeds 70 VdB (unless there are bumps due to frequent potholes in the road). (3 p. 113) Trucks transiting

<sup>&</sup>lt;sup>2</sup> Proposed Project operational noise levels as shown on Tables 9-3 and 9-4.

<sup>&</sup>lt;sup>3</sup> Exterior noise level standards for source (commercial) land use, as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

<sup>&</sup>quot;Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 a.m.

on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the maximum-acceptable vibration criteria of 78 VdB for daytime and 72 VdB for nighttime for residential uses, and therefore, will be *less than significant*.

TABLE 9-6: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	44.3	L1	75.3	75.3	0.0	1.5	No
R2	30.9	L2	54.2	54.2	0.0	5.0	No
R3	30.0	L3	51.0	51.0	0.0	5.0	No
at 200'	29.1	L3	51.0	51.0	0.0	5.0	No

<sup>&</sup>lt;sup>1</sup> See Exhibit 8-A for the receiver locations.



<sup>&</sup>lt;sup>2</sup> Total Project daytime operational noise levels as shown on Table 9-3.

<sup>&</sup>lt;sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>&</sup>lt;sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>&</sup>lt;sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>&</sup>lt;sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>&</sup>lt;sup>7</sup> Significance increase criteria as shown on Table 4-1.

TABLE 9-7: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	44.1	L1	73.8	73.8	0.0	1.5	No
R2	28.6	L2	54.6	54.6	0.0	5.0	No
R3	28.5	L3	50.4	50.4	0.0	5.0	No
at 200'	27.7	L3	50.4	50.4	0.0	5.0	No

<sup>&</sup>lt;sup>1</sup> See Exhibit 8-A for the receiver locations.



<sup>&</sup>lt;sup>2</sup> Total Project nighttime operational noise levels as shown on Table 9-4.

<sup>&</sup>lt;sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>&</sup>lt;sup>4</sup> Observed nighttime ambient noise levels as shown on Table 5-1.

<sup>&</sup>lt;sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>&</sup>lt;sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>&</sup>lt;sup>7</sup> Significance increase criteria as shown on Table 4-1.

#### 10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction noise source locations in relation to the nearby sensitive receiver locations previously described in Section 8.

To prevent high levels of construction noise from impacting noise-sensitive land uses, City of Moreno Valley Municipal Code Section 11.80.030 (D)(7) limits general construction activities within 200 feet of residential uses to weekdays, between 7:00 a.m. and 8:00 p.m. In addition, grading operations shall be limited to the hours identified in Section 8.21.050 (O) of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 4:00 p.m. on weekends and holidays or as approved by the City Engineer.

#### **10.1** Construction Noise Levels

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels.

#### 10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances of 30 feet and 50 feet, all construction noise level measurements presented on Table 10-1 have been adjusted for consistency to describe a uniform reference distance of 50 feet.



LEGEND: Construction Activity Receiver Locations Ŋ Existing Barrier Distance from receiver to Project site boundary (in feet) 6' Existing Barrier Height (in feet)

**EXHIBIT 10-A: Typical Construction Noise Source Locations** 



TABLE 10-1: TYPICAL CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity <sup>1</sup>	Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> )	Highest Reference Noise Level (dBA L <sub>eq</sub> )
	Demolition Activity	67.9	
Demolition	Backhoe	64.2	71.9
	Water Truck Pass-By & Backup Alarm	71.9	
	Scraper Turnaround & Pass-by 4 with Blades	72.6	
Site Preparation	Backhoe	64.2	72.6
Treparation	Water Truck Pass-By & Backup Alarm	71.9	
	Rough Grading Activities	73.5	
Grading	Water Truck Pass-By & Backup Alarm	71.9	73.5
	Construction Vehicle Maintenance Activities	67.5	
	Foundation Trenching	68.2	
Building Construction	Framing	62.3	71.6
Construction	Concrete Mixer Backup Alarms & Air Brakes	71.6	
	Concrete Mixer Truck Movements	71.2	
Paving	Concrete Paver Activities	65.6	71.2
	Concrete Mixer Pour & Paving Activities	65.9	]
	Air Compressors	65.2	
Architectural Coating	Generator	64.9	65.2
Coating	Crane	62.3	

 $<sup>^{\</sup>rm 1}$  Reference construction noise level measurements taken by Urban Crossroads, Inc.

#### 10.3 Typical Construction Noise Analysis

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. To assess the worst-case construction noise levels, the Project construction noise analysis relies on the highest noise level impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of primary construction activity (Project site boundary) to each receiver location. As shown on Table 10-2, the construction noise levels are expected to range from 58.6 to 64.7 dBA L<sub>eq</sub> at the nearby receiver locations and at 200 feet from the property line of the source. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.



TABLE 10-2: TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

		Construction Noise Levels (dBA L <sub>eq</sub> )						
Receiver Location <sup>1</sup>	Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>	
R1	57.0	57.7	58.6	56.7	56.3	50.3	58.6	
R2	63.1	63.8	64.7	62.8	62.4	56.4	64.7	
R3	62.9	63.6	64.5	62.6	62.2	56.2	64.5	
at 200'	61.7	62.4	63.3	61.4	61.0	55.0	63.3	

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 10-A.

#### 10.4 Typical Construction Noise Level Compliance

The construction noise analysis shows that the nearby receiver locations will satisfy the City of Moreno Valley daytime 65 dBA L<sub>eq</sub> significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise is considered *less than significant* at all receiver locations and at 200 feet from the property line of the source.

TABLE 10-3: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

	Construction Noise Levels (dBA L <sub>eq</sub> )				
Receiver Location <sup>1</sup>	Highest Construction Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>		
R1	58.6	65	No		
R2	64.7	65	No		
R3	64.5	65	No		
at 200'	63.3	65	No		

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 10-A.

#### 10.5 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

Nighttime concrete pouring activities may occur as a part of Project construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual buildings area as shown on Exhibit 10-B. Since the nighttime concrete pours may take place outside the permitted hours of construction as outlined in Section 3.5, the Project Applicant will be required to obtain prior authorization for nighttime work from the City of Moreno Valley.



<sup>&</sup>lt;sup>2</sup> Construction noise level calculations based on distance from the project site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

<sup>&</sup>lt;sup>2</sup> Highest construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations as shown on Table 10-2

<sup>&</sup>lt;sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?

**LEGEND:** Nighttime Concrete Pour Activity (Building Area) Existing Barrier Ŋ Site Boundary 6' Existing Barrier Height (in feet) Receiver Locations

**EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS** 



The paving stage construction noise levels, previously presented on Table 10-1, are based on the nighttime concrete pouring activity reference noise level measurements. Table 10-4 shows the concrete pour activities (paving) noise will range from 52.9 to 55.8 dBA  $L_{\rm eq.}$  at the nearest sensitive receiver locations and at 200 feet from the property line of the source. The concrete pouring construction noise analysis shows that the noise sensitive residential receiver locations will satisfy the 60 dBA  $L_{\rm eq}$  nighttime significance threshold during concrete pouring activities. Therefore, the noise impacts due to nighttime concrete pouring activity is considered *less than significant*. Appendix 10.2 includes the detailed CadnaA nighttime concrete construction noise model inputs.

TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

	Construction Noise Levels (dBA L <sub>eq</sub> )			
Receiver Location <sup>1</sup>	Paving Construction <sup>2</sup>	Nighttime Construction Standard <sup>3</sup>	Threshold Exceeded? <sup>4</sup>	
R1	52.9	60	No	
R2	55.8	60	No	
R3	55.8	60	No	
at 200'	55.4	60	No	

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 10-B.

#### 10.6 Typical Construction Vibration Impacts

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the
  potential of causing at least some perceptible vibration while operating close to buildings, the
  vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-5 presents the expected



 $<sup>^{2}</sup>$  Construction noise level calculations based on the distance from the building paving construction activity area.

<sup>&</sup>lt;sup>3</sup> Construction noise level standards as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?

typical construction equipment vibration levels at the nearby receiver locations. At distances ranging from 118 feet to 1,651 feet from typical Project construction activities (at the Project site boundary), construction vibration levels are estimated to range from 32.4 to 66.8 VdB and will remain below the FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria of 78 VdB for daytime residential uses at all receiver locations and at 200 feet from the property line of the source. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

**TABLE 10-5: TYPICAL CONSTRUCTION EQUIPMENT VIBRATION LEVELS** 

	Distance to		Receiver Vibration Levels (VdB) <sup>2</sup>					
Receiver Location <sup>1</sup>	Construction Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	Threshold VdB <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	1,651'	3.4	24.4	31.4	32.4	32.4	78	No
R2	126'	36.9	57.9	64.9	65.9	65.9	78	No
R3	118'	37.8	58.8	65.8	66.8	66.8	78	No
at 200'	200'	30.9	51.9	58.9	59.9	59.9	78	No

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 10-A.

Moreover, the vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

#### 10.7 SHEET PILE SYSTEM CONSTRUCTION REFERENCE NOISE LEVELS

An additional analysis was completed to assess potential impacts due to sheet pile drilling activities planned near the western project site boundary. Exhibit 10-C shows the location of the sheet pile drilling area in relation to three nearby receiver locations. According to the applicant, the sheet pile system will be installed using and ABI drill rig, forklift and rigging crane. It is expected that the contractor will be using the ABI drill rig to drive piles 8 hours per day for approximately 25 days.

This sheet pile construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (24) A default ground attenuation factor of 0.0 was used in the CadnaA noise prediction model to account for hard site conditions. Table 10-6 provides a summary of the reference average L<sub>eq</sub> noise levels used to describe each stage of construction.



<sup>&</sup>lt;sup>2</sup> Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

<sup>&</sup>lt;sup>3</sup> FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Does the vibration level exceed the maximum acceptable vibration threshold?

Sheet pile system will be installed using an ABI drill rig, forklift and rigging crane. Non-impact pile driving equipment (e.g., drilling or other non-impact alternatives) shall be required to reduce the pile driving equipment noise levels at adjacent receiver locations. SITE **LEGEND:** Sheet Pile Area • Sheet Pile Receivers 6' Existing Barrier Height (in feet) Site Boundary Existing Barrier ─● Distance from receiver to sheet pile activity (in feet)

**EXHIBIT 10-C: SHEET PILE DRIVING NOISE SOURCE LOCATIONS** 



TABLE 10-6: SHEET PILE SYSTEM CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Typical Equipment	Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) <sup>1</sup>	Highest Reference Noise Level (dBA L <sub>eq</sub> )
	Drill Rig	77	
Sheet Pile System	Forklifts	68	77
System	Cranes	73	

<sup>&</sup>lt;sup>1</sup> FHWA's Roadway Construction Noise Model, January 2006.

Sheet pile system methods can include different equipment types, such as impact or drilling, and as such, noise levels will vary depending on the method used. Non-impact pile driving equipment (e.g., drilling or other non-impact alternatives) such as the planned ABI drill rig shall be required to reduce the pile driving equipment noise levels at adjacent receiver locations.

#### 10.8 SHEET PILE SYSTEM CONSTRUCTION NOISE ANALYSIS AND COMPLIANCE

Using the reference RCNM construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at three nearby sensitive receiver locations were completed. To assess the worst-case construction noise levels, the Project construction noise analysis relies on the highest noise level impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of primary construction activity (Project site boundary) to each receiver location. As shown on Table 10-7, the sheet pile system construction noise levels are estimated at expected to range from 57.4 to 64.1 dBA L<sub>eq</sub> at the receiver locations near the planned sheet pile area.

The sheet pile system construction noise analysis shows that the nearby receiver locations will satisfy the City of Moreno Valley daytime 65 dBA L<sub>eq</sub> significance threshold. Therefore, the noise impacts due to the Project sheet pile construction noise is considered *less than significant* at all receiver locations and at 200 feet from the property line of the source. Appendix 10.3 includes the detailed CadnaA sheet pile system construction noise model inputs.

TABLE 10-7: SHEET PILE SYSTEM CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

	Sheet Pile System Construction Noise Levels (dBA Leq)				
Receiver Location <sup>1</sup>	Highest Construction Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>		
R1	64.1	65	No		
R2	62.2	65	No		
R3	57.4	65	No		
at 200'	60.0	65	No		

<sup>&</sup>lt;sup>1</sup> Noise receiver locations near the planned sheet pile area are shown on Exhibit 10-C.



<sup>&</sup>lt;sup>2</sup> Highest construction noise level calculations based on distance from the sheet pile noise source activity to nearby receiver locations as shown on Table 10-6.

<sup>&</sup>lt;sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?

#### 10.9 SHEET PILE SYSTEM CONSTRUCTION VIBRATION IMPACTS

Using the typical pile driver vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the sheet pile system vibration impacts. Table 10-8 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 124 feet to 250 feet from the sheet pile construction activities (at the Project site boundary), construction vibration levels are estimated to range from 63.0 to 72.1 VdB and will remain below the FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria of 78 VdB for daytime residential uses at all receiver locations and at 200 feet from the property line of the source. Therefore, the Project-related sheet pile construction vibration impacts are considered *less than significant* during the construction activities at the Project site.

TABLE 10-8: SHEET PILE SYSTEM CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver Location <sup>1</sup>	Distance to Construction Activity (Feet)	Receiver Vibration Levels (VdB) <sup>2</sup>	Threshold VdB <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
P1	124'	72.1	78	No
P2	142'	70.4	78	No
Р3	250'	63.0	78	No
at 200'	200'	65.9	78	No

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 10-C.



<sup>&</sup>lt;sup>2</sup> Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

<sup>&</sup>lt;sup>3</sup> FTA Transit Noise and Vibration Impact Assessment Manual maximum acceptable vibration criteria as shown on Table 4-1.

<sup>&</sup>lt;sup>4</sup> Does the vibration level exceed the maximum acceptable vibration threshold?

#### 11 REFERENCES

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- 21. translutions, inc. Moreno Valley Trade Center Traffic Impact Analysis. March 2020.
- 22. California Department of Transportation Environmental Program. *I-80 Davis OGAC Pavement Noise Study.* September 2001.



- 23. Canadian Ministry of Transportation and Highways, Highway Environment Branch. Open-Graded Asphalt 'Quiet Pavement' Assessment of Traffic Noise Reduction Performance. November 1995.
- 24. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning. FHWA Roadway Construction Noise Model. January, 2006.



#### 12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Moreno Valley Trade Center Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.

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#### **EDUCATION**

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning California Polytechnic State University, San Luis Obispo • June, 1992

#### **PROFESSIONAL REGISTRATIONS**

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009

AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012

PTP – Professional Transportation Planner • May, 2007 – May, 2013

INCE – Institute of Noise Control Engineering • March, 2004

#### **PROFESSIONAL AFFILIATIONS**

ASA – Acoustical Society of America ITE – Institute of Transportation Engineers

#### **PROFESSIONAL CERTIFICATIONS**

Certified Acoustical Consultant – County of Orange • February, 2011 FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013





### **APPENDIX 3.1:**

CITY OF MORENO VALLEY MUNICIPAL CODE





#### **Chapter 11.80 NOISE REGULATION**

#### 11.80.010 Legislative findings.

It is found and declared that:

- A. Excessive sound within the limits of the city is a condition which has existed for some time, and the amount and intensity of such sound is increasing.
- B. Such excessive sound is a detriment to the public health, safety, and welfare and quality of life of the residents of the city.
- C. The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, safety, welfare and quality of life of the city and its inhabitants. (Ord. 740 § 1.2, 2007)

#### 11.80.020 Definitions.

For purposes of this chapter, certain words and phrases used herein are defined as follows:

"A-weighted sound level" means the sound pressure level in decibels as measured with a sound level meter using the A-weighting network. The unit of measurement is the dB(A).

"Commercial" means all uses of land not otherwise classified as residential, as defined in this section.

"Construction" means any site preparation, and/or any assembly, erection, repair, or alteration, excluding demolition, of any structure, or improvements to real property.

"Continuous airborne sound" means sound that is measured by the slow-response setting of a meter manufactured to the specifications of ANSI Section 1.4-1983 (R2006) "Specification for Sound Level Meters," or its successor.

"Daytime" means eight a.m. to ten p.m. the same day.

"Decibel" (dB) means a unit for measuring the amplitude of sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) microPascals (twenty (20) microNewtons per square meter.)

"Demolition" means any dismantling, intentional destruction or removal of structures or other improvements to real property.

"Disturb" means to interrupt, interfere with, or hinder the enjoyment of peace or quiet or the normal listening activities or the sleep, rest or mental concentration of the hearer.

"Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or significant property damage which necessitates immediate action. Economic loss alone shall not constitute an emergency. It shall be the burden of an alleged violator to prove an "emergency."

"Emergency work" means any work made necessary to restore property to a safe condition following an emergency, or to protect persons or property threatened by an imminent emergency, to the extent such work is, in fact, necessary to protect persons or property from exposure to imminent danger or damage.

"Frequency" means the number of complete oscillation cycles per unit of time.

"Impulsive sound" means sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and discharge of firearms.

#### "Nighttime" means 10:01 p.m. to 7:59 a.m. the following day.

"Noise disturbance" means any sound which:

1. Disturbs a reasonable person of normal sensitivities;

- 2. Exceeds the sound level limits set forth in this chapter; or
- 3. Is plainly audible as defined in this section. Where no specific distance is set forth for the determination of audibility, references to noise disturbance shall be deemed to mean plainly audible at a distance of two hundred (200) feet from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property.

"Person" means any person, person's firm, association, copartnership, joint venture, corporation, or any entity public or private in nature.

"Plainly audible" means that the sound or noise produced or reproduced by any particular source, can be clearly distinguished from ambient noise by a person using his/her normal hearing faculties.

"Public right-of-way" means any street, avenue, boulevard, sidewalk, bike path or alley, or similar place normally accessible to the public which is owned or controlled by a governmental entity.

"Public space" means any park, recreational or community facility, or lot which contains at least one building that is open to the general public during its hours of operation.

"Residential" means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.

"Sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium capable of producing an auditory impression. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.

"Sound level" means the weighted sound pressure level as measured in dB(A) by a sound level meter and as specified in American National Standards Institute (ANSI) specifications for sound-level meters (ANSI Section 1.4-1971 (R1976)). If the frequency weighting employed is not indicated, the A-weighting shall apply.

"Sound level meter" means an instrument, demonstrably capable of accurately measuring sound levels as defined above.

All technical definitions not defined above shall be in accordance with applicable publications and standards of the American National Standards Institute (ANSI). (Ord. 740 § 1.2, 2007)

#### 11.80.030 Prohibited acts.

- A. General Prohibition. It is unlawful and a violation of this chapter to maintain, make, cause, or allow the making of any sound that causes a noise disturbance, as defined in Section <u>11.80.020</u>.
  - B. Sound causing permanent hearing loss.
- 1. Sound level limits. Based on statistics from the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health, Table 1 and Table 1-A specify sound level limits which, if exceeded, will have a high probability of producing permanent hearing loss in anyone in the area where the sound levels are being exceeded. No sound shall be permitted within the city which exceeds the parameters set forth in Tables 11.80.030-1 and 11.80.030-1-A of this chapter:

## Table 11.80.030-1 MAXIMUM CONTINUOUS SOUND LEVELS\*

Duration per Day					
<b>Continuous Hours</b>	Sound level [db(A)]				
8	90				
6	92				
4	95				
3	97				

2	100
1.5	102
1	105
0.5	110
0.25	115

<sup>\*</sup> When the daily sound exposure is composed of two or more periods of sound exposure at different levels, the combined effect of all such periods shall constitute a violation of this section if the sum of the percent of allowed period of sound exposure at each level exceeds 100 percent

# Table 11.80.030-1A MAXIMUM IMPULSIVE SOUND LEVELS

Number of Repetitions per	Sound level	
24-Hour Period	[dB(A)]	
1	145	
10	135	
100	125	

- 2. Exemptions. No violation shall exist if the only persons exposed to sound levels in excess of those listed in Tables 11.80.030-1 and 11.80.030-1A are exposed as a result of:
  - a. Trespass;
  - b. Invitation upon private property by the person causing or permitting the sound; or
  - c. Employment by the person or a contractor of the person causing or permitting the sound.
- C. Nonimpulsive Sound Decibel Limits. No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimplusive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

## Table 11.80.030-2 MAXIMUM SOUND LEVELS (IN dB(A)) FOR SOURCE LAND USES

Residential		Com	mercial
Daytime	Nighttime	Daytime	Nighttime
60	55	65	60

- D. Specific Prohibitions. In addition to the general prohibitions set out in subsection A of this section, and unless otherwise exempted by this chapter, the following specific acts, or the causing or permitting thereof, are regulated as follows:
- 1. Motor Vehicles. No person shall operate or cause to be operated a public or private motor vehicle, or combination of vehicles towed by a motor vehicle, that creates a sound exceeding the sound level limits in Table 11.80.030-2 when the vehicle(s) are not otherwise subject to noise regulations provided for by the California Vehicle Code.

- 2. Radios, Televisions, Electronic Audio Equipment, Musical Instruments or Similar Devices from a Stationary Source. No person shall operate, play or permit the operation or playing of any radio, tape player, television, electronic audio equipment, musical instrument, sound amplifier or other mechanical or electronic sound making device that produces, reproduces or amplifies sound in such a manner as to create a noise disturbance. However, this subsection shall not apply to any use or activity exempted in subsection E of this section and any use or activity for which a special permit has been issued pursuant to Section 11.80.040.
- 3. Radios, Electronic Audio Equipment, or Similar Devices from a Mobile Source Such as a Motor Vehicle. Sound amplification or reproduction equipment on or in a motor vehicle is subject to regulation in accordance with the California Vehicle Code when upon the public right-of-way. When upon public space or publicly owned property other than the public right-of-way or upon private property open to the public, sound amplification or reproduction equipment shall not be operated in such a manner that it is plainly audible at a distance of fifty (50) feet in any direction from the vehicle.
- 4. Portable, Hand-Held Music or Sound Amplification or Reproduction Equipment. Such equipment shall not be operated on a public right-of-way, public space or other publicly owned property in such a manner as to be plainly audible at a distance of fifty (50) feet in any direction from the operator.
  - 5. Loudspeakers and Public Address Systems.
- a. Except as permitted by Section <u>11.80.040</u>, no person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any commercial purpose:
  - 1. Which produces, reproduces or amplifies sound in such a manner as to create a noise disturbance; or
  - 2. During nighttime hours on a public right-of-way, public space or other publicly owned property.
- b. No person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any noncommercial purpose, during nighttime hours in such a manner as to create a noise disturbance.
- 6. Animals. No person shall own, possess or harbor an animal or bird that howls, barks, meows, squawks, or makes other sounds that:
  - a. Create a noise disturbance;
- b. Are of frequent or continued duration for ten (10) or more consecutive minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound; or
- c. Are intermittent for a period of thirty (30) or more minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound.
- 7. Construction and Demolition. No person shall operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee. This section shall not apply to the use of power tools as provided in subsection (D)(9) of this section.
- 8. Emergency Signaling Devices. No person shall intentionally sound or permit the sounding outdoors of any fire, burglar or civil defense alarm, siren or whistle, or similar stationary emergency signaling device, except for emergency purposes or for testing as follows:
- a. Testing of a stationary emergency signaling device shall not occur between seven p.m. and seven a.m. the following day;
- b. Testing of a stationary emergency signaling device shall use only the minimum cycle test time, in no case to exceed sixty (60) seconds;
- c. Testing of a complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device, shall not occur more than once in each calendar month. Such testing shall only occur only on weekdays between seven a.m. and seven p.m. and shall be exempt from the time limit specified in subsection (D)(8)(2) of this section.
- 9. Power Tools. No person shall operate or permit the operation of any mechanically, electrically or gasoline motor-driven tool during nighttime hours so as to cause a noise disturbance across a residential real property boundary.
- 10. Pumps, Air Conditioners, Air-Handling Equipment and Other Continuously Operating Equipment. Notwithstanding the general prohibitions of subsection a of this section, no person shall operate or permit the operation of any pump, air

conditioning, air-handling or other continuously operating motorized equipment in a state of disrepair or in a manner which otherwise creates a noise disturbance distinguishable from normal operating sounds.

- E. Exemptions. The following uses and activities shall be exempt from the sound level regulations except the maximum sound levels provided in Tables 11.80.030-1 and 11.80.030-1A:
- 1. Sounds resulting from any authorized emergency vehicle when responding to an emergency call or acting in time of an emergency.
  - 2. Sounds resulting from emergency work as defined in Section 11.80.020
- 3. Any aircraft operated in conformity with, or pursuant to, federal law, federal air regulations and air traffic control instruction used pursuant to and within the duly adopted federal air regulations; and any aircraft operating under technical difficulties in any kind of distress, under emergency orders of air traffic control, or being operated pursuant to and subsequent to the declaration of an emergency under federal air regulations.
- 4. All sounds coming from the normal operations of interstate motor and rail carriers, to the extent that local regulation of sound levels of such vehicles has been preempted by the Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.) or other applicable federal laws or regulations
  - 5. Sounds from the operation of motor vehicles, to the extent they are regulated by the California Vehicle Code.
- 6. Any constitutionally protected noncommercial speech or expression conducted within or upon a any public right-of-way, public space or other publicly owned property constituting an open or a designated public forum in compliance with any applicable reasonable time, place and manner restrictions on such speech or expression or otherwise pursuant to legal authority.
- 7. Sounds produced at otherwise lawful and permitted city-sponsored events, organized sporting events, school assemblies, school playground activities, by permitted fireworks, and by permitted parades on public right-of-way, public space or other publicly owned property.
- 8. An event for which a temporary use permit or special event permit has been issued under other provisions of this code, where the provisions of Section 11.80.040 are met, the permit granted expressly grants an exemption from specific standards contained in this chapter, and the permittee and all persons under the permittee's reasonable control actually comply with all conditions of such permit. Violation of any condition of such a permit related to sound or sound equipment shall be a violation of this chapter and punishable as such.
- F. Nothing in this chapter shall be construed to limit, modify or repeal any other regulation elsewhere in this code relating to the regulation of noise sources, nor shall any such other regulation be read to permit the emission of noise in violation of any provision of this chapter. (Ord. 740 § 1.2, 2007)

#### 11.80.040 Special provisions for temporary use and special event permits.

The exemption by permit set forth in Section <u>11.80.030(E)(8)</u> shall be subject to the following requirements and conditions:

- A. The permit application shall include the name, address and telephone number of the permit applicant; the date, hours and location for which the permit is requested; and the nature of the event or activity. It shall also specify the types of sounds and/or sound equipment to be permitted, the proposed duration of such sound, the specific standards from which the sound is to be exempted, and the reasons for each requested exemption.
- B. The permit shall be issued provided the proposed activity meets the requirements of this section and the issuing official determines that the sound to be emitted at the event as proposed would not be detrimental to the public health, safety or welfare, that the event cannot reasonably achieve its legitimate aims and purposes without the exemption and that the sound levels proposed will not unreasonably damage the peace and quiet enjoyment of the lawful users of surrounding properties, nor constitute a public nuisance.
- C. The official issuing the permit may prescribe any reasonable conditions or requirements he/she deems necessary to minimize noise disturbances upon the community or the surrounding neighborhood, and/or to protect the health, safety or welfare of the public, including participants in the permitted event, including use of mufflers, screens or other sound-attenuating devices.
  - D. Any permit granted must be in writing and shall contain all conditions upon which the permit shall be effective.

- E. No more than six events requiring a sound limit exemption may be held at any particular location upon privately owned or controlled property per calendar year, provided further that the number of events shall not exceed the number permitted under the regulations for the type of permit issued. For purposes of this subsection, "location" means a legal parcel of real property or a complete shopping or commercial center or mall sharing common parking and access even if comprised of multiple legal parcels.
- F. The exemption from sound limits under such permit shall not exceed maximum period of four hours in one twenty-four (24) hour day.
- G. The permit will only be granted for hours between nine a.m. and ten p.m. on all days other than Friday and Saturday; and, on Friday and Saturday, between the hours of nine a.m. and one a.m. of the following day, except in the following circumstances:
- 1. A permit may be granted for hours between nine a.m. on New Year's Eve and one a.m. the following day (New Year's Day).
- 2. A permit may be granted for hours between nine a.m. and two a.m. the following day if there are no residences, hospitals, or nursing homes within a 0.5 mile radius of the property where the function is taking place.
- H. Functions for which the permits are issued shall be limited to a continuous airborne sound level not to exceed seventy (70) dB(A), as measured two hundred (200) feet from the real property boundary of the source property if on private property, or from the source if on public right-of-way, public space or other publicly owned property. (Ord. 740 § 1.2, 2007)

#### 11.80.050 Measurement or assessment of sound.

#### A. Measurement With Sound Meter.

- 1. The measurement of sound shall be made with a sound level meter meeting the standards prescribed by ANSI Section 1.4-1983 (R2006). The instruments shall be maintained in calibration and good working order. A calibration check shall be made of the system at the time of any sound level measurement. Measurements recorded shall be taken so as to provide a proper representation of the source of the sound. The microphone during measurement shall be positioned so as not to create any unnatural enhancement or diminution of the measured sound. A windscreen for the microphone shall be used at all times. However, a violation of this chapter may occur without the occasion of the measurements being made as otherwise provided.
  - 2. The slow meter response of the sound level meter shall be used in order to best determine the average amplitude.
- 3. The measurement shall be made at any point on the property into which the sound is being transmitted and shall be made at least three feet away from any ground, wall, floor, ceiling, roof and other plane surface.
- 4. In case of multiple occupancy of a property, the measurement may be made at any point inside the premises to which any complainant has right of legal private occupancy; provided that the measurement shall not be made within three feet of any ground, wall, floor, ceiling, roof or other plane surface.
- 5. All measurements of sound provided for in this chapter will be made by qualified officials of the city who are designated by the city manager or designee to operate the apparatus used to make the measurements.
- B. Assessment Without Sound Level Meter. Any police officer, code enforcement officer, or other official designated by the city manager or designee who hears a noise or sound that is plainly audible, as defined in Section 11.80.020, in violation of this chapter, may enforce this chapter and shall assess the noise or sound according to the following standards:
- 1. The primary means of detection shall be by means of the official's normal hearing faculties, not artificially enhanced.
- 2. The official shall first attempt to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates so that the official can readily identify the offending source of the sound or noise and the distance involved. If the official is unable to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates, then the official shall confirm the source of the sound or noise by approaching the suspected vehicle or real property until the official is able to obtain a direct line of sight and hearing, and confirm the source of the sound or noise that was heard at the place of the original assessment of the sound or noise.

3. The official need not be required to identify song titles, artists, or lyrics in order to establish a violation. (Ord. 740 § 1.2, 2007)

#### 11.80.060 Violation.

- A. Violation of Sound Level Limits. Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not to exceed one thousand dollars (\$1,000.00) and/or six months in the county jail, or both. Notwithstanding the foregoing, any violation of the provisions of this chapter may, in the discretion of the citing officer or the city attorney, be cited and/or prosecuted as an infraction or be subject to civil citation pursuant to Chapter 1.10.
- B. Joint and Several Responsibility. In addition to the person causing the offending sound, the owner, tenant or lessee of property, or a manager, overseer or agent, or any other person lawfully entitled to possess the property from which the offending sound is emitted at the time the offending sound is emitted, shall be responsible for compliance with this chapter if the additionally responsible party knows or should have known of the offending noise disturbance. It shall not be a lawful defense to assert that some other person caused the sound. The lawful possessor or operator of the premises shall be responsible for operating or maintaining the premises in compliance with this chapter and may be cited regardless of whether or not the person actually causing the sound is also cited.
- C. Violation May be Declared a Public Nuisance. The operation or maintenance of any device, equipment, instrument, vehicle or machinery in violation of any provisions of this chapter which endangers the public health, safety and quality of life of residents in the area is declared to be a public nuisance, and may be subject to abatement summarily or by a restraining order or injunction issued

by a court of competent jurisdiction. (Ord. 824 § 1.2, 2011; Ord. 740 § 1.2, 2007)

View the mobile version.



**APPENDIX 5.1:** 

**STUDY AREA PHOTOS** 





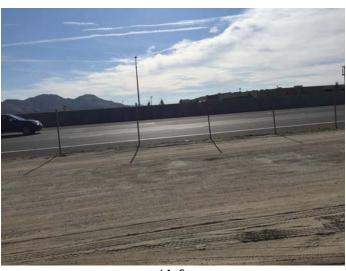
## JN: 12975 Study Area Photos



33, 56' 22.790000", 117, 9' 33.070000"



L1\_N 33, 55' 13.090000", 117, 10' 43.080000"



L1\_S 33, 56' 23.020000", 117, 9' 32.960000"



33, 56' 22.690000", 117, 9' 33.160000"



33, 55' 54.910000", 117, 9' 32.880000"



L2\_N 33, 55' 54.960000", 117, 9' 33.020000"

## JN: 12975 Study Area Photos



L2\_S 33, 55' 54.650000", 117, 9' 32.880000"



L2\_W 33, 55' 55.000000", 117, 9' 32.880000"



L3\_E 33, 55' 54.360000", 117, 9' 48.320000"



L3\_N 33, 55' 22.490000", 117, 9' 25.740000"



13\_5 33, 55' 54.320000", 117, 9' 48.240000"



L3\_W 33, 55' 54.320000", 117, 9' 48.260000"

## APPENDIX 5.2:

**NOISE LEVEL MEASUREMENT WORKSHEETS** 

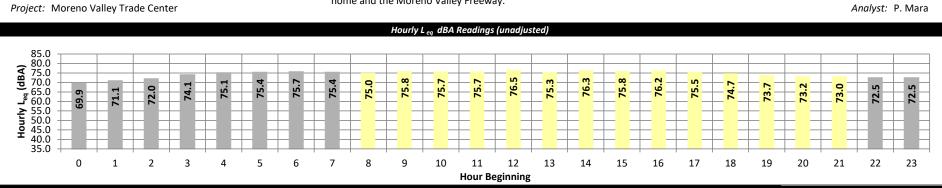




#### **24-Hour Noise Level Measurement Summary**

L1 - Located north of the project site near existing residential Location: home and the Moreno Valley Freeway.

Meter: Piccolo I JN: 12975 Analyst: P. Mara



Timeframe	Hour	$L_{eq}$	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. L <sub>eq</sub>
	0	69.9	86.1	49.6	81.0	79.0	77.0	75.0	68.0	62.0	55.0	54.0	51.0	69.9	10.0	79.9
	1	71.1	92.8	49.6	81.0	80.0	78.0	76.0	69.0	63.0	55.0	53.0	51.0	71.1	10.0	81.1
	2	72.0	86.0	50.0	81.0	80.0	78.0	77.0	71.0	65.0	57.0	56.0	53.0	72.0	10.0	82.0
Night	3	74.1	87.2	55.0	82.0	81.0	80.0	79.0	74.0	70.0	61.0	59.0	56.0	74.1	10.0	84.1
Nigitt	4	75.1	93.2	57.4	82.0	81.0	80.0	79.0	76.0	72.0	63.0	61.0	59.0	75.1	10.0	85.1
	5	75.4	93.0	57.8	82.0	81.0	80.0	79.0	76.0	73.0	65.0	63.0	60.0	75.4	10.0	85.4
	6	75.7	87.7	58.8	83.0	81.0	80.0	79.0	76.0	74.0	68.0	66.0	62.0	75.7	10.0	85.7
	7	75.4	90.3	54.5	83.0	81.0	80.0	79.0	76.0	73.0	66.0	64.0	59.0	75.4	0.0	75.4
	8	75.0	89.9	57.4	82.0	81.0	79.0	78.0	75.0	73.0	66.0	64.0	60.0	75.0	0.0	75.0
	9	75.8	88.1	55.7	83.0	82.0	80.0	79.0	76.0	73.0	66.0	63.0	60.0	75.8	0.0	75.8
	10	75.7	90.8	57.2	82.0	81.0	80.0	79.0	76.0	73.0	66.0	63.0	60.0	75.7	0.0	75.7
	11	75.7	98.0	57.5	82.0	81.0	80.0	79.0	76.0	73.0	66.0	64.0	61.0	75.7	0.0	75.7
	12	76.5	97.0	55.9	85.0	83.0	81.0	79.0	76.0	74.0	67.0	65.0	62.0	76.5	0.0	76.5
	13	75.3	89.0	58.6	82.0	81.0	80.0	79.0	76.0	73.0	66.0	64.0	60.0	75.3	0.0	75.3
Day	14	76.3	89.2	57.0	85.0	83.0	80.0	79.0	76.0	74.0	68.0	65.0	61.0	76.3	0.0	76.3
	15	75.8	96.2	59.9	83.0	82.0	80.0	79.0	76.0	73.0	67.0	64.0	61.0	75.8	0.0	75.8
	16	76.2	99.3	59.3	83.0	81.0	79.0	78.0	76.0	73.0	68.0	65.0	61.0	76.2	0.0	76.2
	17	75.5	98.2	59.4	83.0	81.0	79.0	78.0	75.0	73.0	67.0	65.0	62.0	75.5	0.0	75.5
	18	74.7	88.2	57.7	82.0	81.0	79.0	78.0	75.0	72.0	65.0	63.0	61.0	74.7	0.0	74.7
	19	73.7	90.8	58.0	81.0	80.0	79.0	78.0	74.0	70.0	63.0	61.0	59.0	73.7	5.0	78.7
	20	73.2	88.4	57.0	81.0	80.0	78.0	78.0	73.0	70.0	62.0	61.0	59.0	73.2	5.0	78.2
	21	73.0	89.9	55.7	81.0	80.0	79.0	77.0	73.0	69.0	61.0	60.0	58.0	73.0	5.0	78.0
Night	22	72.5	91.9	51.6	81.0	80.0	78.0	77.0	72.0	67.0	59.0	57.0	54.0	72.5	10.0	82.5
	23	72.5	95.4	52.4	81.0	80.0	78.0	77.0	71.0	67.0	60.0	59.0	54.0	72.5	10.0	82.5
Timeframe	Hour	L <sub>eq</sub>	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min	73.0	88.1	55.7	81.0	80.0	78.0	77.0	73.0	69.0	61.0	60.0	58.0	24-Hour	Daytime	Nighttime
	Max	76.5	99.3	59.9	85.0	83.0	81.0	79.0	76.0	74.0	68.0	65.0	62.0	74.7	75.3	73.8
Energy	Average	75.3		rage:	82.5	81.2	79.5	78.4	75.2	72.4	65.6	63.4	60.4			
Night	Min	69.9	86.0	49.6	81.0	79.0	77.0	75.0	68.0	62.0	55.0	53.0	51.0	24-1	Hour CNEL (a	IБА)
- Francis	Max	75.7	95.4	58.8	83.0	81.0	80.0	79.0	76.0	74.0	68.0	66.0	62.0		80.5	
Energy Average		73.8	Avei	rage:	81.7	80.4	78.9	77.7	72.9	68.6	60.9	59.2	55.9			



Date: Thursday, December 12, 2019

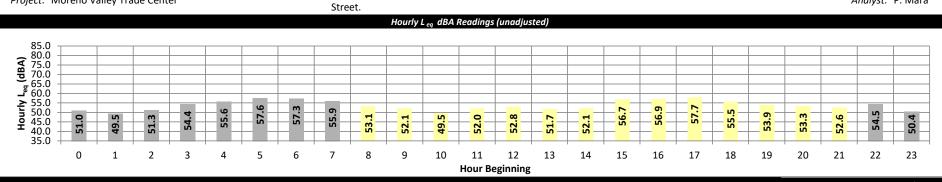
#### **24-Hour Noise Level Measurement Summary**

Date: Thursday, December 12, 2019
Project: Moreno Valley Trade Center

cation: L2 - Located south of the Project site near existing singlefamily residential homes by Encelia Avenue and Shubert

Meter: Piccolo I

JN: 12975 Analyst: P. Mara



Timeframe	Hour	$L_{eq}$	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. L <sub>eq</sub>
	0	51.0	72.9	43.9	59.0	58.0	53.0	52.0	50.0	48.0	46.0	45.0	44.0	51.0	10.0	61.0
	1	49.5	65.4	43.2	55.0	54.0	53.0	52.0	49.0	48.0	45.0	44.0	44.0	49.5	10.0	59.5
	2	51.3	71.5	42.6	60.0	56.0	53.0	52.0	50.0	49.0	45.0	45.0	44.0	51.3	10.0	61.3
Night	3	54.4	79.5	46.6	61.0	58.0	56.0	55.0	53.0	51.0	49.0	48.0	47.0	54.4	10.0	64.4
Nigitt	4	55.6	76.2	46.8	63.0	60.0	57.0	57.0	55.0	53.0	49.0	49.0	48.0	55.6	10.0	65.6
	5	57.6	75.5	50.0	69.0	66.0	60.0	58.0	55.0	54.0	52.0	52.0	51.0	57.6	10.0	67.6
	6	57.3	74.4	49.9	67.0	64.0	60.0	58.0	56.0	55.0	53.0	52.0	51.0	57.3	10.0	67.3
	7	55.9	79.5	46.1	67.0	63.0	56.0	54.0	52.0	50.0	48.0	47.0	46.0	55.9	0.0	55.9
	8	53.1	74.0	44.3	64.0	61.0	57.0	55.0	50.0	48.0	46.0	45.0	45.0	53.1	0.0	53.1
	9	52.1	76.4	41.8	63.0	60.0	55.0	52.0	47.0	45.0	43.0	42.0	42.0	52.1	0.0	52.1
	10	49.5	71.0	40.9	62.0	57.0	50.0	49.0	45.0	43.0	42.0	41.0	41.0	49.5	0.0	49.5
	11	52.0	75.8	39.6	65.0	60.0	52.0	49.0	43.0	42.0	40.0	40.0	40.0	52.0	0.0	52.0
	12	52.8	80.0	39.6	65.0	63.0	57.0	51.0	45.0	42.0	41.0	40.0	39.0	52.8	0.0	52.8
	13	51.7	74.0	39.6	64.0	60.0	55.0	52.0	47.0	44.0	41.0	41.0	40.0	51.7	0.0	51.7
Day	14	52.1	70.4	39.6	65.0	63.0	56.0	53.0	47.0	44.0	41.0	41.0	40.0	52.1	0.0	52.1
24,	15	56.7	80.3	45.4	66.0	63.0	59.0	57.0	54.0	52.0	49.0	48.0	46.0	56.7	0.0	56.7
	16	56.9	77.1	49.9	67.0	65.0	61.0	59.0	55.0	53.0	51.0	51.0	50.0	56.9	0.0	56.9
	17	57.7	81.7	46.9	68.0	66.0	61.0	59.0	54.0	52.0	50.0	50.0	48.0	57.7	0.0	57.7
	18	55.5	77.7	47.0	67.0	64.0	57.0	55.0	52.0	51.0	49.0	49.0	48.0	55.5	0.0	55.5
	19	53.9	71.4	47.0	64.0	62.0	57.0	55.0	52.0	51.0	49.0	48.0	47.0	53.9	5.0	58.9
	20	53.3	73.9	46.2	64.0	61.0	56.0	54.0	51.0	50.0	48.0	47.0	47.0	53.3	5.0	58.3
	21	52.6	77.6	43.8	61.0	59.0	56.0	53.0	50.0	49.0	46.0	46.0	45.0	52.6	5.0	57.6
Night	22	54.5	83.6	43.6	59.0	55.0	52.0	51.0	50.0	48.0	46.0	46.0	45.0	54.5	10.0	64.5
o l	23	50.4	64.3	43.5	56.0	55.0	53.0	52.0	50.0	49.0	47.0	46.0	45.0	50.4	10.0	60.4
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min	49.5	70.4	39.6	61.0	57.0	50.0	49.0	43.0	42.0	40.0	40.0	39.0	24-Hour	Daytime	Nighttime
1	Max	57.7	81.7	49.9	68.0	66.0	61.0	59.0	55.0	53.0	51.0	51.0	50.0	54.4	54.2	54.6
Energy A		54.2		rage:	64.6	61.7	56.4	53.8	49.4	47.6	45.4	44.9	44.1			
Night	Min	49.5	64.3	42.6	55.0	54.0	52.0	51.0	49.0	48.0	45.0	44.0	44.0	24-1	Hour CNEL (a	BA)
	Max	57.6	83.6	50.0	69.0	66.0	60.0	58.0	56.0	55.0	53.0	52.0	51.0	61.0		
Energy A	Average	54.6	Avei	rage:	61.6	58.9	55.3	54.1	52.0	50.5	48.0	47.4	46.5		<u> </u>	

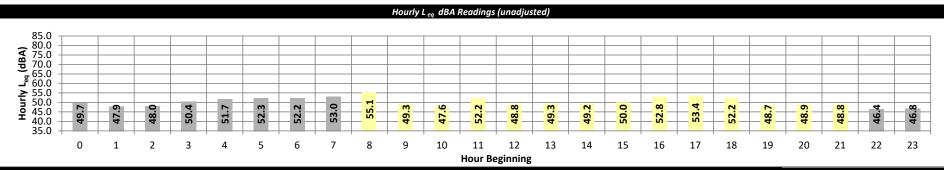


#### **24-Hour Noise Level Measurement Summary**

L3 - Located south of the Project site on Encelia Avenue next to existing single-family residential homes.

Meter: Piccolo I

JN: 12975 Analyst: P. Mara



Timeframe	Hour	$L_{eq}$	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. L <sub>eq</sub>
	0	49.7	66.1	40.4	57.0	55.0	54.0	53.0	50.0	47.0	44.0	43.0	42.0	49.7	10.0	59.7
	1	47.9	67.9	41.3	52.0	51.0	50.0	49.0	48.0	47.0	44.0	44.0	43.0	47.9	10.0	57.9
	2	48.0	64.9	41.2	51.0	51.0	50.0	50.0	49.0	47.0	43.0	43.0	42.0	48.0	10.0	58.0
Night	3	50.4	67.8	44.1	55.0	53.0	53.0	52.0	50.0	49.0	46.0	46.0	45.0	50.4	10.0	60.4
Might	4	51.7	63.2	42.3	57.0	56.0	55.0	55.0	53.0	50.0	46.0	45.0	44.0	51.7	10.0	61.7
	5	52.3	77.3	46.0	60.0	56.0	53.0	52.0	51.0	50.0	48.0	48.0	47.0	52.3	10.0	62.3
	6	52.2	71.1	46.8	61.0	58.0	54.0	53.0	51.0	50.0	48.0	48.0	47.0	52.2	10.0	62.2
	7	53.0	77.2	44.7	62.0	57.0	54.0	53.0	51.0	49.0	47.0	47.0	46.0	53.0	0.0	53.0
	8	55.1	81.7	44.4	65.0	61.0	58.0	56.0	51.0	48.0	47.0	46.0	46.0	55.1	0.0	55.1
	9	49.3	71.9	41.8	59.0	55.0	51.0	49.0	48.0	47.0	45.0	44.0	44.0	49.3	0.0	49.3
	10	47.6	70.1	40.6	55.0	51.0	49.0	48.0	46.0	45.0	43.0	43.0	42.0	47.6	0.0	47.6
	11	52.2	81.3	40.0	62.0	57.0	50.0	48.0	45.0	44.0	43.0	42.0	41.0	52.2	0.0	52.2
	12	48.8	75.0	39.4	61.0	56.0	49.0	46.0	44.0	43.0	42.0	41.0	41.0	48.8	0.0	48.8
	13	49.3	72.1	40.1	61.0	58.0	52.0	50.0	46.0	44.0	42.0	42.0	41.0	49.3	0.0	49.3
Day	14	49.2	78.9	39.6	58.0	54.0	48.0	46.0	45.0	44.0	43.0	42.0	41.0	49.2	0.0	49.2
Juy	15	50.0	67.9	41.4	59.0	56.0	53.0	52.0	49.0	47.0	45.0	44.0	43.0	50.0	0.0	50.0
	16	52.8	70.6	45.6	61.0	59.0	55.0	54.0	52.0	51.0	49.0	48.0	47.0	52.8	0.0	52.8
	17	53.4	73.9	46.1	60.0	58.0	56.0	55.0	53.0	51.0	49.0	49.0	47.0	53.4	0.0	53.4
	18	52.2	77.2	42.8	62.0	59.0	53.0	52.0	49.0	48.0	46.0	45.0	44.0	52.2	0.0	52.2
	19	48.7	69.3	41.6	58.0	54.0	50.0	49.0	47.0	46.0	44.0	44.0	43.0	48.7	5.0	53.7
	20	48.9	68.5	42.2	57.0	53.0	51.0	50.0	48.0	47.0	45.0	44.0	43.0	48.9	5.0	53.9
	21	48.8	67.8	41.0	58.0	54.0	52.0	52.0	47.0	46.0	44.0	43.0	42.0	48.8	5.0	53.8
Night	22	46.4	61.0	40.2	51.0	50.0	48.0	48.0	46.0	45.0	43.0	43.0	42.0	46.4	10.0	56.4
	23	46.8	60.6	40.8	50.0	49.0	49.0	48.0	47.0	46.0	44.0	44.0	43.0	46.8	10.0	56.8
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min	47.6	67.8	39.4	55.0	51.0	48.0	46.0	44.0	43.0	42.0	41.0	41.0	24-Hour	Daytime	Nighttime
	Max	55.1	81.7	46.1	65.0	61.0	58.0	56.0	53.0	51.0	49.0	49.0	47.0	50.8	51.0	50.4
Energy /		51.0		rage:	59.7	56.1	51.9	50.5	47.9	46.5	44.8	44.1	43.2			
Night	Min	46.4	60.6	40.2	50.0	49.0	48.0	48.0	46.0	45.0	43.0	43.0	42.0	24-	Hour CNEL (a	IBA)
	Max	53.0	77.3	46.8	62.0	58.0	55.0	55.0	53.0	50.0	48.0	48.0	47.0	Į.	56.8	
Energy Average		50.4	Avei	rage:	55.6	53.6	52.0	51.3	49.6	48.0	45.3	45.1	44.1		30.0	



Date: Thursday, December 12, 2019

Project: Moreno Valley Trade Center



## **APPENDIX 7.1:**

**OFF-SITE TRAFFIC NOISE CONTOURS** 





	FHV	VA-RD-77-108	HIGH	HWAY	NOISE PI	REDICT	ION MO	DEL			
Road Nai	rio: Existing ne: San Timote ent: n/o Alessan						Name: . lumber:		oreno Valle	y Trade	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	13,775 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	10.00%			Me	dium Tru	ucks (2 /	Axles):	15		
Peak	Hour Volume:	1,378 vehicles	s		He	avy Truc	cks (3+ A	Axles):	15		
V	ehicle Speed:	45 mph			Vehicle	Miv					
Near/Far L	ane Distance:	44 feet				icleType		Dav	Evening	Night	Dailv
Site Data								72.0%	-	13.5%	
R:	arrier Height:	0.0 feet			М	edium Ti	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-V		0.0			1	Heavy Ti	rucks:	81.8%	7.7%	10.6%	1.32%
*, ,	ist. to Barrier:	36.0 feet			M-: 0	5		- /:- #-	4		
Centerline Dist	to Observer:	36.0 feet		-	Noise So	Auto:			et)		
Barrier Distance	to Observer:	0.0 feet				Auto: m Truck:		000			
Observer Height	(Above Pad):	5.0 feet						297	0		
-	Pad Elevation:	0.0 feet			Heal	y Truck	s: 8.	004	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet		l	Lane Eq	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%		l		Auto	s: 28.	931			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 28.	624			
	Right View:	90.0 degree	es		Heav	y Truck	s: 28.	654			
FHWA Noise Mod	del Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	_	Barrier Atte	en Ber	m Atten
Autos	68.46	-0.70		3.4	46	-1.20		-4.55	0.0	000	0.000
Medium Trucks	79.45	-13.97		3.5	53	-1.20		-4.86	0.0	000	0.000
Heavy Trucks	84.25	-19.25		3.5	52	-1.20		-5.63	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	_	Night		Ldn		NEL
Autos			67.8		66.9		61.8		69.7		70.2
Medium Trucks		-	65.8		62.8		59.8		67.6		68.0
Heavy Trucks			65.7		61.4		58.0		66.4		66.8
Vehicle Noise	73	.3	71.3		69.1		64.9	9	72.9	)	73.3
Centerline Distar	ice to Noise Co	ntour (in feet,	)					,		ı	
			L	70	dBA	65	dBA		0 dBA	55	dBA
			Ldn:		56		121		260		560
		CI	NEL:		60		130		279		602

	FHWA	∖-RD-77-108 HI	GHWAY N	IOISE P	REDICT	ION MOD	EL		
Scenario: I Road Name: S Road Segment: s	San Timoteo					t Name: Al lumber: 12		no Valley	Trade
SITE SPI	ECIFIC INP	UT DATA				NOISE M	ODEL I	NPUTS	
Highway Data				Site Cor	ditions	(Hard = 1	0, Soft	= 15)	
Average Daily Trai Peak Hour Per Peak Hour Vehick	centage: 10	7,208 vehicles 0.00% ,721 vehicles 55 mph			avy Tru	Ai rucks (2 Ax rcks (3+ Ax	/	15 15 15	
Near/Far Lane L	Distance:	36 feet	F		icleType		ay E	venina I	Vight Daily
Site Data						Autos: 7	2.0%	14.6%	13.5% 94.24
Barrier Barrier Type (0-Wall,	r <b>Height:</b> 1-Berm):	0.0 feet 0.0			edium 1 Heavy 1		6.2% 1.8%		14.4% 4.44 10.6% 1.32
Centerline Dist. to		55.0 feet		Noico S	urco E	levations	(in foot	1	
Road E Roa L	Observer: ove Pad): Elevation: Elevation: d Grade: eft View:	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 degrees 90.0 degrees	1	Head Lane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2.29 (s: 8.00 t Distance 0s: 52.2 (s: 52.04	97 94 <i>Gi</i> <b>e (in fee</b> 11		stment: 0.0
FHWA Noise Model C			n: /	T =: 2	- /				5 4"
VehicleType F	71.78	raffic Flow I	Distance -0.3		Road -1.20	Fresne	л Ва 4.67	rrier Atter 0.00	
Medium Trucks:	82.40	-13.88	-0.3		-1.20		4.87	0.00	
Heavy Trucks:	86.40	-19.16	-0.3		-1.20		5.38	0.00	
Unmitigated Noise Le	vels (withou	t Topo and ba	rier atten	uation)					
VehicleType Led	q Peak Hour	Leq Day		vening	Leq	Night	Lo		CNEL
Autos:	69.6	67.		66.4		61.3		69.2	69
Medium Trucks:	67.0	65.	-	61.9		59.0		66.8	67
Heavy Trucks:	65.7	64.		59.7		56.4		64.8	65
Vehicle Noise:	72.5	70.	5	68.4		64.1		72.1	72
Centerline Distance to	o Noise Cont	tour (in feet)	70	-/D 4		-(D.4		/D 4	55 dD4
		1 -1	70 0		65	dBA	60 0		55 dBA
		Ldr CNEI		76 81		163 175		351 378	75 81
		CNE		81		1/5		3/8	81

Scenari	o: Existing				Project	Name:	AH1 M	oreno Valle	v Trada	
	o: Existing e: Redlands Blv	ud.				wame: umber:		oreno valle	y rrade	
	e. Rediands bit nt: s/o San Timo		1		JOD IN	uniber.	12973			
	SPECIFIC INF		-			IOISE	MODE	L INPUT	2	
Highway Data	SPECIFIC IN	UIDAIA		Site Co	onditions				,	
Average Daily	Traffic (Adt): 1	7,452 vehicles					Autos:	15		
Peak Hour	Percentage: 1	10.00%		٨	Aedium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	1,745 vehicles		F	leavy Tru	cks (3+ .	Axles):	15		
Vel	hicle Speed:	55 mph		Vehicle	o Miv					
Near/Far Lar	ne Distance:	36 feet			ehicleType		Dav	Evening	Niaht	Dailv
Site Data						Autos:	72.0%	-	13.5%	. ,
	rier Height:	0.0 feet		1 .	Medium T	rucks:	76.2%		14.4%	
Barrier Type (0-W	-	0.0 leet			Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	. ,	55.0 feet		Maia	Source E		- /: #-	-4		
Centerline Dist. t	to Observer:	55.0 feet		Noise	Auto			et)		
Barrier Distance t	to Observer:	0.0 feet		Mod	Auto ium Truck		000 297			
Observer Height (	Above Pad):	5.0 feet			avy Truck		004	Grade Ad	uctment	. 0.0
Pa	ad Elevation:	0.0 feet		пе	avy IIuck	s. o.	004	Grade Auj	ustriient	. 0.0
Roa	ad Elevation:	0.0 feet		Lane E	quivalen	Distan	ce (in t	eet)		
F	Road Grade:	0.0%			Auto	s: 52	211			
	Left View:	-90.0 degrees		Med	ium Truck	s: 52	041			
	Right View:	90.0 degrees		He	avy Truck	s: 52	058			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Distanc	ce Fini	te Road	Fresi	nel	Barrier Atte	en Ber	m Atten
Autos:	71.78	-0.55	-	0.39	-1.20		-4.67	0.0	100	0.00
Medium Trucks:	82.40	-13.82	-	0.36	-1.20		-4.87	0.0	00	0.00
				0.37	-1.20		-5.38	0.0	00	0.00
Heavy Trucks:	86.40	-19.10								
Heavy Trucks: Unmitigated Noise				tenuation	)					
Unmitigated Noise VehicleType	Levels (without Leq Peak Hour	ut Topo and b	arrier at	q Evening	Leq	Night		Ldn		NEL
Unmitigated Noise VehicleType Autos:	Levels (without Leq Peak Hour 69.6	Leq Day	Le	q Evening 66	Leq .5	61.		69.3		69.
Unmitigated Noise VehicleType Autos: Medium Trucks:	Leq Peak Hour 69.6	Leq Day	Lee	q Evening 66 62	Leq .5	61. 59.	1	69.3 66.8	1	69. 67.
VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (without Leq Peak Hour 69.6 67.0 65.7	Leq Day 6 65	7.4 5.1	<i>q Evening</i> 66 62 59	.5 .0 .8	61. 59. 56.	1 4	69.3 66.8 64.8	1	69. 67. 65.
VehicleType  VehicleType  Autos:  Medium Trucks:  Heavy Trucks:  Vehicle Noise:	Levels (without Leq Peak Hour 69.6 67.0 65.7 72.6	Leq Day  6 66  7 66  8 70	Lee	q Evening 66 62	.5 .0 .8	61. 59.	1 4	69.3 66.8	1	69. 67. 65.
VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (without Leq Peak Hour 69.6 67.0 65.7 72.6	Leq Day  6 66  7 66  8 70	7.4 5.1 1.1	q Evening 66 62 59 68	.5 .0 .8 .5	61. 59. 56. 64.	1 4 2	69.3 66.8 64.8 72.1		69. 67. 65. 72.
VehicleType  VehicleType  Autos:  Medium Trucks:  Heavy Trucks:  Vehicle Noise:	Levels (without Leq Peak Hour 69.6 67.0 65.7 72.6	Leq Day  6 66 6 7 64 6 70 6 10 6 10 6 10 6 10 6 10 6 10 6 10 6 1	7.4 5.1 1.1	<i>q Evening</i> 66 62 59	Leq .5 .0 .8 .5	61. 59. 56.	1 4 2 6	69.3 66.8 64.8		NEL 69. 67. 65. 72. dBA

Wednesday, November 4, 2020

FH'	WA-RD-77-108 H	HIGHWAY	NOISE PI	REDICT	ION MOD	EL		
Scenario: Existing Road Name: Redlands I Road Segment: n/o Ironwo					Name: Al umber: 12		eno Valley	Trade
SITE SPECIFIC II	IPUT DATA			N	IOISE MO	DEL	INPUTS	
Highway Data			Site Con	ditions	(Hard = 1	), Soft	= 15)	
Average Daily Traffic (Adt):	18,086 vehicles	3			Αι	itos:	15	
Peak Hour Percentage:	10.00%		Me	dium Tr	ucks (2 Ax	les):	15	
Peak Hour Volume:	1,809 vehicles		He	avy Truc	cks (3+ Ax	les):	15	
Vehicle Speed:	50 mph		Vehicle I	Mix				
Near/Far Lane Distance:	58 feet		Veh	icleType	D	ay E	vening N	light Daily
Site Data					Autos: 7	2.0%	_	13.5% 94.24%
Barrier Height:	0.0 feet		M	edium Ti	rucks: 7	5.2%	9.4%	14.4% 4.44%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 8	1.8%	7.7%	10.6% 1.32%
Centerline Dist. to Barrier:	55.0 feet		Noise So	ource El	evations	in feet	9	
Centerline Dist. to Observer:	55.0 feet			Auto			,	
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck				
Observer Height (Above Pad):	5.0 feet			vy Truck	-		rade Adjus	tment: 0.0
Pad Elevation:	0.0 feet			•				
Road Elevation:	0.0 feet		Lane Eq		Distance	•	et)	
Road Grade:	0.0%			Auto				
Left View:	-90.0 degrees			m Truck	- 10.0			
Right View:	90.0 degrees	3	неач	y Truck	s: 46.83	10		
FHWA Noise Model Calculation	s		1					
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnei	Ba	arrier Atten	Berm Atten
Autos: 70.20		-	.30	-1.20		.67	0.000	
Medium Trucks: 81.00		-	.33	-1.20		.87	0.000	
Heavy Trucks: 85.38	-18.53	0	.32	-1.20	-5	.38	0.000	0.000
Unmitigated Noise Levels (with								
VehicleType Leq Peak Ho			Evening	,	Night	L	dn	CNEL
		7.1	66.2		61.1		69.0	69.5
		4.9 4.3	61.8 60.0		58.9 56.7		66.7 65.1	67.1 65.4
		0.4	68.3		64.0		72.0	72.4
Centerline Distance to Noise C			55.5		00		.2.0	72.5
	ontour (In feet)	7	) dBA		dBA	60	dBA	55 dBA
		/ (	Jaba	00	aba	00		33 UDA
	L	dn:	74	00	160	60	346	745

	FH\	WA-RD-77-108	HIGH	A YAWH	IOISE P	REDICT	ION MC	DEL			
	o: Existing e: Redlands E et: s/o Ironwoo						t Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	iditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	15,092 vehicle	es					Autos:			
Peak Hour I		10.00%					rucks (2				
	our Volume:	1,509 vehicle	S		He	eavy Tru	cks (3+	Axles).	15		
	nicle Speed:	50 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	58 feet			Ver	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Bar	rier Heiaht:	0.0 feet			M	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		55.0 feet		1	Noise S	ource E	levation	s (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	s: 0	.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (/	Above Pad):	5.0 feet 0.0 feet			Hea	vy Truck	s: 8	.004	Grade Adj	iustmen	: 0.0
	d Elevation:	0.0 feet		-	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		.000	,		
,	Left View:	-90.0 degree	26		Mediu	m Truck		.811			
	Right View:	90.0 degree			Hea	vy Truck	s: 46	.830			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20			0.3	-	-1.20		-4.67		000	0.000
Medium Trucks:	81.00			0.3	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38			0.3		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise			_								
	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:	68		66.3		65.4		60.	-	68.2	-	68.8
Medium Trucks:	66		64.1		61.0		58.		65.9		66.3
Heavy Trucks:			63.5		59.3		55.	-	64.3		64.6
Vehicle Noise:	71		69.6		67.5	1	63.	2	71.2	<u> </u>	71.7
Centerline Distanc	e to Noise Co	ontour (in feet	)	70 (	HRA	65	dBA	_	60 dBA	55	dBA
			Ldn:	,,,,	66		142		306		660
			NEL:		71		153	-	329		710

	FHV	/A-RD-77-108	HIGH	WAY N	OISE P	REDICT	TION MOI	DEL			
Scenario: Exis Road Name: Red Road Segment: s/o	dlands B		mps				t Name: A Number: 1		oreno Valley	y Trade	
SITE SPECI	IFIC IN	PUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic Peak Hour Percen Peak Hour Vo	ntage: lume:	14,403 vehicle 10.00% 1,440 vehicle					rucks (2 A rcks (3+ A		15		
Vehicle S		50 mph		ν	'ehicle	Mix					
Near/Far Lane Dist	ance:	58 feet			Veh	icleTyp	e i	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Barrier He	eiaht.	0.0 feet			М	edium 1	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1-B		0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Ba	arrier:	55.0 feet		N	loise S	ource E	levations	(in fe	eet)		
Centerline Dist. to Obs	erver:	55.0 feet				Auto					
Barrier Distance to Obse	erver:	0.0 feet			Mediu	m Truci		97			
Observer Height (Above	Pad):	5.0 feet				v Truci			Grade Adju	ıstment	: 0.0
Pad Elev	ation:	0.0 feet				,					
Road Elev	ation:	0.0 feet		L	ane Eq		t Distanc	_	feet)		
Road G	Grade:	0.0%				Auto		000			
	View:	-90.0 degree				m Truck					
Right	View:	90.0 degree	es		Hea	y Truck	ks: 46.8	330			
FHWA Noise Model Calc	ulations	;									
VehicleType REN	MEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Atte	n Ber	m Atten
Autos:	70.20	-0.97		0.30		-1.20		-4.67	0.00	00	0.000
Medium Trucks:	81.00	-14.24		0.33		-1.20		-4.87	0.00	00	0.000
Heavy Trucks:	85.38	-19.52		0.32		-1.20		-5.38	0.00	00	0.000
Unmitigated Noise Level	ls (witho	out Topo and	barrie	r attenu	ıation)						
VehicleType Leq Pe	eak Hou	r Leq Day	′	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	68.	-	66.1		65.2		60.1		68.0		68.6
Medium Trucks:	65.	-	63.9		60.8		57.9		65.7		66.1
Heavy Trucks:	65.		63.3		59.0		55.7		64.1		64.4
Vehicle Noise:	71.	4	69.4		67.3		63.0		71.0		71.5
Centerline Distance to N	loise Co	ntour (in feet	)					,			
			L	70 d		65	dBA	6	60 dBA	55	dBA
			Ldn:		64		138		297		640
		C	NEL:		69		148		319		688

Sconari	o: Existing					Project	Name:	AH1 NA	oreno Valle	v Trada	
	o. Existing e: Redlands Blv	rd.					umher:		Dieno vane	y made	
	t: n/o Eucalvoti					300 1	uilibei.	12313			
	. 71			-							
	SPECIFIC INF	UT DATA							L INPUT	5	
Highway Data				5	ite Con	ditions	•				
Average Daily	Traffic (Adt): 1	2,290 vehicle	es					Autos:			
Peak Hour	Percentage: 1	0.00%				dium Tr		/			
Peak H	our Volume: 1	,229 vehicles	S		He	avy Tru	cks (3+ )	4xles):	15		
Vel	nicle Speed:	50 mph		ν	ehicle l	Mix					
Near/Far Lar	ne Distance:	58 feet		F	Veh	icleТуре		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Rar	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	t. to Barrier:	55.0 feet		٨	loise So	ource El	evation	s (in fe	eet)		
Centerline Dist. t	to Observer:	55.0 feet		F		Auto		000			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (	Above Pad):	5.0 feet				y Truck		004	Grade Ad	ustment	0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
F	Road Grade:	0.0%				Auto		000			
	Left View:	-90.0 degree	es			m Truck		811			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 46.	830			
FHWA Noise Mode											
VehicleType		Traffic Flow	Dis	stance		Road	Fresi		Barrier Att		m Atten
Autos:	70.20	-1.66		0.30		-1.20		-4.67		100	0.00
Medium Trucks:	81.00	-14.93		0.33		-1.20		-4.87		100	0.00
Heavy Trucks:	85.38	-20.21		0.32		-1.20		-5.38	0.0	100	0.00
Unmitigated Noise VehicleType	Levels (without Leg Peak Hour			er atteni Leg Ev		100	Night	1	Ldn		VEL
Autos:	67.6		65.4	Ley Ev	64.5	_	ivigrit 59.4	4	67.3		NEL 67.
Medium Trucks:	65.2		63.2		60.2		57.2		65.0		65
Heavy Trucks:	64.3		62.6		58.4		55.0	_	63.4		63.
Vehicle Noise:	70.7		68.7		66.6		62.0		70.3		70.
Centerline Distanc	e to Noise Con	tour (in feet)	)								
				70 d	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:		58		124		267		576

Wednesday, November 4, 2020

	FHV	VA-RD-77-108 I	HIGHW	/AY N	OISE PI	REDICTI	ON M	DDEL			
Road Nar	rio: Existing me: Redlands B ent: s/o Eucalyp							Alt1 N	loreno Vall	ey Trade	
SITE Highway Data	SPECIFIC IN	PUT DATA		5	ite Con	N ditions			EL INPUT	s	
Average Daily Peak Hou Peak I	Traffic (Adt): r Percentage: Hour Volume: ehicle Speed: ane Distance:	12,535 vehicles 10.00% 1,254 vehicles 50 mph	S		Ме	dium Tru avy Truc	icks (2	Autos Axles)	: 15 : 15		
	ane Distance.	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data  Barrier Type (0-V	arrier Height: Vall, 1-Berm):	0.0 feet 0.0				A edium Tr Heavy Tr		72.09 76.29 81.89	6 9.4%		4.44%
Centerline D	ist. to Barrier:	55.0 feet		^	loise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist Barrier Distance Observer Height F	to Observer:	55.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks ry Trucks	: 2	0.000 2.297 3.004	Grade Ad	ljustment	t: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees				Autos m Trucks ry Trucks	: 46	7.000 6.811 6.830			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	snel	Barrier Att	ten Bei	rm Atten
Autos	70.20	-1.57		0.30	)	-1.20		-4.67	0.	000	0.000
Medium Trucks		-14.84		0.33		-1.20		-4.87		000	0.000
Heavy Trucks	85.38	-20.12		0.32	2	-1.20		-5.38	0.	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou		_	.eq Ev		Leq I			Ldn		NEL
Autos.	-		5.5		64.6		59		67.	•	68.0
Medium Trucks			3.3		60.2 58.4		57 55		65. 63.		65.5 63.8
Heavy Trucks Vehicle Noise			8.8		66.7		62		70.	-	70.9
Centerline Distan	ce to Noise Co	ntour (in feet)									
		,		70 d	BA	65 (	iBA		60 dBA	55	dBA
		L	.dn:		58		12	6	271	i .	583
		CN	EL:		63		13	5	291	I	627

iday, November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION MC	DEL			
	o: Existing e: Redlands E t: s/o Dwy. 7	Blvd.					t Name: lumber:		loreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	iditions	(Hard =	: 10, S	oft = 15)		
Average Daily		12,535 vehicle	es					Autos:			
	Percentage:	10.00%					rucks (2				
	our Volume:	1,254 vehicle	S		He	eavy Tru	cks (3+	Axles).	15		
	nicle Speed:	50 mph		١	/ehicle	Mix					
Near/Far Lar	ne Distance:	58 feet			Ver	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	4 14.6%	13.5%	94.24%
Bar	rier Heiaht:	0.0 feet			M	edium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 7	rucks:	81.8%	6 7.7%	10.6%	1.32%
Centerline Dis		55.0 feet		1	Voise S	ource E	levation	s (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	s: 0	.000	<u> </u>		
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (	Above Pad):	5.0 feet 0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		1	ane Eo	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%		F		Auto		.000	,		
,	Left View:	-90.0 degree	26		Mediu	m Truck		.811			
	Right View:	90.0 degree			Hea	vy Truck	s: 46	.830			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-1.57		0.30	)	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00			0.33	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38			0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise			_								
	Leq Peak Hou			Leg Ev			Night		Ldn		NEL
Autos:	67		65.5		64.6		59.	-	67.4		68.0
Medium Trucks:	65		63.3		60.2		57.	-	65.		65.5
Heavy Trucks:			62.7		58.4		55.	•	63.5		63.8
Vehicle Noise:	70		68.8		66.7		62.	4	70.4	1	70.9
Centerline Distance	e to Noise Co	ontour (in feet	)	70 c	iBA	65	dBA	_	60 dBA	5/	5 dBA
			Ldn:		58		126		271		583
			NEL:		63		135	-	291		627
		-			00		100		201		021

	- FH	WA-RD-77-10	HIG	HWAY N	IOISE P	KEDICI	HON MO	DEL			
	o: Existing e: Redlands E nt: s/o Dwy. 7	Blvd.					t Name: Number:		oreno Valle	ey Trade	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	12,535 vehic	les					Autos:			
Peak Hour	Percentage:	10.00%				edium Ti					
Peak H	our Volume:	1,254 vehicle	es		He	eavy Tru	icks (3+	Axles).	15		
	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	58 feet		F	Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Bar	rier Heiaht:	0.0 feet			M	ledium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0				Heavy 7	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis		55.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	os: (	.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck	ks: 2	.297			
Observer Height (		5.0 feet			Hea	vy Truck	ks: 8	.004	Grade Adj	iustment	0.0
	nd Elevation:	0.0 feet			Lane Eq	uivalon	t Dieta	aco (in	foot)		
	Road Grade:	0.0 feet			Lane Ly	Auto		.000	ieei)		
,	Left View:	0.0%			Modiu	m Truck		.000			
	Right View:	-90.0 degre				vy Truck		3.830			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-1.57	7	0.3	0	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-14.84	1	0.3	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-20.12	2	0.3	2	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	l barri	er atten	uation)						
	Leq Peak Ho		,	Leq E	vening		Night		Ldn		NEL
Autos:		7.7	65.5		64.6		59	-	67.4		68.
Medium Trucks:		5.3	63.3		60.2		57	-	65.1		65.
Heavy Trucks:		1.4	62.7		58.4		55		63.5		63.
Vehicle Noise:		).8	68.8		66.7		62	.4	70.4	1	70.
Centerline Distanc	e to Noise C	ontour (in fee	t)		/D.4		10.4	1			10.4
			1 4	70 (		65	dBA		60 dBA	55	dBA
			Ldn:		58 63		12 13		271 291		583
			NEL.		03		13	J	291		627

0	. Fuinting				Danie et A		A 14.4 B.4.		Tanada	
	o: Existing e: Redlands F	thred			Job Nu			oreno Valle	y rrade	
Road Segmen					JOD IVU	mber.	12975			
		IPUT DATA			N/	NICE I	40DE	L INPUT		
Highway Data	PECIFIC II	IFOI DATA		Site Co	onditions (					
Average Daily 1	raffic (Adt):	10.585 vehicle	es				Autos:	15		
Peak Hour F	Percentage:	10.00%		٨	ledium Tru	cks (2 A	(xles	15		
Peak Ho	our Volume:	1,059 vehicles	3	F	leavy Truck	(S (3+ A	(xles	15		
Veh	icle Speed:	50 mph		Vehicle	Miv					
Near/Far Lan	e Distance:	58 feet			hicleType		Dav	Evening	Night	Dailv
Site Data					A	utos:	72.0%	14.6%	13.5%	94.249
Ran	rier Height:	0.0 feet			Medium Tru	icks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wa	-	0.0			Heavy Tru	icks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	t. to Barrier:	55.0 feet		Noico	Source Ele	vation	c (in fo	of)		
Centerline Dist. t	o Observer:	55.0 feet		woise .	Autos:		000	ei)		
Barrier Distance t	o Observer:	0.0 feet		Mod	Autos. ium Trucks.		297			
Observer Height (A	Above Pad):	5.0 feet			avy Trucks:		004	Grade Ad	iustmant	. 0 0
Pa	d Elevation:	0.0 feet		110	avy IIucks.	0.1	JU4	Orace Au	astmont	0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent i	Distan	ce (in f	eet)		
F	Road Grade:	0.0%			Autos:	47.	000			
	Left View:	-90.0 degree	es		ium Trucks.					
	Right View:	90.0 degree	es	He	avy Trucks:	46.	830			
FHWA Noise Mode	l Calculation	s		<u> </u>						
VehicleType	REMEL	Traffic Flow	Distan	ce Fini	te Road	Fresn	el .	Barrier Att	en Ber	m Atten
Autos:	70.20	-2.31		0.30	-1.20		-4.67		000	0.00
Medium Trucks:	81.00	-15.57		0.33	-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-20.86		0.32	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise										
-,-	Leq Peak Hοι			q Evening	Leg N	-		Ldn		NEL
Autos:	67		64.8	63		58.7		66.6		67.
Medium Trucks:	64		62.6	59	-	56.6		64.4		64.
	63		62.0	57		54.3		62.7		63.
Heavy Trucks:		.1	68.1	65	.9	61.7	<u></u>	69.6	j .	70.
Vehicle Noise:										
Vehicle Noise:		ontour (in feet,	)	70 dPA	6F ~	DΛ	-	0 4BA	FE	dD A
		, ,	Ldn:	70 dBA	65 d	BA 112		0 dBA 242		dBA 52°

Wednesday, November 4, 2020

	FHW	/A-RD-77-108 I	HIGHWA	Y NOISE P	REDICT	ION MODE	L	
	o: Existing e: Redlands Bl t: n/o Alessan					Name: Alt1 lumber: 129	Moreno Valley 75	/ Trade
	SPECIFIC IN	PUT DATA					DEL INPUTS	
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage: our Volume:	9,391 vehicles 10.00% 939 vehicles	8			Aut ucks (2 Axle cks (3+ Axle	es): 15	
	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	58 feet		Veh	icleType	Da	y Evening	Night Daily
Site Data					,	Autos: 72.	0% 14.6%	13.5% 94.24%
Ran	rier Height:	0.0 feet		М	edium Ti	rucks: 76.	2% 9.4%	14.4% 4.44%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 81.	8% 7.7%	10.6% 1.32%
Centerline Dis		55.0 feet		Noise S	ource El	evations (i	n feet)	
Centerline Dist. t		55.0 feet			Auto	s: 0.000		
Barrier Distance t		0.0 feet		Mediu	m Truck			
Observer Height (A	,	5.0 feet			vy Truck		Grade Adju	stment: 0.0
	d Elevation:	0.0 feet						
	d Elevation:	0.0 feet		Lane Eq		Distance (	,	
F	Road Grade:	0.0%			Auto			
	Left View:	-90.0 degrees			m Truck	10.011		
	Right View:	90.0 degrees	3	пеа	vy Truck	s: 46.830	1	
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte	
Autos:	70.20	-2.83		0.30	-1.20	-4.		
Medium Trucks:	81.00	-16.09		0.33	-1.20	-4.		
Heavy Trucks:	85.38	-21.38		0.32	-1.20	-5.	38 0.00	0.000
Unmitigated Noise								
	Leq Peak Houi			Evening		Night	Ldn	CNEL
Autos:	66.		4.3	63.3		58.2	66.1	66.7
Medium Trucks:	64.		2.1	59.0		56.1	63.8	64.2
Heavy Trucks:	63.		1.5	57.2		53.8	62.2	62.6
Vehicle Noise:	69.		7.5	65.4		61.2	69.1	69.6
Centerline Distance	e to Noise Co	ntour (in feet)		70 dBA	65	dBA	60 dBA	55 dBA
		,	dn:	70 ава 48	00	104	223	33 <i>abA</i> 481
		_	an: FL:	48 52		111	240	481 517
		CN	LL.	52		111	240	317

FH	WA-RD-77-108	HIGI	HWAY N	OISE PI	REDICTI	ON MO	DEL			
Scenario: Existing Road Name: Redlands Road Segment: s/o Alessa						Name: . umber:		oreno Valle	ey Trade	
SITE SPECIFIC I	NPUT DATA							L INPUT	S	
Highway Data				Site Con	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	8,501 vehicl	es					Autos:	15		
Peak Hour Percentage:	10.00%			Me	dium Tru	icks (2 /	Axles):	15		
Peak Hour Volume:	850 vehicle	es.		He	avy Truc	ks (3+ A	Axles):	15		
Vehicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far Lane Distance:	58 feet		F		icleType		Dav	Evening	Niaht	Dailv
Site Data						utos:	72.0%	-	13.5%	94.24%
Barrier Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1-Berm):	0.0			1	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barrier:	55.0 feet		1	Voise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist. to Observer:	55.0 feet		F		Autos		000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks	. 2	297			
Observer Height (Above Pad):	5.0 feet				y Trucks		004	Grade Ad	iustmen	t: 0.0
Pad Elevation:	0.0 feet		L							
Road Elevation:	0.0 feet		I	.ane Eq	uivalent		_ •	feet)		
Road Grade:	0.0%				Autos		000			
Left View:	-90.0 degre	es			m Trucks		811			
Right View:	90.0 degre	es		Heav	y Trucks	: 46.	830			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	nel .	Barrier Att	en Be	rm Atten
Autos: 70.20			0.30	-	-1.20		-4.67		000	0.000
Medium Trucks: 81.00			0.33	-	-1.20		-4.87		000	0.000
Heavy Trucks: 85.38			0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise Levels (with									1 -	
VehicleType Leq Peak Ho			Leq Ev		Leq I	-	<u> </u>	Ldn		NEL
	6.0	63.8		62.9		57.8		65.		66.3
	3.6	61.6		58.6		55.6		63.		63.8
	2.7	61.0		56.8		53.4		61.		62.1
	9.1	67.1		65.0		60.7	′	68.	(	69.2
Centerline Distance to Noise C	ontour (in feet	t)	70 0	iBA	65.0	iBA	6	i0 dBA	55	dBA
		Ldn:	,,,,	45	000	97		209		450

	o: Existing e: John F Ker t: s/o Cactus						t Name: lumber:		oreno Valle	y Trade	
	PECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	iditions	(Hard		ft = 15)		
Average Daily		5,797 vehic	cles					Autos:	15		
Peak Hour I		10.00%				edium Ti					
	our Volume:	580 vehicl	es		He	eavy Tru	cks (3+	Axles):	15		
	nicle Speed:	45 mph		ν	ehicle	Mix					
Near/Far Lar	e Distance:	36 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Ran	rier Heiaht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		44.0 feet			laina C	ource E	lovetie	na (in f	not)		
Centerline Dist. t	o Observer:	44.0 feet		^	ioise si				eu		
Barrier Distance t	o Observer:	0.0 feet			A 4 15 -	Auto m Truck		.000			
Observer Height (/	Above Pad):	5.0 feet							Grade Ad	iuctmont	. 0.0
Pa	d Elevation:	0.0 feet			Hea	vy Truck	(S.' E	.004	Grade Ad	usimeni	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distaı	nce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 40	.460			
	Left View:	-90.0 degr	ees		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degr	ees		Hear	vy Truck	(S: 4(	).262			
FHWA Noise Mode	I Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	68.46		-	1.28		-1.20		-4.61		000	0.000
Medium Trucks:	79.45		-	1.31		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-23.0	1	1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise			d barri	ier attenι	uation)						
	Leq Peak Hou		,	Leq Ev			Night		Ldn		NEL
Autos:		1.1	61.9		60.9		55		63.7		64.3
Medium Trucks:		1.8	59.9		56.8		53		61.6		62.0
Heavy Trucks:		1.3	59.7		55.4		52		60.4		60.8
Vehicle Noise:		7.4	65.4		63.1		59	.0	66.9	)	67.4
Centerline Distanc	e to Noise Co	ontour (in fee	et)				dBA				
Centernine Distanc											
Centerime Distanc			Ldn:	70 d	ВА 27	65	<i>abA</i> 5		60 dBA 127		dBA 274

		VA-RD-77-108 H	попу	VAIN	UISE PI	KEDIC III	OIA MC	DEL			
Road Nam	io: Existing ne: Moreno Be nt: n/o SR-60 \	ach Dr. Westbound Ram	IDS			Project I Job Nu			oreno Valle	ey Trade	
	SPECIFIC IN		_			N	OISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions (	Hard =	= 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	12,724 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	1,272 vehicles			He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph			/ehicle I	Miv					
Near/Far La	ne Distance:	48 feet				icleType		Dav	Evening	Night	Daily
Site Data							utos:	72.0%		13.5%	
Ra	rrier Height:	0.0 feet			Ме	edium Tr	ucks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-W	-	0.0			F	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.32
Centerline Di	. ,	50.0 feet			/-: O-		4!	- /:- £-			
Centerline Dist.	to Observer:	50.0 feet		^	ioise so	ource Ele		- ,	et)		
Barrier Distance	to Observer:	0.0 feet				Autos n Trucks		.000			
Observer Height (	(Above Pad):	5.0 feet				n mucks v Trucks	_	.004	Grade Ad	iuctment	
Pa	ad Elevation:	0.0 feet			пеач	y ITUCKS	. 0	.004	Grade Au	usuneni.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in t	feet)		
	Road Grade:	0.0%				Autos	: 44	.147			
	Left View:	-90.0 degrees	3		Mediur	n Trucks	: 43	.947			
	Right View:	90.0 degrees	3		Heav	y Trucks	: 43	.966			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atter
Autos:	66.51	-0.54		0.71		-1.20		-4.65	0.0	000	0.0
Medium Trucks:	77.72	-13.81		0.74	ļ	-1.20		-4.87		000	0.0
Heavy Trucks:	82.99	-19.09		0.73	3	-1.20		-5.43	0.0	000	0.0
Unmitigated Noise	e Levels (with	out Topo and b	arrier	atteni	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	.eq Ev	ening	Leq I	Vight		Ldn		VEL
Autos:	65	.5 6	3.3		62.3		57.	2	65.	1	65
Medium Trucks:	63		1.5		58.4		55.	-	63.3	-	63
Heavy Trucks:			1.8		57.5		54.		62.		62
Vehicle Noise:	69	.0 6	7.0		64.7		60.	6	68.6	3	69
Centerline Distand	ce to Noise Co	ontour (in feet)		70					0 104		10.4
		,		70 d		65 c			i0 dBA		dBA
		CN	dn:		40 43		93	-	186 199		40 43

Wednesday, November 4, 2020

	FHV	WA-RD-77-10	B HIGH	1 YAWH	IOISE PI	REDICT	ION MOD	EL			
	e: Existing e: Moreno Be t: s/o SR-60 B		mps				Name: A lumber: 1		oreno Valley	Trade	
SITE S	PECIFIC IN	IPUT DATA					IOISE M	ODE	L INPUTS		
Highway Data					Site Con	ditions	(Hard = 1	0, Sc	oft = 15)		
Average Daily T Peak Hour F	. ,	23,934 vehic 10.00%	les		Ме	dium Tr	A ucks (2 A)	utos: des):	15 15		
Peak Ho	ur Volume:	2,393 vehicle	es		He	avy Tru	cks (3+ A)	(les):	15		
Veh	icle Speed:	50 mph		-	Vehicle I	Miv					
Near/Far Lan	e Distance:	82 feet		H		icleType	e [	ay	Evening I	Vight	Daily
Site Data							Autos: 7	2.0%	14.6%	13.5%	94.24%
Barr	ier Height:	0.0 feet			M	edium T	rucks: 7	6.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0			I	Heavy T	rucks: 8	1.8%	7.7%	10.6%	1.32%
Centerline Dist		67.0 feet		1	Noise So	ource E	levations	(in fe	eet)		
Centerline Dist. to		67.0 feet				Auto	s: 0.00	00			
Barrier Distance to		0.0 feet			Mediu	m Truck					
Observer Height (A	,	5.0 feet				vy Truck		04	Grade Adjus	stment:	0.0
	d Elevation:	0.0 feet		H-							
	d Elevation:	0.0 feet			Lane Eq		t Distance	•	reet)		
R	load Grade:	0.0%				Auto					
	Left View:	-90.0 degre				m Truck	00.0				
	Right View:	90.0 degre	es		Heav	y Truck	s: 53.0	76			
FHWA Noise Model	l Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresne		Barrier Atter		n Atten
Autos:	70.20	1.24		-0.5		-1.20		4.71	0.00		0.000
Medium Trucks:	81.00	-12.03		-0.4	-	-1.20		4.88	0.00		0.000
Heavy Trucks:	85.38	-17.31	l	-0.4	9	-1.20	-	5.29	0.00	0	0.000
Unmitigated Noise			l barri	er atten	uation)						
	Leq Peak Hoι		,	Leq E	vening		Night		Ldn	C١	IEL
Autos:	69		67.5		66.6		61.5		69.4		70.0
Medium Trucks:	67	'.3	65.3		62.2		59.3		67.1		67.5
Heavy Trucks:	66		64.7		60.4		57.1		65.5		65.8
Vehicle Noise:	72	2.8	70.8		68.7		64.4		72.4		72.9
Centerline Distance	e to Noise Co	ontour (in fee	t)								
			L	70 0		65	dBA	6	60 dBA	55 (	dBA
			Ldn:		97		208		448		965
		C	NEL:		104		224		482		1,038

	FHW	A-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION MC	DDEL			
Road Nar	rio: Existing me: Moreno Bea ent: s/o Alessand						Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,862 vehicle	es					Autos:			
Peak Hou	r Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak I	Hour Volume:	1,886 vehicles	3		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ane Distance:	82 feet		F		icleType	,	Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%	-	13.5%	94.24%
Rs	arrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
	ist. to Barrier:	67.0 feet		٨	loise S	ource E	levation	ns (in fe	eet)		
Centerline Dist.		67.0 feet				Auto	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height	(Above Pad):	5.0 feet				y Truck		004	Grade Ad	iustmen	t: 0.0
F	Pad Elevation:	0.0 feet									
Ro	oad Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distar	ice (in i	feet)		
	Road Grade:	0.0%				Auto	s: 53	.226			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 53	.059			
	Right View:	90.0 degree	es		Hea	y Truck	s: 53	.076			
FHWA Noise Mod	del Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos.	70.20	0.20		-0.51		-1.20		-4.71	0.0	000	0.000
Medium Trucks.	81.00	-13.07		-0.49	9	-1.20		-4.88	0.0	000	0.000
Heavy Trucks.		-18.35		-0.49		-1.20		-5.29	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hour		_	Leq Ev			Night		Ldn		NEL
Autos.			66.5		65.6		60.		68.3	-	68.9
Medium Trucks.		=	64.3		61.2		58.	-	66.		66.4
Heavy Trucks.			63.7		59.4		56.	_	64.4		64.8
Vehicle Noise.	: 71.	8	69.8		67.6		63.	.4	71.3	3	71.8
Centerline Distan	ice to Noise Co	ntour (in feet)	1	70 d	ID A	65	dBA	-	60 dBA		i dBA
			Ldn:	700		05					
			VEL:		82		17		382		824
		CI	vcL:		89		19	1	411		886

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION M	ODEL			
	c: Existing e: Moreno Be t: s/o Cactus							: Alt1 M : 12975	oreno Valle	y Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
	. ,	15,452 vehicl 10.00% 1,545 vehicle 50 mph			Ме	edium Ti eavy Tru	rucks (2	Autos: 2 Axles): - Axles):	15		
Near/Far Lan	e Distance:	82 feet				icleTyp	е	Day	Evening	Night	Daily
Site Data Barı Barrier Type (0-Wa	rier Height:	0.0 feet 0.0				ledium 1		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%
Centerline Dist. t	t. to Barrier:	67.0 feet 67.0 feet		1	Voise S	ource E	levatio	ns (in f	eet)		
Barrier Distance to Observer Height (A Pa	o Observer: Above Pad): d Elevation:	0.0 feet 5.0 feet 0.0 feet			Hea	Auto m Truck vy Truck	ks:	0.000 2.297 8.004	Grade Ad	iustment	: 0.0
R	d Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre				Auto m Truck vy Truck	os: 5 ks: 5	3.226 3.059 3.076	reetj		
FHWA Noise Mode					,						
VehicleType	REMEL	Traffic Flow		stance		Road	Fre	snel	Barrier Att		m Atten
Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38			-0.51 -0.49 -0.49	9	-1.20 -1.20 -1.20		-4.71 -4.88 -5.29	0.0	000 000 000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	V	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	67	7.8	65.6		64.7	•	59	9.6	67.5	5	68.
Medium Trucks:		5.4	63.4		60.3			7.4	65.2		65.0
Heavy Trucks:		1.5	62.8		58.5			5.2	63.6		63.9
Vehicle Noise:		).9	68.9		66.8	}	62	2.5	70.	5	71.
Centerline Distance	e to Noise Co	ontour (in feet	)		·		10.4				10.4
			L	70 a		65	dBA		60 dBA		dBA
			Ldn:		72		15		335		721
		C	NEL:		78		16	)/	360		775

	: Existing : Moreno Bea t: s/o John F I					Project N Job Nu			oreno Valle	ey Trade	
SITE S Highway Data	PECIFIC IN	PUT DATA			ito Con	NC ditions (F			L INPUT	S	
• •		45 000bi-l-		3	nie con	uitions (i		Autos:	15		
Average Daily T	. ,	15,898 vehicle:	3			-6 T			15 15		
Peak Hour F		10.00%				dium Truc			15		
		1,590 vehicles			He	avy Truck	S (3+ A	ixies):	15		
	icle Speed:	50 mph		ν	'ehicle l	Иiх					
Near/Far Lan	e Distance:	82 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	72.0%	14.6%	13.5%	94.24
Rarr	ier Height:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wa	-	0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.329
Centerline Dist	. ,	67.0 feet		-							
Centerline Dist. to	Observer:	67.0 feet		^	ioise So	urce Ele			et)		
Barrier Distance to	Ohserver:	0.0 feet				Autos:		000			
Observer Height (A	hove Pad):	5.0 feet				n Trucks:		297			
	d Flevation:	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ustment	0.0
Road	d Elevation:	0.0 feet		L	ane Equ	uivalent L	Distanc	e (in t	eet)		
R	oad Grade:	0.0%				Autos:	53.	226			
	Left View:	-90.0 degrees	3		Mediur	n Trucks:	53.	059			
	Right View:	90.0 degrees			Heav	y Trucks:	53.	076			
FHWA Noise Model	Calculations	<u> </u>									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-0.54		-0.51		-1.20		-4.71	0.0	000	0.00
Medium Trucks:	81.00	-13.81		-0.49	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-19.09		-0.49	1	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrie	r attenu	ıation)						
VehicleType L	.eq Peak Hou	r Leq Day		Leg Ev	ening	Leq N	ight		Ldn		NEL
Autos:	68.		5.7		64.8		59.7	,	67.6	-	68
Medium Trucks:	65.	5 6	3.5		60.5		57.5	5	65.3	3	65
Heavy Trucks:	64.		2.9		58.7		55.3	3	63.7	7	64
Vehicle Noise:	71.	0 6	9.0		66.9		62.6	6	70.6	3	71
Centerline Distance	e to Noise Co	ntour (in feet)		70							(D.4
			, L	70 d		65 dl		6	0 dBA		dBA
		_	dn:		73		158		341		73
		CN	FL:		79		170		367		790

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGHWA	AY NO	ISE PF	REDICT	ION MOI	DEL			
Scenario Road Name Road Segment		St.					Name: A lumber: 1		loreno Valley	Trade	
	PECIFIC IN	PUT DATA							L INPUTS		
Highway Data				Sit	e Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	19,248 vehicle 10.00% 1,925 vehicles					ucks (2 A cks (3+ A	/	15		
Veh	icle Speed:	50 mph		Ve	hicle I	Wix					
Near/Far Lan	e Distance:	82 feet				icleType		Day	Evening 1	Vight I	Daily
Site Data								72.0%		-	4.24%
Ran	ier Height:	0.0 feet			М	edium T	rucks:	76.29	6 9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0			F	leavy T	rucks:	81.8%	6 7.7%	10.6%	1.32%
Centerline Dist		67.0 feet		No	ise Sc	urce El	levations	(in f	eet)		
	Observer: Above Pad): d Elevation:	67.0 feet 0.0 feet 5.0 feet 0.0 feet			Heav	Auto n Truck ry Truck	s: 2.2 s: 8.0	97 104	Grade Adjus	stment: 0	.0
	d Elevation:	0.0 feet		La	ne Eq		Distanc		reet)		
	load Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Auto n Truck ry Truck	s: 53.0	)59			
FHWA Noise Model	l Calculations	i									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	e/	Barrier Atten	Berm .	Atten
Autos:	70.20	0.29		-0.51		-1.20		4.71	0.00	0	0.000
Medium Trucks:	81.00	-12.98		-0.49		-1.20		-4.88	0.00	0	0.000
Heavy Trucks:	85.38	-18.26		-0.49		-1.20		-5.29	0.00	0	0.000
Unmitigated Noise											
	Leq Peak Hou			q Eve		Leq	Night		Ldn	CNE	
Autos:	68.	-	6.6		65.6		60.5		68.4		69.0
Medium Trucks:	66.		34.4		61.3		58.4		66.1		66.5
Heavy Trucks:	65. 71.		3.8 9.8		59.5 67.7		56.1 63.5		64.5 71.4		64.9 71.9
			,5.0		01.1		03.3		71.4		, 1.5
Centerline Distance	e to Noise Co	ntour (in feet)		70 dB.	Α	65	dBA		60 dBA	55 dE	BA .
		L	.dn:		83		180		388		835
		CN	IEL:		90		193		417		898

	FH	WA-RD-77-108	HIGH	YAWH	NOISE PI	REDICT	ION MO	DEL			
Road Nan	io: Existing ne: Iris Av. nt: e/o Lassell	e St.					Name: . lumber:		oreno Valle	y Trade	
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	30,134 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	Axles):	15		
Peak F	lour Volume:	3,013 vehicle	S		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Miv					
Near/Far La	ne Distance:	82 feet		H		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%		13.5%	94.24%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0			-	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Di		67.0 feet		-	Noise So			- /:- #-			
Centerline Dist.	to Observer:	67.0 feet			woise 30	Auto		000	eu		
Barrier Distance	to Observer:	0.0 feet			Modiu	Auto m Truck		297			
Observer Height	(Above Pad):	5.0 feet				ry Truck		004	Grade Ad	iuctmant	. 0.0
P	ad Elevation:	0.0 feet			пеан	ry Truck	S. O.	004	Grade Au	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 53.	226			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53.	059			
	Right View:	90.0 degre	es		Heav	y Truck	s: 53.	076			
FHWA Noise Mod	el Calculation	s		- '							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	_	Barrier Att	en Ber	m Atten
Autos:	70.20			-0.5		-1.20		-4.71		000	0.00
Medium Trucks:				-0.4		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-16.31		-0.4	9	-1.20		-5.29	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho			Leq E	vening	_	Night		Ldn	_	NEL
Autos:		0.7	68.5		67.6		62.5		70.4		71.0
Medium Trucks:		3.3	66.3		63.2		60.3		68.1		68.
Heavy Trucks:		7.4	65.7		61.4		58.1		66.5		66.
Vehicle Noise:	73	3.8	71.8		69.7		65.4	1	73.4	1	73.9
Centerline Distan	ce to Noise C	ontour (in feet	)								
			L	70 (	dBA	65	dBA		0 dBA		dBA
			Ldn:		113		243		522		1,126
		С	NEL:		121		261		562		1,210

	- FHV	WA-RD-77-108	HIGI	TVVAT N	OISE P	KEDICI	ION MC	JUEL			
Scenario Road Name Road Segmen		g St.					Name: lumber:		oreno Valle	ey Trade	
SITE S	SPECIFIC IN	IPUT DATA				ı	IOISE	MODE	L INPUT	s	
Highway Data				S	ite Cor	ditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily 1	Traffic (Adt):	26,472 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	10.00%			Ме	dium Tr	ucks (2	Axles):	15		
Peak Ho	our Volume:	2,647 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Vet	nicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far Lar	ne Distance:	82 feet		F.		icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Ran	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	t. to Barrier:	67.0 feet		۸	loise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. t	o Observer:	67.0 feet		-	.0.00	Auto		.000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet				•					
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen		_ •	feet)		
F	Road Grade:	0.0%				Auto		.226			
	Left View:	-90.0 degre	es			m Truck	00	.059			
	Right View:	90.0 degre	es		Hea	y Truck	s: 53	.076			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	1.68		-0.51		-1.20		-4.71		000	0.00
Medium Trucks:	81.00			-0.49		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-16.87	'	-0.49	)	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise			barri								
	Leq Peak Hοι			Leq Ev		Leq	Night		Ldn		NEL
Autos:	70		67.9		67.0		61	-	69.8		70.
Medium Trucks:	67		65.7		62.7		59	-	67.		67.
Heavy Trucks:	66		65.1		60.9		57		65.9		66.
Vehicle Noise:	73	3.2	71.2		69.1		64	9	72.8	3	73.
Centerline Distanc	e to Noise Co	ontour (in fee	t)	70	D.4	65	-10.4		0 -ID 4		-10.4
				70 d	BA		dBA	1 6	i0 dBA	1 55	dBA
			Ldn:		103		22		479		1.033

	: Existing : Eucalyptus	Δv					Name: I		reno Valle	y Trade	
Road Segment						JOD IVE	imber.	12973			
		PUT DATA				M	OISE I	IODE	L INPUTS	2	
Highway Data	PECIFIC III	FUIDAIA		s	ite Con	ditions (				<u> </u>	
Average Daily T	raffic (Adt):	9.376 vehicl	es			,		Autos:	15		
Peak Hour P	. ,	10.00%			Me	dium Tru	cks (2 A	(xles):	15		
	ur Volume:	938 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Vehi	icle Speed:	40 mph			ehicle l		•				
Near/Far Lane	e Distance:	48 feet		V		icleType		Dav	Evening	Night	Dailv
Site Data					ven			72.0%	14.6%	13.5%	
					14	edium Tr		76.2%	9.4%	14.4%	4.44%
	ier Height:	0.0 feet				Heavy Tr		81.8%		10.6%	
Barrier Type (0-Wa Centerline Dist	. ,	0.0 50.0 feet				1001) 111	30110.	01.070	1.170	10.070	1.027
Centerline Dist. to		50.0 feet		٨	loise So	ource Ele	evations	s (in fe	et)		
Barrier Distance to		0.0 feet				Autos	: 0.0	000			
Observer Height (A		5.0 feet			Mediu	m Trucks	: 2.2	297			
	d Flevation:	0.0 feet			Heav	y Trucks	: 8.0	004	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in f	eet)		
	oad Grade:	0.0%				Autos			,		
	Left View:	-90.0 degre	es		Mediu	m Trucks		947			
,	Right View:	90.0 degre				y Trucks					
						•					
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn	_	Barrier Atte		m Atten
Autos:	66.51	-1.86		0.71		-1.20		-4.65	0.0		0.00
Medium Trucks:	77.72	-15.13		0.74		-1.20		-4.87	0.0		0.00
Heavy Trucks:	82.99	-20.41		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ıation)						
VehicleType L	.eq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq I	Vight		Ldn	C	VEL
Autos:	64	.2	61.9		61.0		55.9		63.8		64.
Medium Trucks:	62		60.2		57.1		54.2		61.9		62.
Heavy Trucks:	62		60.5		56.2		52.8		61.2		61.
Vehicle Noise:	67	.7	65.7		63.4		59.2		67.2	2	67.
Centerline Distance	to Noise Co	ntour (in feet	)								
		,		70 d	BA	65 c	iBA	6	0 dBA	55	dBA
			Ldn:		33		70		152		327

Wednesday, November 4, 2020

F	HWA-RD-77-1	08 HIGHW	AY NOISE P	REDICT	ION MODEL		
Scenario: Existing Road Name: Eucalypt Road Segment: e/o Fir A					Name: Alt1 lumber: 1297	Moreno Valley '5	Trade
SITE SPECIFIC	INPUT DATA	4				EL INPUTS	
Highway Data			Site Cor	nditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt)	: 14,002 vehi	cles			Auto	s: 15	
Peak Hour Percentage	: 10.00%				ucks (2 Axles	,	
Peak Hour Volume	: 1,400 vehic	les	He	eavy Tru	cks (3+ Axles	;): 15	
Vehicle Speed	: 40 mph		Vehicle	Mix			
Near/Far Lane Distance	: 48 feet			nicleType	Day	Evening I	Night Daily
Site Data					Autos: 72.0	% 14.6%	13.5% 94.24%
Barrier Height	: 0.0 feet		M	ledium T	rucks: 76.2	9.4%	14.4% 4.44%
Barrier Type (0-Wall, 1-Berm)				Heavy T	rucks: 81.8	% 7.7%	10.6% 1.32%
Centerline Dist. to Barrier	: 50.0 feet		Noise S	ource E	levations (in	feet)	
Centerline Dist. to Observer	: 50.0 feet			Auto			
Barrier Distance to Observer	: 0.0 feet		Mediu	ım Truck			
Observer Height (Above Pad)				vy Truck		Grade Adjus	stment: 0.0
Pad Elevation	. 0.0 1001						
Road Elevation			Lane Eq		t Distance (ii	n feet)	
Road Grade				Auto			
Left View	. 00.0 409			m Truck			
Right View	: 90.0 deg	rees	Hea	vy Truck	s: 43.966		
FHWA Noise Model Calculati	ons						
VehicleType REMEL	Traffic Flow	/ Distai	nce Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 66.	51 -0.1	12	0.71	-1.20	-4.6	5 0.00	0.000
Medium Trucks: 77.		-	0.74	-1.20	-4.8		
Heavy Trucks: 82.	99 -18.6	67	0.73	-1.20	-5.4	3 0.00	0.000
Unmitigated Noise Levels (w.	ithout Topo an	d barrier a	attenuation)				
VehicleType Leq Peak F	Hour Leq D	ay L	eq Evening	Leq	Night	Ldn	CNEL
Autos:	65.9	63.7	62.8		57.6	65.5	66.1
Medium Trucks:	63.9	61.9	58.8		55.9	63.7	64.0
Heavy Trucks:	63.9	62.2	57.9		54.5	63.0	63.3
Vehicle Noise:	69.4	67.4	65.1		61.0	69.0	69.4
Centerline Distance to Noise	Contour (in fe	et)					
			70 dBA	65	dBA	60 dBA	55 dBA
		Ldn:	43		92	198	427
		CNEL:	46		99	213	458

ay, November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	1 YAW	IOISE PI	REDICT	ION MC	DEL			
Road Nan	io: Existing ne: Eucalyptus nt: w/o Moren						Name: umber:		oreno Valle	ey Trade	;
	SPECIFIC IN	IPUT DATA			0				L INPUT	s	
Highway Data				-	Site Con	aitions	(Hara =	: 10, Sc	ort = 15)		
Average Daily	Traffic (Adt):	3,673 vehicle	es					Autos:			
	Percentage:	10.00%				dium Tri					
	lour Volume:	367 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		<b>+</b>	Vehicle i	Mix					
Near/Far La	ne Distance:	48 feet		H		icleType		Dav	Evenina	Niaht	Daily
Site Data							Autos:	72.0%		13.5%	
Ra	rrier Height:	0.0 feet			М	edium Ti	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0			-	Heavy Ti	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Di		50.0 feet									
Centerline Dist.	to Observer:	50.0 feet		H.	Noise So				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
-	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	ad Flevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto:	s: 44	.147			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	.947			
	Right View:	90.0 degree			Heav	y Truck	s: 43	.966			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-5.93		0.7	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-19.20		0.7	4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-24.48		0.7	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	60	).1	57.9		56.9		51.	8	59.	7	60.3
Medium Trucks:	58	3.1	56.1		53.0		50.	1	57.	9	58.2
Heavy Trucks:	58	3.0	56.4		52.1		48.	7	57.	1	57.5
Vehicle Noise:	63	3.6	61.6		59.3		55.	2	63.	2	63.6
Centerline Distan	ce to Noise Co	ontour (in feet	)								
				70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		17		38	3	81		175
		C	NEL:		19		40	)	87		188

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	TION MOI	DEL			
	o: Existing e: Eucalyptus it: e/o Auto M						t Name: A Number: 1		oreno Valle	y Trade	•
SITE S	SPECIFIC II	IPUT DATA					NOISE N	IODE	L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	10, So	ft = 15)		
Peak He	Traffic (Adt): Percentage: our Volume: nicle Speed:	1,617 vehicle 10.00% 162 vehicle 40 mph		1/		avy Tru	rucks (2 A icks (3+ A	/	15 15 15		
Near/Far Lar	ne Distance:	48 feet		V		iviix icleType		Dav	Evening	Night	Daily
Site Data	rier Height:	0.0 feet					Autos:	72.0% 76.2%	14.6%	13.59 14.49	6 94.24%
Barrier Type (0-W		0.0				Heavy 1	rucks:	81.8%	7.7%	10.69	6 1.32%
Centerline Dis	t. to Barrier:	50.0 feet		A	laica S	ourco E	levations	(in fo	not)		
Roa	o Observer:	50.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Head ane Eq Mediu	Auto m Truck vy Truck <b>uivalen</b> Auto m Truck vy Truck	ks: 2.2 ks: 8.0 at Distance os: 44.1 ks: 43.9	297 004 <b>e (in 1</b> 147 947	Grade Adj	iustmer	t: 0.0
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99			0.71 0.74 0.73		-1.20 -1.20 -1.20		-4.65 -4.87 -5.43		000 000 000	0.000 0.000 0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
	Leq Peak Ho			Leg Eve		Leq	Night		Ldn		CNEL
Autos:	56	3.5	54.3		53.4		48.3		56.2	2	56.7
Medium Trucks:	-	1.5	52.5		49.4		46.5		54.3		54.7
Heavy Trucks:		1.5	52.8		48.5		45.2		53.6		53.9
Vehicle Noise:	60	0.0	58.1		55.8		51.6		59.6	6	60.1
Centerline Distance	e to Noise C	ontour (in feet	)								
				70 dl	BA	65	dBA	6	0 dBA	5	5 dBA
			Ldn:		10		22		47		101
		C	NEL:		11		23		50		109

Scenar	io: Existing					Project	Name: I	Alt1 M	oreno Valle	y Trade	
	ne: Eucalyptus	Av.					umber:			•	
Road Segme	nt: e/o Dwy. 1										
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1,507 vehicles	3				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	(xles	15		
Peak H	lour Volume:	151 vehicles			He	avy Truc	ks (3+ A	(xles	15		
Ve	hicle Speed:	40 mph		ν	ehicle I	Nix					
Near/Far La	ne Distance:	48 feet		Ė		cleType		Day	Evening	Night	Daily
Site Data							lutos:	72.0%	14.6%	13.5%	94.24
Ba	rrier Height:	0.0 feet			Me	edium Ti	ucks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-W		0.0			F	leavy Ti	ucks:	81.8%	7.7%	10.6%	1.32
Centerline Di	st. to Barrier:	50.0 feet		N	loisa So	urce El	evations	e (in fa	not)		
Centerline Dist.	to Observer:	50.0 feet		/*	UISE SU	Auto:		000	eij		
Barrier Distance	to Observer:	0.0 feet			Modius	n Truck:		297			
Observer Height	(Above Pad):	5.0 feet				y Truck		004	Grade Ad	iustmant	. 0.0
P	ad Elevation:	0.0 feet			ricav	y ITUCK	5. 0.0	JU-4	Orauc Au	ustricit	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos	3: 44.	147			
	Left View:	-90.0 degrees	3		Mediur	n Trucks	3: 43.9	947			
	Right View:	90.0 degrees	3		Heav	y Truck:	3: 43.9	966			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	66.51	-9.80		0.71		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-23.07		0.74		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-28.35		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (witho	out Topo and b	arrier	attenu	ıation)						
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn		NEL
Autos:			4.0		53.1		48.0		55.9		56
Medium Trucks:			2.2		49.1		46.2		54.0		54
Heavy Trucks:			2.5		48.2		44.9		53.3		53
Vehicle Noise:	59.	.7 5	7.8		55.5		51.3		59.3	3	59
Centerline Distan	ce to Noise Co	ntour (in feet)									
			1	70 di	BA	65 (	dBA	6	60 dBA	55	dBA
								•			
		_	dn: FL:		10 10		21 22		45 48		9 <sup>1</sup>

Wednesday, November 4, 2020

	FHWA	A-RD-77-108 H	IGHWA	Y NOISE P	REDICT	ION MODE	L		
Scenario: Existir Road Name: Eucaly Road Segment: w/o D	ptus A	V.				Name: Alt lumber: 12	1 Moreno Val 975	ley Tra	de
SITE SPECIF	C INP	UT DATA					DEL INPU	rs	
Highway Data				Site Cor	nditions	(Hard = 10	), Soft = 15)		
Average Daily Traffic (A Peak Hour Percenta Peak Hour Volui	ge: 1	2,424 vehicles 0.00% 242 vehicles				Au ucks (2 Axl cks (3+ Axl	,		
Vehicle Spe	ed:	40 mph		Vehicle	Mix				
Near/Far Lane Distan	ce:	48 feet			nicleType	Da	ay Evening	Nigh	t Dailv
Site Data							2.0% 14.6%		
Barrier Heig	ht.	0.0 feet		N	ledium T	rucks: 76	6.2% 9.4%	14.4	% 4.44%
Barrier Type (0-Wall, 1-Ber		0.0			Heavy T	rucks: 81	.8% 7.7%	10.6	3% 1.32%
Centerline Dist. to Barr	ier:	50.0 feet		Noise S	ource E	levations (	in feet)		
Centerline Dist. to Observ	/er:	50.0 feet			Auto				
Barrier Distance to Observ	/er:	0.0 feet		Mediu	ım Truck				
Observer Height (Above Pa	ad):	5.0 feet			vy Truck			diustme	ent: 0.0
Pad Elevati	on:	0.0 feet					-	-,	
Road Elevati	on:	0.0 feet		Lane Ec	quivalent	t Distance	, ,		
Road Gra	de:	0.0%			Auto	s: 44.14	7		
Left Vi	ew:	-90.0 degrees		Mediu	ım Truck	s: 43.94	7		
Right Vi	ew:	90.0 degrees		Hea	vy Truck	s: 43.96	6		
FHWA Noise Model Calcula	ations								
VehicleType REME	L 7	raffic Flow	Distanc	e Finite	Road	Fresnel	Barrier A	tten E	Berm Atten
Autos: 6	6.51	-7.74		0.71	-1.20	-4	.65 0	.000	0.000
Medium Trucks: 7	7.72	-21.01		0.74	-1.20	-4	.87 0	.000	0.000
Heavy Trucks: 8	2.99	-26.29		0.73	-1.20	-5	.43 0	.000	0.000
Unmitigated Noise Levels	withou	t Topo and b	arrier at	tenuation)					
VehicleType Leq Pea		Leq Day		g Evening		Night	Ldn		CNEL
Autos:	58.3		6.1	55.1		50.0	57		58.5
Medium Trucks:	56.2	-	1.3	51.2	-	48.3	56		56.4
Heavy Trucks:	56.2		1.6	50.3		46.9	55		55.7
Vehicle Noise:	61.8	59	9.8	57.5	5	53.4	61	.4	61.8
Centerline Distance to Noi	se Con	tour (in feet)	1 .		T		22 12 1	-	
				70 dBA	65	dBA	60 dBA		55 dBA
		_	dn:	13		29	6		133
		CNE	:L:	14		31	6	ь	142

	FH\	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MO	DEL			
Road Nan	io: Existing ne: Eucalyptus nt: w/o Redlan						Name: lumber:		oreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA			0:: 0				L INPUT	s	
Highway Data					Site Cor	aitions	-				
Average Daily	Traffic (Adt):	2,424 vehicl	es					Autos:			
Peak Hour	Percentage:	10.00%					ucks (2 ,	,			
Peak F	lour Volume:	242 vehicle	s		He	avy Tru	cks (3+ ,	Axles):	15		
Ve	hicle Speed:	40 mph		f	Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%	-	13.5%	94.24%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Di	. ,	50.0 feet		-	Noise S	roo E	lavation	a (in f	not)		
Centerline Dist.	to Observer:	50.0 feet		F	Noise 3	Auto		000	eei)		
Barrier Distance	to Observer:	0.0 feet			A d = elic	Auto m Truck		000 297			
Observer Height	Above Pad):	5.0 feet				ry Truck		004	Grade Ad	iuotmon	t: 0.0
P	ad Elevation:	0.0 feet			неа	y iruck	S. 8.	004	Grade Ad	justinen	t. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44.	147			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	947			
	Right View:	90.0 degre	es		Hear	y Truck	s: 43	966			
FHWA Noise Mod	el Calculation	s		'							
VehicleType	REMEL	Traffic Flow		stance		Road	Fresi	_	Barrier Att		rm Atten
Autos:	66.51			0.7		-1.20		-4.65		000	0.000
Medium Trucks:				0.7		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-26.29		0.7	73	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attei	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL
Autos:		3.3	56.1		55.1		50.0	-	57.9	-	58.5
Medium Trucks:		5.2	54.3		51.2		48.3	-	56.		56.4
Heavy Trucks:		5.2	54.6		50.3		46.		55.3		55.7
Vehicle Noise:	61	.8	59.8		57.5		53.4	1	61.4	1	61.8
Centerline Distan	ce to Noise Co	ontour (in feet	:)								
			Į	70	dBA	65	dBA	4 - 7	60 dBA		5 dBA
			Ldn:		13		29		62		133
		С	NEL:		14		31		66	i	142

Autos: 72.0%   14.6%   13.5%   94		FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION M	DDEL			
Average Daily Traffic (Adt):	Road Name	e: Eucalyptus									ey Trad	9
Average Daily Traffic (Adt): 2,612 vehicles Peak Hour Volume: 261 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet    Vehicle Type		SPECIFIC II	NPUT DATA			O					S	
Site Data	Average Daily Peak Hour I Peak Ho Vel	Percentage: our Volume: hicle Speed:	10.00% 261 vehicle 40 mph			Me He 'ehicle	dium Tr avy Tru <b>Mix</b>	ucks (2 cks (3+	Autos Axles) Axles)	15 15 15	A.Cde-4	0-7-
Barrier Height:   0.0   feet     Medium Trucks:   76.2%   9.4%   14.4%   4   Heavy Trucks:   81.8%   7.7%   10.6%   1	Sito Data				-	ven				-	-	Daily 6 94.24%
Noise Model Calculations   Noise Noise Source Elevations (in Feet)										6 9.4%	14.49	6 4.44%
Barrier Distance to Observer: 0.00 feet   Autos: 0.000   Medium Trucks: 2.297   Autos: 0.000   Medium Trucks: 0.					Ν	loise S	ource E	levatio	ns (in f	eet)		
FHWA Noise   Mode  Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnet   Barrier Atten   Berm A	Barrier Distance t Observer Height ( Pa Roa	to Observer: Above Pad): ad Elevation: ad Elevation: Road Grade: Left View:	0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		L	Head ane Eq Mediu	m Truck ry Truck <b>uivalen</b> Auto m Truck	s: 2 s: 8 t Distar s: 44 s: 43	2.297 3.004 <b>nce (in</b> 1.147 3.947		justmer	nt: 0.0
VehicleType	F1844 Noise 44-4-	•										
Autos:         66.51         -7.41         0.71         -1.20         -4.65         0.000           Medium Trucks:         77.72         -20.68         0.74         -1.20         -4.87         0.000           Heavy Trucks:         82.99         -25.96         0.73         -1.20         -5.43         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         58.6         56.4         55.5         50.4         58.3           Medium Trucks:         56.6         54.6         51.5         48.6         56.4           Heavy Trucks:         56.6         54.9         50.6         47.3         55.7           Vehicle Noise:         62.1         60.1         57.9         53.7         61.7           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         14         30         65         65         66         66         66         66         66         66         66         66         66         66         66         67         67			-	Die	tance	Finite	Road	Free	nel	Rarrier Att	en Re	rm Atten
Unmitigated Noise Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL	Autos: Medium Trucks:	66.51 77.72	-7.41 -20.68		0.71 0.74		-1.20 -1.20	7,700	-4.65 -4.87	0.0	000	0.00
VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL							-1.20		-5.43	0.0	000	0.00
Autos:         58.6         56.4         55.5         50.4         58.3           Medium Trucks:         56.6         54.6         51.5         48.6         56.4           Heavy Trucks:         56.6         54.9         50.6         47.3         55.7           Vehicle Noise:         62.1         60.1         57.9         53.7         61.7           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         14         30         65								A 17 In 4	-	Late		DAIE!
Medium Trucks:         56.6         54.6         51.5         48.6         56.4           Heavy Trucks:         56.6         54.9         50.6         47.3         55.7           Vehicle Noise:         62.1         60.1         57.9         53.7         61.7           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         14         30         65	,,, .	- 1			Led EV		Leq	-	4			JNEL 58.
Heavy Trucks:		-										56.
Vehicle Noise:         62.1         60.1         57.9         53.7         61.7           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         14         30         65		-										56.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 14 30 65	· -	62	2.1	60.1		57.9		53	.7	61.7	7	62.
Ldn: 14 30 65	Centerline Distanc	e to Noise C	ontour (in feet	)								
==··· · · · · · · · · · · · · · · · · ·					70 d		65					
CNEL: 15 32 69								-	-			139
			С	NEL:		15		3	2	69	1	150

Road Nan	no: Existing ne: Encilia Av. nt: e/o Essen I	ano					Name: I umber:		oreno Valle	y Trade	
	SPECIFIC IN			ĺ		N	OISE N	/ODE	L INPUTS	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	217 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	(xles	15		
Peak F	lour Volume:	22 vehicles	s		He	avy Truc	cks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph		-	Vehicle I	Miss					
Near/Far La	ne Distance:	36 feet		ŀ		icleType		Dav	Evening	Night	Daily
Site Data					****			72.0%		13.5%	
	rrier Height:	0.0 feet			М	edium Ti	ucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W		0.0			- 1	Heavy Ti	ucks:	81.8%	7.7%	10.6%	1.329
Centerline Di		44.0 feet		L							
Centerline Dist.		44.0 feet		Ŀ	Noise So				et)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297			
	ad Flevation:	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	ce (in t	eet)		
	Road Grade:	0.0%				Autos	s: 40.	460			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fresn	iel .	Barrier Atte	en Ber	m Atten
Autos:	68.46	-18.73		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-32.00		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-37.28		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atter	uation)						
VehicleType	Leq Peak Hou				vening	Leq	Night		Ldn		VEL
Autos:	49		47.6		46.7		41.6		49.5		50
Medium Trucks:	47		45.6		42.5		39.6		47.4		47
Heavy Trucks:			45.4		41.1		37.8		46.2		46
Vehicle Noise:	53	3.1	51.1		48.9		44.7	,	52.7	7	53
Centerline Distan	ce to Noise Co	ontour (in feet,	)					,			
			!		dBA	65	dBA		i0 dBA	55	dBA
			Ldn:		3		7		14		3

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PI	REDICTI	ON M	ODEL			
Road Nar	rio: Existing me: Encilia Av. ent: e/o Mozart	Wy.						: Alt1 M : 12975	loreno Vall	ey Trade	
SITE Highway Data	SPECIFIC IN	PUT DATA			Site Con	N ditions			L INPUT	s	
Average Daily Peak Hou Peak I	Traffic (Adt): r Percentage: Hour Volume: ehicle Speed: ane Distance:	217 vehicle 10.00% 22 vehicles 45 mph			Ме	edium Tru eavy Truc	icks (2	Autos. Axles).	15		
	arie Distarice.	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-V	arrier Height: Vall, 1-Berm):	0.0 feet 0.0				A edium Tr Heavy Tr		72.09 76.29 81.89	6 9.4%		
Centerline D	ist. to Barrier:	44.0 feet		,	Voise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist Barrier Distance Observer Height	to Observer:	44.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks ry Trucks	s: (	0.000 2.297 3.004	Grade Ad	ljustment	: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks y Trucks	6: 4	0.460 0.241 0.262			
FHWA Noise Mod	lel Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos	68.46	-18.73		1.28	3	-1.20		-4.61	0.	000	0.000
Medium Trucks Heavy Trucks		-32.00 -37.28		1.3 <sup>4</sup>		-1.20 -1.20		-4.87 -5.50		000 000	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrie	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leg Ev	rening	Leq	Night		Ldn	C	NEL
Autos	49	.8 4	7.6		46.7		41	.6	49.	5	50.0
Medium Trucks	47	.6 4	5.6		42.5		39	.6	47.	4	47.7
Heavy Trucks	47	.1 4	5.4		41.1		37	.8	46.	2	46.5
Vehicle Noise	53	.1 5	51.1		48.9		44	.7	52.	7	53.1
Centerline Distan	ce to Noise Co	ntour (in feet)							00 104	1	
				70 c		65 (	dBA	7	60 dBA 14		dBA 31
		_	.dn: IEL:		3			7	14		33

ay, November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	I YAW	NOISE PI	REDICT	ION MC	DEL			
Road Nan	io: Existing ne: Encilia Av. nt: w/o Redlan	ıds Blvd.					Name: lumber:		oreno Valle	ey Trade	e
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	475 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak F	lour Volume:	48 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		-	Vehicle I	Miv					
Near/Far La	ne Distance:	36 feet				icleType	,	Dav	Evenina	Niaht	Daily
Site Data					****		Autos:	72.0%		13.59	
	rrier Height:	0.0 feet			Me	edium T	rucks:	76.2%	9.4%	14.49	6 4.44%
Barrier Type (0-W		0.0 leet			F	Heavy T	rucks:	81.8%	7.7%	10.69	
Centerline Di		44.0 feet		L							
Centerline Dist.		44.0 feet		L	Noise So				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height		5.0 feet				m Truck		.297			
-	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		ŀ	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		.460	,		
	Left View:	-90.0 degree	25		Mediu	m Truck		241			
	Right View:	90.0 degree			Heav	y Truck	s: 40	.262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46			1.2	-	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-28.60		1.3	1	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-33.88		1.3	1	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	(	NEL
Autos:	53	3.2	51.0		50.1		45.	0	52.	9	53.4
Medium Trucks:	51	.0	49.0		45.9		43.	0	50.	В	51.1
Heavy Trucks:	50	).5	48.8		44.5		41.	2	49.	6	49.9
Vehicle Noise:	56	3.5	54.5		52.3		48.	1	56.	1	56.5
Centerline Distan	ce to Noise Co	ontour (in feet	)								
				70	dBA	65	dBA	6	60 dBA	5	5 dBA
			Ldn:		5		11		24	1	52
		C	NEL:		6		12	2	26	5	56

Road Name: Alessandro Blvd. Road Segment: efo Lasselle St.  SITE SPECIFIC INPUT DATA  Highway Data  Average Daily Traffic (Adt): 10,745 vehicles Peak Hour Volume: 1,075 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 82 feet  Barrier Height: 0.0 feet  Job Number: 12  Site Conditions (Hard = 11  Medium Trucks (2 Axt) Vehicle Mix Vehicle Mix  Vehicle Type Di Autos: 72  Medium Trucks: 73  Medium Trucks: 73  Medium Trucks: 74	DDEL INPUTS  2, Soft = 15)  totos: 15  tes): 15  tes): 15  ay Evening Night  2.0% 14.6% 13.5*  2.2% 9.4% 14.4*  1.8% 7.7% 10.65*	Daily % 94.24% % 4.44%
Highway Data  Average Daily Traffic (Adi): 10,745 vehicles Peak Hour Percentage: 10,00% Peak Hour Volume: 1,075 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 82 feet  Barrier Height: 0.0 feet Barrier Type (O-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 67.0 feet Centerline Dist. to Observer: 67.0 feet Barrier Distance to Observer: 67.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet	0, Soft = 15) // tos: 15 // tos:	% 94.24% % 4.44%
Average Daily Traffic (Adt): 10,745 vehicles Peak Hour Percentage: 10,00% Medium Trucks (2 Axi Peak Hour Volume: 1,075 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 82 feet    Vehicle Type   Di.	tos: 15 (es): 16 (es): 16 (es): 17 (es): 18 (es)	% 94.24% % 4.44%
Site Data	2.0% 14.6% 13.59 3.2% 9.4% 14.49 1.8% 7.7% 10.69	% 94.24% % 4.44%
Barrier Height: 0.0 feet Medium Trucks: 76 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 67.0 feet Centerline Dist. to Observer: 67.0 feet Autos: 0.00 Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.00 Pad Elevation: 0.0 feet	6.2% 9.4% 14.49 1.8% 7.7% 10.69 (in feet)	% 4.44%
Centerline Dist. to Observer: 67.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Pad Elevation: 0.0 feet		
Road Elevation: 0.0 feet Lane Equivalent Distance	7 4 Grade Adjustmei	nt: 0.0
Road Grade: 0.0%	6	
FHWA Noise Model Calculations		
Medium Trucks: 81.00 -15.51 -0.49 -1.20 -4	Barrier Atten   Be   2.71   0.000   2.88   0.000   3.29   0.000	0.00 0.00 0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)		
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night	Ldn	CNEL
Autos:         66.3         64.0         63.1         58.0           Medium Trucks:         63.8         61.8         58.8         55.8	65.9 63.6	66. 64.
Heavy Trucks:         62.9         61.2         57.0         53.6           Vehicle Noise:         69.3         67.3         65.2         60.9	62.0 68.9	62. 69.
Centerline Distance to Noise Contour (in feet)		
70 dBA   65 dBA     Ldn: 57 122   CNEL: 61 131	60 dBA 5	55 dBA 566 609

Scenari	o: Existing					Project	Name	Alt1 M	oreno Valle	v Trade	
	e: Alessandro	Blvd						12975		Jy ITauc	
Road Segmer						0007	u111001.	12010			
SITE	SPECIFIC IN	IPUT DATA				-	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	9,553 vehic	les					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles).	15		
Peak H	our Volume:	955 vehicl	es		He	avy Tru	cks (3+	Axles).	15		
Vei	hicle Speed:	50 mph		-	Vehicle I	Mix					
Near/Far Lar	ne Distance:	58 feet				icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	72.09		13.5%	94.249
Bar	rier Height:	0.0 feet			M	edium T	rucks:	76.29	9.4%	14.4%	4.449
Barrier Type (0-W	-	0.0			I	Heavy T	rucks:	81.89	7.7%	10.6%	1.329
Centerline Dis	st. to Barrier:	55.0 feet		- 1	Noise So	ource E	levatio	ns (in f	eet)		
Centerline Dist.		55.0 feet		Ī		Auto		.000	,		
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (	,	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet					D:-4	/:	£4)		
	d Elevation:	0.0 feet		- 1	Lane Eq	uivaien Auto			reet)		
,	Road Grade:	0.0%				Auto m Truck		7.000 3.811			
	Left View:	-90.0 degr				m Truck vy Truck		3.830			
	Right View:	90.0 degr	ees		пеач	у писк	S. 40	0.030			
FHWA Noise Mode			_								
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20		-	0.3	-	-1.20		-4.67		000	0.00
Medium Trucks:	81.00		_	0.3		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38			0.3		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise											
VehicleType Autos:	Leq Peak Hou		64.3	Leq E	vening 63.4	Leq	Night 58	2	Ldn 66.3		NEL 66
Medium Trucks:	64		62.1		59.1		56		63.9	_	64
Heavy Trucks:	63		61.5		57.3		53		62.3	-	62
Vehicle Noise:	69		67.6		65.5		61		69.	-	69.
Centerline Distanc	e to Noise Co	ontour (in fee	et)								
				70 c	iBA	65	dBA		60 dBA	55	dBA
			Ldn:		49		10	5	226		487
			CNEL:		52		10	0	220		

Wednesday, November 4, 2020

		71112 11 100	11101	IIIAI II	OIOLII	REDICTION					
	io: Existing								oreno Valle	y Trade	
	e: Alessandro I					Job Nu	ımber:	12975			
Road Segme	nt: e/o Moreno	Beach Dr.									
	SPECIFIC IN	PUT DATA			24- 0				L INPUT	S	
Highway Data				- 12	site Con	ditions (					
Average Daily	. ,	5,549 vehicle	es					Autos:	15		
		10.00%				dium Tru		,	15		
	lour Volume:	555 vehicles	S		He	avy Truc	ks (3+ /	Axles):	15		
	hicle Speed:	50 mph		١	/ehicle l	Mix					
Near/Far La	ne Distance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	72.0%	14.6%	13.5%	94.249
Rai	rrier Heiaht:	0.0 feet			M	edium Tru	ucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W		0.0			- 1	Heavy Tro	ucks:	81.8%	7.7%	10.6%	1.329
Centerline Di	. ,	55.0 feet			Vaina Ca	ource Ele	uration	o (in fo	nel)		
Centerline Dist.	to Observer:	55.0 feet		,	voise sc				ei)		
Barrier Distance	to Observer:	0.0 feet				Autos		000 297			
Observer Height (	Above Pad):	5.0 feet				m Trucks			0	4 4	
Pi	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.	004	Grade Adj	ustrient.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in f	eet)		
	Road Grade:	0.0%				Autos	: 47.	000			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 46.	811			
	Right View:	90.0 degree	es		Heav	y Trucks	: 46.	830			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel .	Barrier Att	en Ber	m Atten
Autos:	70.20	-5.11		0.30	)	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-18.38		0.33	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-23.66		0.32	2	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hour	Leq Day	/	Leq Ev	ening/	Leq N	light		Ldn	CI	VEL
Autos:	64.	='	62.0		61.1		55.9		63.8		64.
Medium Trucks:	61.		59.8		56.7		53.8	3	61.6		61.
Heavy Trucks:	60.8		59.2		54.9		51.5	_	59.9		60.
Vehicle Noise:	67.3	3	65.3		63.1		58.9	9	66.8	3	67.
Centerline Distand	ce to Noise Co	ntour (in feet,	)								
			L	70 a		65 a			0 dBA		dBA
			Ldn:		34		73		157		339
			NEL:		36		78		169		364

y, November 4, 2020 Wednesday, November 4, 2020

	FHW	A-RD-77-108	HIGH	N YAWH	IOISE P	REDICT	TION M	ODEL			
Road Nam	io: Existing + Pro ne: San Timoteo nt: n/o Alessand	Canyon Rd.					t Name. Number.		oreno Valle	ey Trade	
SITE :	SPECIFIC INP	UT DATA			Site Cor				L INPUT	S	
Average Daily	Traffic (Adt): 1	4.005 vehicle	· c	- '	Site Cor	iaiuoris	паги	Autos:			
		0.00%	50		Me	edium Tı	rucks (2				
		.401 vehicles	3			eavy Tru					
Ve	hicle Speed:	45 mph		-	Vehicle	Miv					
Near/Far La	ne Distance:	44 feet		F		icleType	e	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	-	13.5%	
Bai	rrier Height:	0.0 feet			М	ledium 7	rucks:	76.2%	9.4%	14.4%	4.37%
Barrier Type (0-W		0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.29%
Centerline Dis	st. to Barrier:	36.0 feet		1	Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.		36.0 feet 0.0 feet		F		Auto		0.000			
Barrier Distance			Mediu	m Truck	ks: 2	2.297					
Observer Height (	,	5.0 feet			Hear	vy Truck	ks: 8	3.004	Grade Ad	justment	: 0.0
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		H	Lane Eq	uivalon	t Dieta	nco (in	foot)		
		0.0 reet		ľ	Laile Ly	Auto		3.931	ieet)		
	Left View:	-90.0 degree	25		Mediu	m Truck		3.624			
	Right View:	90.0 degree				vy Truck		3.654			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	-0.63		3.4	-	-1.20		-4.55		000	0.000
Medium Trucks:	79.45	-13.97		3.5	-	-1.20		-4.86		000	0.000
Heavy Trucks:	84.25	-19.25		3.5		-1.20		-5.63	0.0	000	0.000
Unmitigated Noise VehicleType	Leg Peak Hour	It Topo and Leg Day			uation) vening	100	Night		Ldn		NEL
Autos:	70.1		67.9	Ley E	67.0		rvigrit 61	8	69.1		70.3
Medium Trucks:	67.8		65.8		62.8		59		67.		68.0
Heavy Trucks:	67.3		65.7		61.4	ı	58	.0	66.	4	66.8
Vehicle Noise:	73.4		71.3		69.2	!	65	.0	72.	9	73.4
Centerline Distance	ce to Noise Con	tour (in feet)									
			[	70 (		65	dBA		60 dBA		dBA
			Ldn:		56		12		261		563
		CI	VEL:		61		13	U	281		605

		VA-RD-77-108									
	: Existing + F								oreno Valle	y Trade	
		o Canyon Rd.				Job N	lumber:	12975			
Road Segment	: s/o Live Oa	k Canyon Rd.									
	PECIFIC IN	PUT DATA							L INPUT	8	
Highway Data				S	Site Con	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily T	raffic (Adt):	17,611 vehicl	es					Autos:	15		
Peak Hour F	Percentage:	10.00%				dium Tr					
Peak Ho	ur Volume:	1,761 vehicle	s		He	avy Tru	cks (3+	Axles).	15		
	icle Speed:	55 mph		V	/ehicle l	Wix					
Near/Far Lan	e Distance:	36 feet		F	Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.389
Barr	ier Heiaht:	0.0 feet			M	edium T	rucks:	76.2%	9.4%	14.4%	4.349
Barrier Type (0-Wa	II, 1-Berm):	0.0			F	Heavy T	rucks:	81.8%	7.7%	10.6%	1.299
Centerline Dist		55.0 feet		٨	Voise Sc	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		55.0 feet				Auto	s: 0	.000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	ustmen	: 0.0
	d Elevation:	0.0 feet		-		•					
	d Elevation:	0.0 feet		L	ane Eq				reet)		
R	oad Grade:	0.0%				Auto		.211			
	Left View:	-90.0 degre				m Truck	02	.041			
	Right View:	90.0 degre	es		Heav	y Truck	s: 52	.058			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		m Atten
Autos:	71.78	-0.50		-0.39		-1.20		-4.67	0.0		0.00
Medium Trucks:	82.40	-13.88		-0.36		-1.20		-4.87		000	0.00
Heavy Trucks:	86.40	-19.16		-0.37		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise										_	
.,	.eq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:	69		67.5		66.6		61		69.3		69.
Medium Trucks:	67 65		65.0 64.0		61.9 59.7		59 56	-	66.8 64.8		67. 65.
Heavy Trucks: Vehicle Noise:	72		70.5		68.5		64	-	72.1		72.
					68.5		64		12.		12.
	e to Noise Co	ontour (in feet	r)	70 d	IRΔ	65	dBA	Τ.	60 dBA	55	dBA
ountermine Diotaine											
ontermo Biotano			Ldn:	70 0	76	- 00	16		354		763

	FH\	WA-RD-77-108	HIGHV	VAY N	OISE PF	REDICTI	ON MO	DEL			
Scenario: Road Name: Road Segment:	Redlands E	Blvd.	Rd.				Name: I umber:		oreno Valle	y Trade	
	ECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Tra	ffic (Adt):	17,452 vehicl	es					Autos:	15		
Peak Hour Per	rcentage:	10.00%			Me	dium Tru	icks (2 A	(xles	15		
Peak Hour	· Volume:	1,745 vehicle	s		He	avy Truc	ks (3+ A	(xles	15		
Vehicl	e Speed:	55 mph		١	/ehicle I	Mix					
Near/Far Lane I	Distance:	36 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data							lutos:	72.0%	14.6%	13.5%	94.249
Rarrie	r Heiaht:	0.0 feet			Me	edium Ti	ucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wall,		0.0			F	leavy Ti	ucks:	81.8%	7.7%	10.6%	1.329
Centerline Dist. t	o Barrier:	55.0 feet		^	Voise So	urce El	evation	s (in f	eet)		
Centerline Dist. to 0	Observer:	55.0 feet		F		Auto		000	,		
Barrier Distance to 0	Observer:	0.0 feet			Mediur	n Truck:		297			
Observer Height (Abo	,	5.0 feet				y Truck		004	Grade Ad	ustment	: 0.0
	Elevation:	0.0 feet		_							
	Elevation:	0.0 feet		L	ane Equ			_ •	feet)		
	ad Grade:	0.0%				Auto					
-	_eft View:	-90.0 degre				n Truck					
Ri	ght View:	90.0 degre	es		Heavy Trucks: 52.058						
FHWA Noise Model C		-									
	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Att		m Atten
Autos:	71.78			-0.39	-	-1.20		-4.67	0.0		0.00
Medium Trucks:	82.40			-0.36	-	-1.20		-4.87		000	0.00
Heavy Trucks:	86.40			-0.37		-1.20		-5.38	0.0	000	0.00
VehicleType Le	<b>evels (with</b> g Peak Hou			<b>atten</b> Leg Ev		100	Night		Ldn		NFL.
Autos:	4 reak not 69		67.4	Ley Ev	66.5	Leq	61.4	<u>                                     </u>	69.3		69
		'.O	65.1		62.0		59.1		66.8		67
	67				59.8		56.4		64.8		65.
Medium Trucks:			64 1								
	67 65 72	i.7	70.5		68.5		64.2	2	72.1		
Medium Trucks: Heavy Trucks: Vehicle Noise:	65 72	5.7 2.6	70.5				64.2	2	72.1		
Medium Trucks: Heavy Trucks:	65 72	5.7 2.6	70.5	70 d	68.5	65 (	64.2		72.1 60 dBA		72.
Medium Trucks: Heavy Trucks: Vehicle Noise:	65 72	5.7 2.6	70.5	70 d	68.5	65 (				55	72.

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTI	ON M	DDEL			
Road Name	o: Existing + F e: Redlands B nt: n/o Ironwoo	lvd.						Alt1 N 12975	loreno Valle	ey Trade	
SITE S	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard	= 10, S	oft = 15)		
	Traffic (Adt): Percentage: our Volume:	18,546 vehicle 10.00% 1,855 vehicles				dium Tru avy Truc		,	15		
Vel	hicle Speed:	50 mph		ν	ehicle l	Mix					
Near/Far Lar	ne Distance:	58 feet		F		icleType	T	Dav	Evening	Night	Daily
Site Data							lutos:	72.09		13.59	
Par	rier Height:	0.0 feet			М	edium Tı	ucks:	76.29	6 9.4%	14.49	4.33%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Ti	ucks:	81.89	6 7.7%	10.69	1.28%
Centerline Dis		55.0 feet		٨	loise So	ource El	evatio	ns (in f	eet)		
Centerline Dist. t		55.0 feet				Autos	s: (	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck:	s: 2	.297			
Observer Height (	,	5.0 feet			Heav	y Trucks	s: 8	.004	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		L	ane Eq	uivalent		_	feet)		
F	Road Grade:	0.0%				Autos		.000			
	Left View:	-90.0 degree				m Trucks		3.811			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46	3.830			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	0.14		0.30	1	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-13.25		0.33		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-18.53		0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	atteni	ıation)						
	Leq Peak Hou			eq Ev			Night		Ldn		NEL
Autos:	69		67.2		66.3		61	-	69.1		69.7
Medium Trucks:	66	-	64.9		61.8		58		66.7		67.
Heavy Trucks:	66	-	64.3		60.0		56		65.1		65.4
Vehicle Noise:	72		70.4		68.3		64	.1	72.0	)	72.
Centerline Distanc	e to Noise Co	ntour (in feet)		70 d	DΛ	65	dBA		60 dBA	5	5 dBA
			Ldn:	700	75	00	16		349		752
			VEL:		81		17		349		808
		Ci	VLL.		01		17	4	3/3		000

	FH	WA-RD-77-108	HIGH	1 YAW	NOISE P	REDICT	ION MC	DEL			
Road Nan	io: Existing + l ne: Redlands l nt: s/o Ironwo	Blvd.					Name: lumber:		oreno Valle	ey Trade	9
	SPECIFIC II	NPUT DATA			0:4- 0				L INPUT	s	
Highway Data				-	Site Cor	aitions	(Hara =	10, Sc	oft = 15)		
Average Daily		15,552 vehicle	es					Autos:			
Peak Hour	Percentage:	10.00%				edium Tr					
Peak F	lour Volume:	1,555 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		<b>+</b>	Vehicle	Mix					
Near/Far La	ne Distance:	58 feet		F		icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	72.0%	14.6%	13.5%	6 94.41%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.49	6 4.31%
Barrier Type (0-W		0.0				Heavy T	rucks:	81.8%	7.7%	10.69	6 1.28%
Centerline Di		55.0 feet		-	Noise S	ourco E	lovation	e (in f	not)		
Centerline Dist.	to Observer:	55.0 feet		H	WOISE SI	Auto		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iuctman	#: 0 O
P	ad Elevation:	0.0 feet			пеа	y Huck	s. o	.004	Grade Au	Justinen	i. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 47	.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 46	.830			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-0.63		0.3		-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-14.03		0.3	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-19.32		0.3	2	-1.20		-5.38	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	,	Leq E	vening	Leq	Night		Ldn	(	NEL
Autos:	68	3.7	66.5		65.5		60.	4	68.3	3	68.9
Medium Trucks:	66	3.1	64.1		61.0		58.	1	65.9	9	66.3
Heavy Trucks:			63.5		59.3		55.	-	64.3		64.6
Vehicle Noise:	71	1.7	69.7		67.6		63.	3	71.3	3	71.7
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70	dBA	65	dBA	6	60 dBA	5	5 dBA
			Ldn:		67		144	1	310		667
		C	VEL:		72		155	5	333		718

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	TION MO	DEL			
Road Nam	io: Existing + I ne: Redlands E nt: s/o SR-60		ımps				t Name: . Number:		loreno Valle	y Trade	
SITE	SPECIFIC IN	NPUT DATA					NOISE I	/IODE	L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Peak H	Percentage: lour Volume:	15,925 vehicle 10.00% 1,592 vehicle					rucks (2 ) icks (3+ )		: 15		
	hicle Speed:	50 mph		V	ehicle.	Mix					
Near/Far La	ne Distance:	58 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	72.09	6 14.6%	13.5%	92.10%
Bai	rrier Heiaht:	0.0 feet			М	edium 7	rucks:	76.29	6 9.4%	14.4%	4.57%
Barrier Type (0-W		0.0				Heavy 7	rucks:	81.89	6 7.7%	10.6%	3.33%
Centerline Di	st. to Barrier:	55.0 feet		A/	laica S	urco E	levation	r (in f	inati		
Centerline Dist.	to Observer:	55.0 feet		/4	0136 31	Auto		000	eeij		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck	-	297			
Observer Height (	Above Pad):	5.0 feet				v Truck		004	Grade Adju	ıstment	. 0.0
Pa	ad Elevation:	0.0 feet				,				301770771	. 0.0
Ros	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
i i	Road Grade:	0.0%				Auto		000			
	Left View:	-90.0 degre				m Truck					
	Right View:	90.0 degre	es		Hea	y Truck	ks: 46.	830			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	n Bei	m Atten
Autos:	70.20			0.30		-1.20		-4.67	0.0		0.00
Medium Trucks:	81.00			0.33		-1.20		-4.87			0.00
Heavy Trucks:	85.38			0.32		-1.20		-5.38	0.0	00	0.00
Unmitigated Noise					_						
VehicleType	Leq Peak Hou			Leq Eve		Leq	Night		Ldn	С	NEL
Autos:		3.7	66.5		65.5		60.4		68.3		68.
Medium Trucks:		3.5	64.5		61.4		58.5		66.3		66.
Heavy Trucks:		9.4	67.8		63.5		60.1		68.5		68.
Vehicle Noise:		3.1	71.2		68.6		64.5	)	72.6		73.0
Centerline Distant	e to Noise Co	ontour (in fee	)	70 di	DΛ	e e	dBA	1	60 dBA	FE	dBA
	Ldn:		, U UI	BA 82	03	176	l	380	33	819	
			CNEL:		88		189		407		876
		C			00		109		407		0/6

Barrier Height:   0.0   feet		FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICTI	ON MC	DEL			
Average Daily Traffic (Adf):	Road Nam	ne: Redlands E	Blvd.							oreno Valle	ey Trade	
Average Daily Traffic (Adt): 14,472 vehicles   Peak Hour Potentage: 10,00%   Medium Trucks (2 Axles): 15   Heavy Trucks (3* Axles): 15		SPECIFIC IN	IPUT DATA			· O					S	
Peak Hour Percentage: 10.00%					5	ite Con	aitions					
Peak Hour Volume: Vehicle Speed: 50 mph   Near/Far Lane Distance: 58 feet   So mph   Near/Far Lane Distance: 58 feet   New York (3+ Axles): 15   Near/Far Lane Distance: 58 feet   Near/Far Lane Distance: 72.0%   14.6%   13.5%   91.56   Ned Um Trucks: 76.2%   9.4%   14.4%   4.50   Ned Um Trucks: 81.8%   7.7%   10.6%   3.94   Ned Um Trucks: 81.0%   Ned Um Tr	Average Daily	Traffic (Adt):	14,472 vehicle	es								
Vehicle Speed:   S0 mph   Near/Far Lane Distance:   S8 feet   Vehicle Mix   Vehicle Type   Day   Evening   Night   Daily   Site Data   Autos: 72.0%   14.6%   13.5%   91.56	Peak Hour	Percentage:	10.00%						,			
Near/Far Lane Distance:   58 feet     VehicleType   Day   Evening   Night   Daily   Site Data			,	S		He	avy Truc	cks (3+	Axles):	15		
Site Data   Sarrier Height:   Do.   Get   Medium Trucks:   76.2%   14.6%   15.5%   91.56					ν	ehicle	Mix					
Barrier Height:   0.0   feet	Near/Far La	ne Distance:	58 feet			VehicleType Day Evening Night						Daily
Barrier Trype (0-Well, 1-Berm): 0.0   Centerline Dist. to Diserver: 55.0   feet Centerline Dist. to Observer: 55.0   feet Barrier Distance to Observer: 0.0   feet Pad Elevation: 0.0   feet Pad	Site Data					Autos: 72.0% 14.6% 13.5%						91.569
	Ra	rrier Height	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.509
Noise Model Calculations   Noise Model Calculations   Noise Model Calculations		-				1	Heavy Tr	ucks:	81.8%	7.7%	10.6%	3.949
Autos: 0.000	Centerline Di	st. to Barrier:	55.0 feet		٨	loise S	ource Ele	evation	s (in fe	et)		
Barrier Distance to Observer: 0.0 feet   Medium Trucks: 2.297   Heavy Trucks: 8.004   Grade Adjustment: 0.0	Centerline Dist.	to Observer:	55.0 feet									
Diserver Height (Above Pad):	Barrier Distance	to Observer:	0.0 feet			Mediu						
Pad Elevation:   0.0 feet	Observer Height	(Above Pad):	5.0 feet							Grade Ad	iustment	. 0.0
Road Grade: 0.0%	P	ad Elevation:	0.0 feet			11001	ry mache	J. U.	.004	0/440 / 14,	dottriont	. 0.0
Right View: 90.0 degrees   Heavy Trucks: 46.811   Heavy Trucks: 46.830   Heavy Trucks: 70.20	Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in t	eet)		
Right View: 90.0 degrees   Heavy Trucks: 46.830		Road Grade:	0.0%				Autos	s: 47	.000			
		Left View:	-90.0 degree	es		Mediu	m Trucks	s: 46	.811			
VehicleType		Right View:	90.0 degree	es		Hear	y Trucks	s: 46	.830			
Autos: 70.20	FHWA Noise Mod	el Calculation	s									
Medium Trucks:   81.00				Dist			_	Fresi				
Heavy Trucks:   85.38												0.00
Unmitigated Noise   Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL	Medium Trucks:	81.00										0.00
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         68.2         66.0         65.1         60.0         67.9         68.8           Medium Trucks:         66.0         64.0         60.9         58.0         68.8         66           Heavy Trucks:         69.8         68.1         63.8         60.5         68.9         69           Vehicle Noise:         73.0         71.1         68.4         64.4         72.5         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         80         173         372         80	Heavy Trucks:	85.38	-14.74		0.32		-1.20		-5.38	0.0	000	0.00
Autos:         68.2         66.0         65.1         60.0         67.9         68           Medium Trucks:         66.0         64.0         60.9         58.0         65.8         66           Heavy Trucks:         69.8         68.1         63.8         60.5         68.9         69           Vehicle Noise:         73.0         71.1         68.4         64.4         72.5         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         80         173         372         80												
Medium Trucks:         66.0         64.0         60.9         58.0         65.8         66           Heavy Trucks:         69.8         68.1         63.8         60.5         68.9         69           Vehicle Noise:         73.0         71.1         68.4         64.4         72.5         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         80         173         372         80		•			Leq Ev		Leq	_			_	
Heavy Trucks:   69.8   68.1   63.8   60.5   68.9   69   Vehicle Noise:   73.0   71.1   68.4   64.4   72.5   72									-			
Vehicle Noise:         73.0         71.1         68.4         64.4         72.5         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         80         173         372         80									-		-	
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         80         173         372         80									-			69. 72.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 80 173 372 80						30.4		04.	7	12.	,	12.
Ldn: 80 173 372 80.	Centerline Distant	ce to Noise Co	ontour (in feet,	, 	70 d	BA	65 (	dBA	6	i0 dBA	55	dBA
				Ldn:								802
												857

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICTION	ON MOE	EL		
Road Nan	io: Existing + I ne: Redlands E nt: s/o Eucalyp	Blvd.					Name: A mber: 1		oreno Valley T	Trade
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODE	L INPUTS	
Highway Data				S	ite Con	ditions (	Hard = 1	0, So	ft = 15)	
	Traffic (Adt): Percentage: four Volume:	15,755 vehicle 10.00% 1,576 vehicle				dium Truci avy Truci	cks (2 A	,	15 15 15	
	hicle Speed:	50 mph		L			(			
	ne Distance:	58 feet		ν	ehicle l					
	no Biolanoo.	50 1001			Veh	icleType		Day	_	light Daily
Site Data				_				2.0%		3.5% 95.42%
Ва	rrier Height:	0.0 feet				edium Tru		6.2%		4.4% 3.53%
Barrier Type (0-VI	/all, 1-Berm):	0.0			- 1	Heavy Tru	icks: 8	1.8%	7.7% 1	1.05%
Centerline Di	st. to Barrier:	55.0 feet		۸	loise So	ource Ele	vations	(in fe	et)	
Centerline Dist.	to Observer:	55.0 feet				Autos		•		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks				
Observer Height	(Above Pad):	5.0 feet				y Trucks			Grade Adjus	tment: 0.0
P	ad Elevation:	0.0 feet								
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in t	eet)	
	Road Grade:	0.0%				Autos		00		
	Left View:	-90.0 degre	es		Mediu	m Trucks	46.8	11		
	Right View:	90.0 degre	es		Heav	y Trucks	46.8	30		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atten	Berm Atten
Autos:	70.20	-0.52		0.30		-1.20	-	4.67	0.000	0.000
Medium Trucks:		-14.84		0.33		-1.20	-	4.87	0.000	0.000
Heavy Trucks:	85.38	-20.12		0.32		-1.20	-	5.38	0.000	0.000
Unmitigated Nois			barrier	attenı	ıation)					
VehicleType	Leq Peak Hot	ur Leq Da	y L	eq Ev	ening	Leq N	light		Ldn	CNEL
Autos:	68	3.8	66.6		65.6		60.5		68.4	69.0
Medium Trucks:	65	5.3	63.3		60.2		57.3		65.1	65.5
Heavy Trucks:	64	1.4	62.7		58.4		55.1		63.5	63.8
Vehicle Noise:	71	1.4	69.3		67.3		63.0		70.9	71.4
Centerline Distan	ce to Noise C	ontour (in fee	t)							
				70 d		65 d		6	i0 dBA	55 dBA
			Ldn:		64		137		295	635
		C	NEL:		68		147		318	684

	FHW.	A-RD-77-108	HIGH	HWAY N	OISE P	REDICTI	ON MC	DEL			
Scenario: Exist Road Name: Redl Road Segment: s/o [	ands Blv						Name: umber:		oreno Valle	ey Trade	
SITE SPECII	IC INF	UT DATA							L INPUT	S	
Highway Data				2	site Cor	ditions					
Average Daily Traffic (	,	6,388 vehicle	es					Autos:	15		
Peak Hour Percent		10.00%				dium Tru		,	15		
Peak Hour Volu		1,639 vehicles	S		He	avy Truc	ks (3+ .	Axles):	15		
Vehicle Sp		50 mph		١	/ehicle	Mix					
Near/Far Lane Dista	nce:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	95.60%
Barrier Hei	aht.	0.0 feet			М	edium Tı	ucks:	76.2%	9.4%	14.4%	3.40%
Barrier Type (0-Wall, 1-Be	erm):	0.0				Heavy Ti	ucks:	81.8%	7.7%	10.6%	1.01%
Centerline Dist. to Ba		55.0 feet		1	Voise S	ource El	evation	s (in fe	et)		
Centerline Dist. to Obse		55.0 feet				Autos	s: 0.	.000	,		
Barrier Distance to Obse		0.0 feet			Mediu	m Trucks	s: 2.	.297			
Observer Height (Above F	,	5.0 feet			Hear	y Trucks	s: 8.	.004	Grade Ad	justment	: 0.0
Pad Eleva		0.0 feet		_				-			
Road Eleva		0.0 feet		L	.ane Eq	uivalent		_ •	'eet)		
Road Gr		0.0%				Autos		.000			
Left V		-90.0 degree				m Trucks		.811			
Right \	iew:	90.0 degree	es		Hea	y Trucks	s: 46	.830			
FHWA Noise Model Calcu					,						
VehicleType REM		Traffic Flow	Dis	stance		Road	Fresi		Barrier Att		m Atten
Autos:	70.20	-0.35		0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00	-14.84		0.33		-1.20		-4.87		000	0.000
	85.38	-20.12		0.32		-1.20		-5.38	0.0	000	0.000
VehicleType Leq Pe	•			er atteni Leg Ev		100	Night	1	Ldn	0	NEL
Autos:	69.0		66.7	Ley Ev	65.8	_	60.	7	68.6	_	69.2
Medium Trucks:	65.3		63.3		60.2		57	-	65.	-	65.5
Heavy Trucks:	64.4		62.7		58.4		55.	-	63.5		63.8
Vehicle Noise:	71.5		69.4		67.5		63.		71.0		71.5
Centerline Distance to No	ise Cor	tour (in feet,	)								
·				70 a	iBA	65 (	dBA	6	0 dBA	55	dBA
			Ldn:		65		139	)	299		645
		CI	VEL:		70		150	)	323		695

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE P	REDICT	ION MOI	DEL			
	o: Existing + I e: Redlands E nt: s/o Dwy. 7						t Name: / Number: *		oreno Valle	y Trade	9
SITE S	SPECIFIC II	IPUT DATA					NOISE N	IODE	L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	16,503 vehicl 10.00% 1,650 vehicle 50 mph			He	avy Tru	rucks (2 A Icks (3+ A	,	15		
Near/Far Lar	ne Distance:	58 feet		V	ehicle		_	0	Eina	A Contra	D-#-
Site Data		00 1111					Autos:	<i>Day</i> 72.0%		Night 13.5%	
Bar	rier Height:	0.0 feet				edium 1		76.2%		14.49	
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks:	81.8%	7.7%	10.69	6 1.00%
Centerline Dis	st. to Barrier:	55.0 feet		N	oise S	ource E	levations	(in f	eet)		
Roa	to Observer:	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		Li	Head ane Eq	Auto m Truck vy Truck uivalen Auto m Truck	ks: 2.2 ks: 8.0 et Distandos: 47.0	000	Grade Adj	ustmer	nt: 0.0
FHWA Noise Mode	Right View:	90.0 degre				y Truck					
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	اه	Barrier Atte	an Re	erm Atten
Autos:	70.20			0.30	7 111110	-1.20		-4.67	0.0		0.000
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38			0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Ho			Leq Eve			Night		Ldn		CNEL
Autos:		9.0	66.8		65.9		60.7		68.6		69.2
Medium Trucks:		5.3	63.3		60.2		57.3		65.1		65.5
Heavy Trucks:		1.4	62.7		58.4		55.1		63.5		63.8
Vehicle Noise:		1.5	69.4		67.5	i	63.1		71.1	l	71.5
Centerline Distance	e to Noise C	ontour (in feet	)	70 dE	24	· ·	dBA		60 dBA	-	5 dBA
			Ldn:	7 U at	65	00	139		300 300	5	647
					70		139		300		697
	CNEL:						150		324		097

Scenari	o: Existing + Pi	roiect				Proiect	Name:	Alt1 M	oreno Valle	ev Trade	
	e: Redlands Bl						umber:		51 0110 ¥ UIII	oy mado	
Road Segmer	nt: s/o Encelia	Av.									
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	11,965 vehicle:	3					Autos:	15		
Peak Hour	Percentage:	10.00%				dium Tru		,	15		
Peak H	our Volume:	1,197 vehicles			He	avy Truc	ks (3+ )	Axles):	15		
Ve	hicle Speed:	50 mph		V	ehicle I	Mix					
Near/Far Lar	ne Distance:	58 feet		Ė	Vehi	cleType		Day	Evening	Night	Daily
Site Data							lutos:	72.0%	14.6%	13.5%	94.919
Rai	rier Height:	0.0 feet			Me	edium Tr	ucks:	76.2%	9.4%	14.4%	3.939
Barrier Type (0-W	-	0.0			F	leavy Tr	ucks:	81.8%	7.7%	10.6%	1.169
Centerline Dis	st. to Barrier:	55.0 feet		N	oise So	urce El	evation	s (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		-		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks		297			
Observer Height (	Above Pad):	5.0 feet				y Trucks		004	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet								,	
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent			eet)		
F	Road Grade:	0.0%				Autos		000			
	Left View:	-90.0 degrees	3			n Trucks					
	Right View:	90.0 degrees	3		Heav	y Trucks	s: 46.	830			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresr	_	Barrier Att		rm Atten
Autos:	70.20	-1.74		0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00	-15.57		0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-20.86		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise										1	
	Leq Peak Hour			eq Eve		Leq			Ldn		NEL
Autos:	67.0	-	5.3		64.4		59.3		67.2	_	67.
Medium Trucks:	64.0	-	2.6		59.5		56.6		64.4	•	64.
Heavy Trucks: Vehicle Noise:	63.0		2.0 8.3		57.7 66.3		54.3 62.0		62.1		63. 70.
			0.0		50.0		02.0		00.		70.
Centerline Distance	e to Noise Coi	ntour (in feet)		70 dl	BA	65 (	dBA	6	0 dBA	55	dBA
		L	dn:		54		117		253		545

Wednesday, November 4, 2020

	FHW	/A-RD-77-108 I	HIGHWA	Y NOISE P	REDICT	ON MOD	EL		
Scenario:   Road Name:   Road Segment:		vď.				Name: A umber: 1		eno Valley	Trade
	ECIFIC IN	PUT DATA						INPUTS	
Highway Data				Site Cor	nditions	(Hard = 1	0, Sof	t = 15)	
Average Daily Tra	. ,	9,736 vehicles	3				utos:	15	
Peak Hour Per		10.00%				icks (2 A)	/	15	
Peak Hour		974 vehicles		He	eavy iruo	ks (3+ A)	(les):	15	
	e Speed:	50 mph		Vehicle	Mix				
Near/Far Lane I	Distance:	58 feet		Veh	icleType	L	ay E	Evening N	light Daily
Site Data					A	Autos: 7	2.0%	14.6%	13.5% 94.45%
Barrie	r Height:	0.0 feet		М	edium Ti	ucks: 7	6.2%	9.4%	14.4% 4.28%
Barrier Type (0-Wall,		0.0			Heavy Ti	rucks: 8	1.8%	7.7%	10.6% 1.27%
Centerline Dist. to	o Barrier:	55.0 feet		Noise S	ource El	evations	(in fee	t)	
Centerline Dist. to C	Observer:	55.0 feet			Auto		•	7	
Barrier Distance to C		0.0 feet		Mediu	m Truck				
Observer Height (Abo		5.0 feet		Hea	vy Truck	s: 8.00	14 (	Grade Adjus	tment: 0.0
	levation:	0.0 feet							
	levation:	0.0 feet		Lane Eq		Distance	•	et)	
	d Grade:	0.0%			Auto				
	.eft View:	-90.0 degrees			m Truck				
Ri	ght View:	90.0 degrees	3	Hea	vy Truck:	s: 46.8	30		
FHWA Noise Model C	alculations	:		1					
VehicleType I	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresne	l B	arrier Atten	Berm Atten
Autos:	70.20	-2.66		0.30	-1.20		4.67	0.000	
Medium Trucks:	81.00	-16.09		0.33	-1.20		4.87	0.000	
Heavy Trucks:	85.38	-21.38	1	0.32	-1.20	-	5.38	0.000	0.000
Unmitigated Noise Le			arrier at	tenuation)					
	q Peak Houi			Evening		Night	L	_dn	CNEL
Autos:	66.		4.4	63.5		58.4		66.3	66.9
Medium Trucks:	64.		2.1	59.0		56.1		63.8	64.2
Heavy Trucks:	63.		1.5	57.2		53.8		62.2	62.6
Vehicle Noise:	69.		7.6	65.5		61.3		69.2	69.7
Centerline Distance to	o Noise Co	ntour (in feet)				·D.4	-		55 104
				O dBA	65	dBA	60	dBA	55 dBA 487
		CN	dn:	49 52		105 113		226 243	487 524
		CN	EL:	52		113		243	524

y, November 4, 2020 Wednesday, November 4, 2020

	FHW.	A-RD-77-108	HIGH	WAY N	OISE P	REDICTI	ON MC	DEL			
	Existing + Pro Redlands Blv s/o Alessandr	ď.					Name: umber:		oreno Valle	ey Trade	
	ECIFIC INP	UT DATA							L INPUT	s	
Highway Data				٥	site Cor	ditions			oft = 15)		
Average Daily Tra	affic (Adt):	8,731 vehicle	es					Autos:	15		
Peak Hour Pe	ercentage: 1	0.00%				edium Tru		,			
Peak Hou	ır Volume:	873 vehicles	3		He	eavy Truc	ks (3+ .	Axles):	15		
Vehic	cle Speed:	50 mph		ı	/ehicle	Mix					
Near/Far Lane	Distance:	58 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	-	13.5%	94.40%
Rarrie	er Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.32%
Barrier Type (0-Wall		0.0				Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.28%
Centerline Dist.		55.0 feet		٨	loise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist. to		55.0 feet				Autos	s: 0.	.000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Trucks	s: 2	297			
Observer Height (Ab	oove Pad):	5.0 feet				vy Trucks		004	Grade Ad	iustmen	t: 0.0
Pad	Elevation:	0.0 feet									
Road	Elevation:	0.0 feet		L	.ane Eq	uivalent		_ •	feet)		
Ro	ad Grade:	0.0%				Autos		.000			
	Left View:	-90.0 degree	es			m Trucks		.811			
R	Right View:	90.0 degree	es		Hea	vy Trucks	s: 46	.830			
FHWA Noise Model											
VehicleType		raffic Flow	Dis	stance		Road	Fresi		Barrier Att		rm Atten
Autos:	70.20	-3.13		0.30		-1.20		-4.67		000	0.000
Medium Trucks:	81.00	-16.53		0.33		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-21.81		0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise L	•	•					A 17 In 4	_	1 -1		NE
VehicleType Le	eq Peak Hour 66.2	Leq Day	63.9	Leq Ev			Night 57		Ldn 65.8		NEL 66.4
Autos: Medium Trucks:	63.6		61.6		63.0 58.6		57.	-	63.4	-	63.8
								-			
Heavy Trucks: Vehicle Noise:	62.7 69.2		61.0 67.2		56.8 65.1		53. 60.		61.8		62.1 69.2
Centerline Distance	to Noise Con	tour (in feet)	1								
Diotance	5011	( 1001)		70 d	IBA	65 (	dBA	6	0 dBA	55	dBA
			Ldn:		45		98	3	211		455
		CI	VEL:		49		105	5	227		489

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICT	TION MOD	EL			
	e: Existing + F e: John F Ker t: s/o Cactus	nnedy Dr.					t Name: A Number: 1		oreno Valle	y Trade	
SITE S	PECIFIC IN	IPUT DATA					NOISE M	ODE	L INPUTS	ì	
Highway Data				S	ite Con	ditions	(Hard = 1	10, So	ft = 15)		
	Percentage: our Volume: icle Speed:	6,027 vehicle 10.00% 603 vehicle 45 mph 36 feet		V	He ehicle	avy Tru <b>Viix</b>	rucks (2 A icks (3+ A	xles):	15 15 15		
iveai/i ai Laii	e Distance.	36 1661			Veh	icleType	e L	Day	Evening	Night	Daily
Site Data  Barrier Type (0-Wa	ier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1	rucks:	72.0% 76.2% 31.8%		13.5% 14.4% 10.6%	94.46% 4.27% 1.27%
Centerline Dist	t. to Barrier:	44.0 feet		N	oise So	ource E	levations	(in fe	et)		
Roai R	Observer:	44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	ks: 2.2 ks: 8.0 ht Distanc os: 40.4 ks: 40.2	97 04 <b>e (in f</b> 60	Grade Adju	ustment.	0.0
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	68.46	-4.28		1.28		-1.20		4.61	0.0	00	0.000
Medium Trucks: Heavy Trucks:	79.45 84.25			1.31 1.31		-1.20 -1.20		4.87 5.50	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType I	Leq Peak Hou	ur Leq Day	V 1	Leq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	64	1.3	62.0		61.1		56.0		63.9		64.5
Medium Trucks:	61		59.9		56.8		53.9		61.6		62.0
Heavy Trucks:	61		59.7		55.4		52.0		60.4		60.8
Vehicle Noise:	67	'.4	65.4		63.3		59.0		67.0		67.5
Centerline Distance	e to Noise Co	ontour (in feet	)								
			L	70 dl		65	dBA	6	0 dBA	55	dBA
			Ldn:		28		60		129		278
		С	NEL:		30		64		139		299

	FH'	WA-RD-77-108 I	HIGHV	VAY N	OISE PF	REDICTION	ом ис	DEL			
Road Na	rio: Existing + I me: Moreno Be ent: n/o SR-60		nps			Project N Job Nu			oreno Valle	ey Trade	:
SITE Highway Data	SPECIFIC II	NPUT DATA			ita Con	No ditions (i			L INPUT	S	
	/ Traffic (Adt):	12.897 vehicles			nte con	unions (i		Autos:			
	. ,	,	5		140	dium Tru					
	r Percentage:	10.00%				avy Truck					
	Hour Volume:	1,290 vehicles			He	avy iruci	(5 (3+)	4xies):	15		
	ehicle Speed:	40 mph		V	ehicle l	Иiх					
Near/Far L	ane Distance:	48 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	72.0%	14.6%	13.5%	94.329
R	arrier Height:	0.0 feet			Me	edium Tru	icks:	76.2%	9.4%	14.4%	4.389
Barrier Type (0-V		0.0			F	leavy Tru	icks:	81.8%	7.7%	10.6%	1.309
*, ,	ist, to Barrier:	50.0 feet			/-: O-		4!	- // #-			
Centerline Dist	to Observer:	50.0 feet		^	ioise so	ource Ele			eetj		
Barrier Distance	to Observer:	0.0 feet				Autos:		000			
Observer Height	(Above Pad):	5.0 feet				n Trucks.		297	0	·	4. 0.0
F	Pad Elevation:	0.0 feet			Heav	y Trucks.	8.	004	Grade Ad	justmen	t: 0.0
Ro	oad Elevation:	0.0 feet		L	ane Equ	uivalent l	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	44.	147			
	Left View:	-90.0 degrees	S		Mediur	n Trucks.	43.	947			
	Right View:	90.0 degrees	S		Heav	y Trucks:	43.	966			
FHWA Noise Mod	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos	: 66.51	-0.48		0.71		-1.20		-4.65	0.0	000	0.00
Medium Trucks	: 77.72	-13.81		0.74	ļ	-1.20		-4.87	0.0	000	0.00
Heavy Trucks	: 82.99	-19.09		0.73	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Nois	se Levels (with	out Topo and b	arrier	atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	L	Leq Ev	ening	Leq N	light		Ldn	С	NEL
Autos	: 65	5.5 6	3.3		62.4		57.3	3	65.2	2	65.
Medium Trucks	: 63	3.4 6	1.5		58.4		55.5	5	63.3	3	63.
Heavy Trucks	:63		1.8		57.5		54.	1	62.	5	62.
Vehicle Noise	: 69	9.0 6	7.0		64.8		60.6	3	68.0	5	69
Centerline Distar	ice to Noise C	ontour (in feet)									
			. ∟	70 d		65 d			0 dBA		dBA
			.dn:		40		87		187		402
		CN	EL:		43		93		200	1	432

Wednesday, November 4, 2020

	FHWA	A-RD-77-108 H	IIGHWAY	NOISE P	REDICT	ION MODEL		
Scenario: Road Name: Road Segment:		h Dr.	)S			Name: Alt1 lumber: 129	Moreno Valley 75	Trade
	ECIFIC INP	UT DATA			N	IOISE MOI	DEL INPUTS	
Highway Data				Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Tra Peak Hour Pe Peak Hour	rcentage: 1 r Volume: 2	5,945 vehicles 0.00% ,594 vehicles		1		Auto ucks (2 Axle cks (3+ Axle	s): 15	
	le Speed:	50 mph		Vehicle	Mix			
Near/Far Lane	Distance:	82 feet		Veh	icleType	Day	Evening I	Vight Daily
Site Data						Autos: 72.	0% 14.6%	13.5% 93.37%
Barrie	r Height:	0.0 feet		М	edium T	rucks: 76.	2% 9.4%	14.4% 4.37%
Barrier Type (0-Wall,		0.0		- 1	Heavy T	rucks: 81.	3% 7.7%	10.6% 2.26%
Centerline Dist. t		67.0 feet		Noise S	ource El	levations (ir	feet)	
Centerline Dist. to 0		67.0 feet			Auto	s: 0.000		
Barrier Distance to 0		0.0 feet		Mediu	m Truck			
Observer Height (Ab		5.0 feet			vy Truck		Grade Adju	stment: 0.0
	Elevation:	0.0 feet			•			
	Elevation:	0.0 feet		Lane Eq		t Distance (	in feet)	
		0.0%			Auto			
L	Left View:	-90.0 degrees			m Truck			
Ri	ight View:	90.0 degrees		Hear	ry Truck	s: 53.076		
FHWA Noise Model C	Calculations							
VehicleType	REMEL 7	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	70.20	1.55	-0.	.51	-1.20	-4.7	71 0.00	0.000
Medium Trucks:	81.00	-11.75	-0.	.49	-1.20	-4.8	88 0.00	0.000
Heavy Trucks:	85.38	-14.61	-0.	.49	-1.20	-5.2	9 0.00	0.000
Unmitigated Noise Le	evels (withou	t Topo and ba	arrier atte	enuation)				
VehicleType Le	q Peak Hour	Leq Day	Leq	Evening	Leq	Night	Ldn	CNEL
Autos:	70.0	67	7.8	66.9		61.8	69.7	70.3
Medium Trucks:	67.6	65	5.6	62.5		59.6	67.4	67.7
Heavy Trucks:	69.1		7.4	63.1		59.8	68.2	68.5
Vehicle Noise:	73.8	71	1.8	69.4		65.3	73.3	73.7
Centerline Distance t	to Noise Con	tour (in feet)		) dBA		dBA	60 dBA	55 dBA
			dn:	111	05	239	60 dBA 515	55 dBA 1,110
		CNE		111		239 256	515 553	, .
		CNE	EL.	119		200	553	1,191

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE PI	REDICT	ION MC	DEL			
Road Nar	rio: Existing + F ne: Moreno Be ent: s/o Alessan	ach Dr.					Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	PUT DATA			04- 0				L INPUT	s	
Highway Data					Site Con	aitions	•				
Average Daily	Traffic (Adt):	19,265 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%				dium Tr					
Peak I	lour Volume:	1,926 vehicles	S		He	avy Tru	cks (3+ .	Axles):	15		
	ehicle Speed:	50 mph		ľ	Vehicle	Mix					
Near/Far La	ane Distance:	82 feet		Ī	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.36%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.35%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.29%
	ist. to Barrier:	67.0 feet			Noise So	ource El	evation	s (in fe	eet)		
Centerline Dist.		67.0 feet		-		Auto	s: 0.	.000	,		
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	297			
Observer Height	, ,	5.0 feet			Heav	y Truck	s: 8.	.004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		ļ							
	ad Elevation:	0.0 feet			Lane Eq			_ •	feet)		
	Road Grade:	0.0%				Auto		.226			
	Left View:	-90.0 degree				m Truck		.059			
	Right View:	90.0 degree	es		Heav	y Truck	s: 53	.076			
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.30		-0.5	51	-1.20		-4.71	0.0	000	0.000
Medium Trucks:	81.00	-13.07		-0.4	19	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-18.35		-0.4	19	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois		-						_		T	
VehicleType	Leq Peak Hou			Leq E	vening	_	Night		Ldn	_	NEL
Autos:			66.6		65.7		60.	-	68.4		69.0
Medium Trucks:		-	64.3		61.2		58.	-	66.		66.4
Heavy Trucks: Vehicle Noise:			63.7 69.8		59.4 67.7		56. 63.	-	64.4 71.4		64.8 71.9
Centerline Distan	ce to Noise Co	ntour (in feet	)								
z z z z z z z z z z z z z z z z z z z		,,		70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		83		179	)	385		830
		0	NEL:		89		192		414		892

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MOD	EL			
	o: Existing + I e: Moreno Be nt: s/o Cactus	ach Dr.					t Name: A Number: 1		oreno Valle	y Trade	
SITE S	SPECIFIC IN	IPUT DATA							L INPUTS	;	
Highway Data				S	Site Cor	ditions	(Hard = 1	10, So	ft = 15)		
Peak He	Percentage: our Volume:	15,855 vehicle 10.00% 1,585 vehicle					A rucks (2 A icks (3+ A		15 15 15		
	hicle Speed:	50 mph		V	/ehicle	Mix					
Near/Far Lar	ne Distance:	82 feet			Veh	icleType	e L	Day	Evening	Night	Daily
Site Data							Autos: 7	72.0%	14.6%	13.5%	94.39%
Bar	rier Heiaht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.33%
Barrier Type (0-W		0.0				Heavy 7	rucks: 8	31.8%	7.7%	10.6%	1.28%
Centerline Dis	t. to Barrier:	67.0 feet		^	loise S	ource E	levations	(in fe	et)		
Centerline Dist. t	to Observer:	67.0 feet		F		Auto		•			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck					
Observer Height (	Above Pad):	5.0 feet				v Truck			Grade Adju	ıstment	0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		L	.ane Eq		t Distanc	_	eet)		
F	Road Grade:	0.0%				Auto		26			
	Left View:	-90.0 degre				m Truck					
	Right View:	90.0 degre	es		Hea	y Truck	ks: 53.0	76			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	70.20	-0.54		-0.51	I	-1.20	-	4.71	0.0	00	0.00
Medium Trucks:	81.00	-13.93		-0.49	9	-1.20	-	4.88	0.0	00	0.00
Heavy Trucks:	85.38	-19.21		-0.49	9	-1.20	-	5.29	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou	ur Leq Da		Leq Ev	rening	Leq	Night		Ldn	С	VEL
Autos:		'.9	65.7		64.8		59.7		67.6		68.2
Medium Trucks:		5.4	63.4		60.3		57.4		65.2		65.0
Heavy Trucks:		1.5	62.8		58.5		55.2		63.6		63.9
Vehicle Noise:	71	.0	68.9		66.8		62.6		70.5		71.0
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 d		65	dBA	6	0 dBA	55	dBA
			Ldn:		73		157		338		728
		С	NEL:		78		169		363		783

0-	- Frietre - S				Dest.	4.0/	A 14.4 A *		T	
	o: Existing + Pro							oreno Valle	y Trade	
	e: Moreno Beac nt: s/o John F Ke				JOD I	lumber:	12975			
				1			_			
SITE : Highway Data	SPECIFIC INP	UT DATA		Site C	onditions			L INPUTS ft = 15)	5	
Average Daily	Traffic (Adt): 1	6.531 vehicles				•	Autos:	15		
	. ,	0.00%	'		Medium Ti			15		
		.653 vehicles			Heavy Tru		,	15		
	hicle Speed:	50 mph			-	(-				
Near/Far Lar		82 feet			le Mix		_			
a:				١	ehicleType		Day	Evening	Night	Daily
Site Data				-	Medium 7	Autos:	72.0%		13.5%	
	rier Height:	0.0 feet					76.2%		14.4%	
Barrier Type (0-W	. ,	0.0			Heavy 1	rucks:	81.8%	7.7%	10.6%	1.279
Centerline Dis		67.0 feet		Noise	Source E	levation	s (in fe	et)		
Centerline Dist. 1		67.0 feet			Auto	s: 0	.000			
Barrier Distance t		0.0 feet		Me	dium Truck	s: 2	297			
Observer Height (	,	5.0 feet		Н	eavy Truck	s: 8	.004	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet								
	ad Elevation:	0.0 feet		Lane	Equivalen			eet)		
F		0.0%			Auto		.226			
		-90.0 degrees			dium Truck		.059			
	Right View:	90.0 degrees		Н	eavy Truck	s: 53	.076			
FHWA Noise Mode	el Calculations									
VehicleType		Traffic Flow	Distan		ite Road	Fresi		Barrier Atte	_	m Atten
Autos:	70.20	-0.36		-0.51	-1.20		-4.71	0.0		0.00
Medium Trucks:	81.00	-13.81		-0.49	-1.20		-4.88	0.0		0.00
Heavy Trucks:	85.38	-19.09		-0.49	-1.20		-5.29	0.0	00	0.00
Unmitigated Noise	•		$\overline{}$		<u> </u>					
., .	Leq Peak Hour	Leq Day		q Evening		Night		Ldn		NEL
Autos:	68.1	-	5.9	-	5.0	59.	-	67.8		68.
Medium Trucks:	65.5	-	3.5	-	0.5	57.	-	65.3		65.
Heavy Trucks: Vehicle Noise:	64.6 71.1		2.9 9.1		7.0	55. 62.		63.7 70.7		64. 71.
Centerline Distanc	e to Noise Con	tour (in feet)						***		
	e to 110/36 CON	tour (iii leet)		70 dBA	65	dBA	6	0 dBA	55	dBA
Centernine Distanc				/ U UDA	00					00,1
oenternile Distanc		L	dn:		75	161		346	- 00	745

Wednesday, November 4, 2020

	FHV	VA-RD-//-108 HIG	HWAY	NOISE P	REDICTION	MODEL			
Scenari	io: Existing + F	Project			Project Nan	ne: Alt1 N	loreno Valle	ey Trade	
Road Nam	e: Iris Av.	•			Job Numb	er: 12975	;	•	
Road Segmen	nt: e/o Nason	St.							
SITE	SPECIFIC IN	PUT DATA			NOIS	E MODE	L INPUT	s	
Highway Data				Site Con	ditions (Har	d = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	19,766 vehicles				Autos	: 15		
Peak Hour	Percentage:	10.00%		Me	dium Trucks	(2 Axles)	: 15		
Peak H	lour Volume:	1,977 vehicles		He	avy Trucks (	3+ Axles)	: 15		
Ve	hicle Speed:	50 mph		Vehicle	Mix				
Near/Far La	ne Distance:	82 feet			icleType	Day	Evening	Night	Daily
Site Data					Autos		-	13.5%	94.39%
Par	rrier Heiaht:	0.0 feet		М	edium Trucks	: 76.29	6 9.4%	14.4%	4.32%
Barrier Type (0-W		0.0			Heavy Trucks	81.89	6 7.7%	10.6%	1.28%
Centerline Dis	. ,	67.0 feet			· ·				
Centerline Dist.		67.0 feet		Noise S	ource Elevat		eet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000			
Observer Height (	Above Pad):	5.0 feet			m Trucks:	2.297	Grade Ad	li rotmont	
Pa	ad Elevation:	0.0 feet		Heal	y Trucks:	8.004	Grade Ad	justinent	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent Dis	tance (in	feet)		
1	Road Grade:	0.0%			Autos:	53.226			
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.059			
	Right View:	90.0 degrees		Hear	y Trucks:	53.076			
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road Fi	resnel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.41	-0.	51	-1.20	-4.71	0.	000	0.000
Medium Trucks:	81.00	-12.98	-0.4		-1.20	-4.88		000	0.000
Heavy Trucks:	85.38	-18.26	-0.4	49	-1.20	-5.29	0.	000	0.000
Unmitigated Noise									
VehicleType	Leq Peak Hou			vening	Leq Nigh		Ldn		VEL
Autos:	68			65.8		60.7	68.		69.1
Medium Trucks:	66			61.3		58.4	66.		66.
Heavy Trucks:	65			59.5		56.1	64.		64.9
Vehicle Noise:	71	.9 69.9	)	67.8		63.5	71.	5	72.0
Centerline Distanc	ce to Noise Co	entour (in feet)	70	-/0.4	CE -(DA		CO -ID 4		-10.4
		Ldn		dBA 84	65 dBA	182	60 dBA 391		dBA 843
		Lan. CNFL		84 91		182 195	391 421		906
		CNEL		91		190	421		906

	FHW	VA-RD-77-108	HIGH	A YAWH	IOISE PI	REDICT	ION MO	DDEL			
Road Nam	io: Existing + P ne: Iris Av. nt: e/o Lasselle	•					t Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	30,422 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	3,042 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		l,	Vehicle	Mix					
Near/Far La	ne Distance:	82 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.30%
Rai	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.40%
Barrier Type (0-W		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.30%
Centerline Di	st. to Barrier:	67.0 feet			Noise So	urce F	lovatio	ne (in fa	not)		
Centerline Dist.	to Observer:	67.0 feet		– F	10/30 00	Auto		.000	.00		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet		L						dourrorn	0.0
Ros	ad Elevation:	0.0 feet		1	Lane Eq			_ •	feet)		
i i	Road Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degree				m Truck		1.059			
	Right View:	90.0 degree	es		Heav	y Truck	s: 53	3.076			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	2.28		-0.5	1	-1.20		-4.71	0.0	000	0.000
Medium Trucks:	81.00	-11.03		-0.4	-	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-16.31		-0.4	9	-1.20		-5.29	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq E			Night		Ldn		VEL
Autos:	70.	-	68.6		67.6		62	-	70.4		71.0
Medium Trucks:	68.	-	66.3		63.2		60	-	68.		68.5
Heavy Trucks:	67.		65.7		61.4		58		66.		66.8
Vehicle Noise:	73.	.8	71.8		69.7		65	.4	73.4	4	73.9
Centerline Distant	ce to Noise Co	ntour (in feet	)	70	/D.4		10.4				15.4
			1 -1	70 c		65	dBA		0 dBA		dBA
Ldn:				113 243 524			1,129				
		^	NEL:		121		26	0	564		1.214

Road Name: Road Segment: SITE SPI Highway Data Average Daily Tra Peak Hour Per	PECIFIC IN  affic (Adt): crcentage:	St.						: Alt1 Me : 12975	oreno Valle	ey Trade	
Highway Data Average Daily Tra Peak Hour Pei Peak Hour Vehicl	affic (Adt):										
Average Daily Tra Peak Hour Pei Peak Hour Vehicl	rcentage:	00.500 1.11							L INPUT	S	
Peak Hour Pei Peak Hour Vehicl	rcentage:				Site Con	ditions	(Hard				
Peak Hour Vehicl	-	26,530 vehicle	es					Autos:			
Vehicl		10.00%						Axles):			
		2,653 vehicles	S		He	avy Tru	cks (3+	Axles):	15		
Near/Far Lane I	le Speed:	50 mph		- 1	Vehicle i	Mix					
	Distance:	82 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.269
Barrie	er Heiaht:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.439
Barrier Type (0-Wall,		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.319
Centerline Dist. t		67.0 feet		1	Noise So	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to 0		67.0 feet				Auto	s: (	0.000			
Barrier Distance to C		0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (Abo	ove Pad): Elevation:	5.0 feet			Heav	y Truck	:s: 8	3.004	Grade Adj	justment	: 0.0
	Elevation: Flevation:	0.0 feet 0.0 feet			Lane Eq	uivalon	t Dieta	nce (in i	Foot)		
	ed Grade:	0.0 reet		H.	Lane Lq	Auto		3.226	001)		
	Left View:	-90.0 degree			Mediu	m Truck		3.059			
_	ight View:	90.0 degree				y Truck		3.076			
FHWA Noise Model C	Calculations	1									
VehicleType I	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.69		-0.5	1	-1.20		-4.71	0.0	000	0.00
Medium Trucks:	81.00	-11.59		-0.4	9	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-16.87		-0.4	9	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise Le											
• • • • • • • • • • • • • • • • • • • •	q Peak Hou			Leg E	vening		Night		Ldn		NEL
Autos:	70.	_	68.0		67.0		61		69.8	-	70.
Medium Trucks:	67.		65.7		62.7		59		67.5	-	67.
Heavy Trucks:	66.		65.1		60.9		57		65.9		66.
Vehicle Noise:	73.		71.2		69.1		64	.9	72.8	5	73.
Centerline Distance t	to Noise Co	ntour (in feet,	)	70.	dBA	65	dBA	-	i0 dBA	55	dBA
			Ldn:	700	103	00	и <i>Б</i> А 22		480		1.033
			VEL:		111		23		516		1,030

Scenario: Existing	+ Project	t				Project N	lame: A	Alt1 Mo	oreno Valle	y Trade	
Road Name: Eucalyp						Job Nui				,	
Road Segment: e/o Nasi	on St.										
SITE SPECIFIC	INPUT	DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (F					
Average Daily Traffic (Adt)	.,.	06 vehicles	3					Autos:	15		
Peak Hour Percentage						dium Truc		,	15		
Peak Hour Volume		1 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle Speed		0 mph		ν	ehicle I	Лix					
Near/Far Lane Distance	: 4	8 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	72.0%	14.6%	13.5%	94.38
Barrier Heigh	. 0	.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.33
Barrier Type (0-Wall, 1-Berm,	: 0	0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.28
Centerline Dist. to Barrie		0.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observe		0.0 feet				Autos:	0.0	000			
Barrier Distance to Observe		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (Above Pad,	: 5	i.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	: 0.0
Pad Elevation		0.0 feet		-  -							
Road Elevation		0.0 feet		L	ane Equ	uivalent E			eet)		
Road Grade						Autos:					
Left View		0.0 degrees				n Trucks:					
Right View	: 90	0.0 degrees	8		Heav	y Trucks:	43.9	966			
FHWA Noise Model Calculati	_										
VehicleType REMEL		fic Flow	Distar		Finite		Fresn		Barrier Att		m Atter
Autos: 66.		-1.75		0.71		-1.20		-4.65		000	0.0
Medium Trucks: 77.	-	-15.13		0.74		-1.20		-4.87		000	0.00
Heavy Trucks: 82.		-20.41		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels (w			_								
VehicleType Leq Peak I		Leq Day	2.0	eq Ev		Leq N	-		Ldn		NEL
Autos: Medium Trucks:	64.3 62.1	-	2.0 0.2		61.1 57.1		56.0 54.2		63.9 61.9		64 62
	62.1	-	0.2		56.2		54.2		61.9		
Heavy Trucks: Vehicle Noise:	67.7		0.5 5.7		63.5		52.8		67.3		61 67
venicie ivoise:			0.7		03.5		59.3		67.3	5	67
		ir (in foot)									
Centerline Distance to Noise	Contou	i (iii ieet)		70 di	BA	65 dE	3 <i>A</i>	6	i0 dBA	55	dBA
Centerline Distance to Noise	Contou	, ,	dn:	70 di	BA 33	65 dE	3A 71	6	0 dBA 153		dBA 32

Wednesday, November 4, 2020

	FHV	VA-RD-77-108 H	HIGHWA	Y NOISE	PREDICT	TION MC	DEL			
	: Existing + F : Eucalyptus : e/o Fir Av.					t Name: Number:		loreno Valle	y Trade	
SITE S	PECIFIC IN	PUT DATA				NOISE	MODE	L INPUT	S	
Highway Data				Site C	onditions	(Hard =	10, S	oft = 15)		
Average Daily T Peak Hour F	. ,	14,290 vehicles 10.00% 1.429 vehicles	3		Medium Ti Heavy Tru		,	: 15		
	icle Speed:	40 mph				0110 (0 :	1000)	0		
Near/Far Lan		48 feet		Vehic	+					
	c Distance.	40 1001		١	ehicleTyp		Day	Evening	Night	Daily
Site Data						Autos:	72.09		13.5%	
Barr	ier Height:	0.0 feet			Medium 7	rucks:	76.29	6 9.4%	14.4%	4.35%
Barrier Type (0-Wa	ıll, 1-Berm):	0.0			Heavy 1	rucks:	81.89	6 7.7%	10.6%	1.29%
Centerline Dist	to Barrier:	50.0 feet		Noise	Source E	lovation	e (in f	oot)		
Centerline Dist. to	Observer:	50.0 feet		140136	Auto		.000	eeij		
Barrier Distance to	Observer:	0.0 feet			Auto dium Truck		.000			
Observer Height (A	bove Pad):	5.0 feet						Grade Ad	iuctman	t: 0.0
Pad	d Elevation:	0.0 feet		Н	eavy Truck	s: 8	.004	Grade Adj	ustriieri	ı. u.u
Road	d Elevation:	0.0 feet		Lane	Equivalen	t Distan	ce (in	feet)		
R	oad Grade:	0.0%			Auto	s: 44	.147			
	Left View:	-90.0 degrees	3	Me	lium Truck	s: 43	.947			
	Right View:	90.0 degrees		Н	eavy Truck	(s: 43	.966			
FHWA Noise Model	Calculation	S								
VehicleType	REMEL	Traffic Flow	Distant	e Fir	ite Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-0.03		0.71	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-13.39		0.74	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-18.67		0.73	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise			arrier at	tenuatio	1)					
VehicleType L	eq Peak Hou	r Leq Day	Le	q Evenin	Leq	Night		Ldn		NEL
Autos:	66		3.8	6:	2.9	57.	7	65.6	3	66.2
Medium Trucks:	63	.9 6	1.9	5	3.8	55.	9	63.7	7	64.0
Heavy Trucks:	63	.9 6	2.2	5	7.9	54.	5	63.0	)	63.3
Vehicle Noise:	69	.5 6	7.5	6	5.2	61.	0	69.0	)	69.5
Centerline Distance	to Noise Co	ntour (in feet)		70 dBA	CF	dBA		60 dBA		5 dBA
			dn:		13	ава 93		<i>60 ава</i> 199	58	430
		CN			13 16	90		199 214		430 461
		CN	EL:		ю	98	,	214		461

	FH	WA-RD-77-108	HIGHW	VAY N	IOISE PI	REDICT	ION M	DDEL			
Road Nam	io: Existing + l ne: Eucalyptus nt: w/o Moren	Av.						Alt1 M 12975	oreno Vall	ey Trac	le
SITE Highway Data	SPECIFIC II	NPUT DATA			Site Con				L INPUT	S	
				- 1	site Con	aitions	(Hara				
Average Daily	. ,	6,836 vehicle	es					Autos:			
	Percentage:	10.00%				dium Tı					
	lour Volume:	684 vehicles	8		He	avy Tru	cks (3+	Axles):	15		
	hicle Speed:	40 mph		1	Vehicle I	Viix					
Near/Far La	ne Distance:	48 feet		ı	Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5	% 96.91%
Ra	rrier Height:	0.0 feet			Me	edium 7	rucks:	76.2%	9.4%	14.4	% 2.39%
Barrier Type (0-W		0.0			F	Heavy 7	rucks:	81.8%	7.7%	10.6	% 0.71%
Centerline Di	st. to Barrier:	50.0 feet		- 1	Voise So	urce F	levatio	ns (in fi	pet)		
Centerline Dist.	to Observer:	50.0 feet		ď	10/36 00	Auto		0.000	001)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height (	Above Pad):	5.0 feet				y Truck		1.004	Grade Ad	liustme	nt: 0.0
P	ad Elevation:	0.0 feet		L						, aoi.mo	7A. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44	1.147			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 40	3.947			
	Right View:	90.0 degree	es		Heav	y Truck	(s: 40	3.966			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	inel	Barrier At	ten B	erm Atten
Autos:	66.51			0.7	1	-1.20		-4.65	0.	000	0.000
Medium Trucks:	77.72	-19.20		0.7	4	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	82.99	-24.48		0.7	3	-1.20		-5.43	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	· L	Leg E	/ening	Leq	Night		Ldn		CNEL
Autos:	62	2.9	60.7		59.8		54	.7	62.	5	63.1
Medium Trucks:	58	3.1	56.1		53.0		50	.1	57.	9	58.2
Heavy Trucks:	58	3.0	56.4		52.1		48	.7	57.	1	57.5
Vehicle Noise:	65	5.1	63.0		61.2		56	.7	64.	7	65.2
Centerline Distant	ce to Noise C	ontour (in feet,	)								
				70 c	IBA	65	dBA	(	60 dBA		55 dBA
			Ldn:		22		4	7	102	2	220
		CI	VEL:		24		5	1	110	)	238

	FHW	A-RD-77-108	HIGHW	AY NOISE F	PREDICT	TON MO	DEL			
Scenario: Road Name: Road Segment:		v.				t Name: lumber:		oreno Valle	y Trade	
	ECIFIC INF	UT DATA		27. 0				L INPUT	S	
Highway Data  Average Daily Tra  Peak Hour Pei  Peak Hour  Vehici  Near/Far Lane	rcentage: 1 Volume: le Speed:	4,088 vehicle 10.00% 409 vehicles 40 mph 48 feet		M H Vehicle		rucks (2 i	Autos: Axles): Axles):	15 15 15		
Site Data				ve	hicleType	Autos:	Day 72.0%	Evening 14.6%	Night 13.5%	Daily 89.33%
	r Height: 1-Berm):	0.0 feet 0.0		^	Medium 1 Heavy 1	rucks:	76.2% 81.8%	9.4%	14.4%	3.49%
Centerline Dist. t	o Barrier:	50.0 feet		Noise S	Source E	levation	s (in fe	eet)		
Centerline Dist. to ( Barrier Distance to ( Observer Height (Abi Road I Road I Ri	50.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		Lane E	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustme  Lane Equivalent Distance (in feet) Autos: 44.147 Medium Trucks: 43.947 Heavy Trucks: 43.966						
FHWA Noise Model C	alculations									
		Traffic Flow	Distar		e Road	Fresi		Barrier Atte		m Atten
Autos:	66.51	-5.70		0.71	-1.20		-4.65	0.0		0.00
Medium Trucks: Heavy Trucks:	77.72 82.99	-19.78 -16.65		0.74 0.73	-1.20 -1.20		-4.87 -5.43		000 000	0.00
Unmitigated Noise Le	evels (withou	ut Topo and I	barrier a	attenuation	)					
VehicleType Le	q Peak Hour	Leq Day	L	eq Evening	Leq	Night		Ldn	С	NEL
Autos:	60.3	3 .	58.1	57.	2	52.	1	60.0	)	60.
Medium Trucks:	57.5		55.5	52.		49.	-	57.3		57.
Heavy Trucks:	65.9		64.2	59.	-	56.		65.0		65.
Vehicle Noise:	67.4		65.6	62.	3	58.	5	66.7		67.
Centerline Distance t	o Noise Con	tour (in feet)		70 /04	1	15.4			1	
				70 dBA		dBA		60 dBA	55	dBA
		-	Ldn:	30		65		140		301
		CN	IEL:	32	<u> </u>	69		149		320

		WA-RD-77-108									
	o: Existing + I e: Eucalyptus t: e/o Dwy. 1						Name: . umber:		oreno Valle	y Trade	
SITE S	PECIFIC IN	NPUT DATA							L INPUT	S	
Highway Data				Si	te Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	5,441 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	dium Tru	icks (2 /	Axles):	15		
Peak Ho	our Volume:	544 vehicle	s		He	avy Truc	ks (3+ )	Axles):	15		
Veh	icle Speed:	40 mph		Ve	ehicle l	Mix					
Near/Far Lan	e Distance:	48 feet		-		icleType		Day	Evening	Night	Daily
Site Data							lutos:	72.0%	14.6%	13.5%	84.239
Barı	ier Heiaht:	0.0 feet			M	edium Tı	ucks:	76.2%	9.4%	14.4%	4.15%
Barrier Type (0-Wa		0.0			I	Heavy Ti	ucks:	81.8%	7.7%	10.6%	11.619
Centerline Dis	t. to Barrier:	50.0 feet		No	nise Sc	ource El	evation	s (in f	eet)		
Centerline Dist. to	o Observer:	50.0 feet		***	<i>n</i> 36 00	Auto:		000	.01)		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck:		297			
Observer Height (A	Above Pad):	5.0 feet				v Truck		004	Grade Ad	ustment	: 0.0
	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		La	ne Eq	uivalent			feet)		
R	oad Grade:	0.0%				Auto		147			
	Left View:	-90.0 degree				m Truck		947			
	Right View:	90.0 degree	es		Heav	y Truck:	3: 43.	966			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresr		Barrier Att		m Atten
Autos:	66.51			0.71		-1.20		-4.65		000	0.00
Medium Trucks:	77.72			0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	•										
VehicleType I	Leq Peak Hou	ur Leq Day	59.1	eq Eve	ning 58.2	_	Night 53.1	_	Ldn 60.9		NEL 61.
Medium Trucks:	-		57.5		54.4		53.1 51.5		59.3		59.
			57.5 67.5		63.3		59.9	-	68.3		
Heavy Trucks: Vehicle Noise:			68.5		64.9		61.2		69.5		68. 69.
VOLINGIO INGISE.					04.5		01.2	-	09.0	,	05.
		ontour (in feet	)								
Centerline Distance	e to Noise C			70 dF	24	65					dRA
Centerline Distance	e to Noise C		Ldn:	70 dE	8A 46	65	dBA 99		60 dBA 214		dBA 46

Wednesday, November 4, 2020

	FH\	VA-RD-77-108	HIGHV	VAY N	OISE P	REDICTION	ON MOE	EL		
Road Nan	rio: Existing + F ne: Eucalyptus ent: w/o Dwy. 5						Name: A mber: 1		oreno Valley 1	Frade
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODE	L INPUTS	
Highway Data				5	ite Con	ditions (	Hard = 1	10, So	ft = 15)	
	Traffic (Adt): Percentage:	5,066 vehicle 10.00% 507 vehicle				dium Tru avy Truci	cks (2 A	/	15 15 15	
	ehicle Speed:	40 mph	,,,	L			(			
	ne Distance:	48 feet		١	ehicle I	icleType	- 1	Dav	Evening N	ight Daily
Site Data					ven			72.0%		3.5% 87.10%
	rrier Heiaht:	0.0 feet			Me	edium Tru		6.2%		4.4% 4.22%
Barrier Type (0-V	Vall, 1-Berm):	0.0				leavy Tru		31.8%		0.6% 8.68%
	ist. to Barrier:	50.0 feet		٨	loise Sc	urce Ele	vations	(in fe	et)	
Centerline Dist. Barrier Distance Observer Height P	to Observer:	50.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos n Trucks ry Trucks	2.2	97	Grade Adjust	tment: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in f	eet)	
	Road Grade:	0.0%				Autos	44.1	47		
	Left View: Right View:	-90.0 degre				n Trucks y Trucks				
FHWA Noise Mod	el Calculation	•								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/ .	Barrier Atten	Berm Atten
Autos:	66.51	-4.88		0.71		-1.20		4.65	0.000	0.000
Medium Trucks:	77.72	-18.03	1	0.74	ļ	-1.20	-	4.87	0.000	0.000
Heavy Trucks:	82.99	-14.89	)	0.73	3	-1.20	-	5.43	0.000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)					
VehicleType	Leq Peak Hou	ır Leq Da	y i	Leq Ev	ening	Leq N	light		Ldn	CNEL
Autos:	61	.1	58.9		58.0		52.9		60.8	61.4
Medium Trucks:		.2	57.3		54.2		51.3		59.0	59.4
Heavy Trucks:			66.0		61.7		58.3		66.7	67.1
Vehicle Noise:			67.2		63.8		60.0		68.3	68.7
Centerline Distan	ce to Noise Co	ontour (in fee	t)							
			L	70 d		65 d		6	0 dBA	55 dBA
		_	Ldn:		38		83		178	383
		С	NEL:		41		88		189	407

Scenario: Existing + Project Project Name: Alt1 Moreno Valley Tr. Road Name: Eucalyptus Av. Road Segment: w/o Redlands Blvd. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS	ade
CITE CRECIFIC INDUST DATA	
Highway Data Site Conditions (Hard = 10, Soft = 15)	
Average Daily Traffic (Adt): 4,034 vehicles Autos: 15	
Peak Hour Percentage: 10.00% Medium Trucks (2 Axles): 15	
Peak Hour Volume: 403 vehicles Heavy Trucks (3+ Axles): 15	
Vehicle Speed: 40 mph	
Near/Far Lane Distance: 48 feet VehicleType Day Evening Nig	ht Daily
Site Data Autos: 72.0% 14.6% 13	.5% 96.54%
Barrier Height: 0.0 feet Medium Trucks: 76.2% 9.4% 14	.4% 2.67%
	.6% 0.79%
Centerline Dist. to Barrier: 50.0 feet Noise Source Elevations (in feet)	
Centerline Dist. to Observer: 50.0 feet Autos: 0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustn	nent: 0.0
Pad Elevation: 0.0 feet	10111. 0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 44.147	
Left View: -90.0 degrees Medium Trucks: 43.947	
Right View: 90.0 degrees Heavy Trucks: 43.966	
FHWA Noise Model Calculations	-
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten	Berm Atten
Autos: 66.51 -5.42 0.71 -1.20 -4.65 0.000	0.00
Medium Trucks: 77.72 -21.01 0.74 -1.20 -4.87 0.000	0.00
Heavy Trucks: 82.99 -26.29 0.73 -1.20 -5.43 0.000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)	01/5/
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn	CNEL
Autos: 60.6 58.4 57.5 52.3 60.2	60.8
Medium Trucks: 56.2 54.3 51.2 48.3 56.1	56.4
Heavy Trucks: 56.2 54.6 50.3 46.9 55.3	55.°
Vehicle Noise: 63.0 60.9 59.0 54.6 62.6	50.
Vehicle Noise:         63.0         60.9         59.0         54.6         62.6           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA	55 dBA
Centerline Distance to Noise Contour (in feet)	55 dBA

	FHV	VA-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION M	DDEL			
Road Nam	io: Existing + F ne: Eucalyptus nt: e/o Redland	Av.						Alt1 M 12975	oreno Valle	ey Trade	
SITE :	SPECIFIC IN	PUT DATA			ita Cor				L INPUT	s	
Average Daily Peak Hour Peak H Ve	Traffic (Adt): Percentage: lour Volume: hicle Speed: ne Distance:	2,612 vehicle 10.00% 261 vehicle 40 mph 48 feet			Me He <b>'ehicle</b>	dium Tr avy Tru <b>Mix</b>	ucks (2 cks (3+	Autos: Axles): Axles):	15 15 15		
Site Data					ven	icleType	Autos:	72.0%	Evening 14.6%	Night 13.5%	Daily 94.24%
	rrier Height: /all, 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks:	76.2% 81.8%	9.4%	14.4% 10.6%	4.44%
Centerline Dis	st. to Barrier:	50.0 feet		۸	loise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet					Hea	Auto m Truck ry Truck <b>uivalen</b>	s: 2	0.000 2.297 3.004 nce (in a	Grade Adj	iustment	: 0.0
ı	Road Grade: Left View: Right View:	0.0% -90.0 degre- 90.0 degre-				Auto m Truck ry Truck	s: 43	1.147 3.947 3.966			
FHWA Noise Mode											
VehicleType Autos:	REMEL 66.51	Traffic Flow -7.41		stance 0.71		-1.20	Fres	nel -4.65	Barrier Att	en Bei 000	m Atten 0.000
Medium Trucks: Heavy Trucks:	77.72 82.99	-20.68 -25.96		0.74 0.73		-1.20 -1.20		-4.87 -5.43		000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er attenu	ıation)						
VehicleType	Leq Peak Hou	r Leq Day	<i>y</i>	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	58		56.4		55.5		50		58.3		58.8
Medium Trucks:	56		54.6		51.5		48		56.4		56.7
Heavy Trucks: Vehicle Noise:	56 62		54.9 60.1		50.6 57.9		47 53		55.7 61.7		56.0 62.1
Centerline Distance	re to Noise Co	ntour (in feet	1)								
Contonine Distant	30 10 .10/36 00	(III TOOL	,	70 d	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:		14		3	-	65		139
		C	NEL:		15		3	2	69		150

Scenario: Existing	+ Pro	oject				Project N	lame: F	Alt1 Mo	oreno Valle	ey Trade	
Road Name: Encilia	٩v.	•				Job Nui	mber: 1	12975		•	
Road Segment: e/o Ess	en La	ne									
SITE SPECIFIC	INP	UT DATA							L INPUT	S	
lighway Data				5	ite Con	ditions (F	iara =	10, So			
Average Daily Traffic (Adi		850 vehicle	S					Autos:	15		
Peak Hour Percentage		0.00%				dium Truc		,	15		
Peak Hour Volume		85 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle Speed		45 mph		ν	ehicle I	Nix					
Near/Far Lane Distance	9.	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	72.0%	14.6%	13.5%	98.53
Barrier Heigh	t:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	1.13
Barrier Type (0-Wall, 1-Berm	):	0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	0.34
Centerline Dist. to Barrie		44.0 feet		٨	loise So	urce Elev	ations	(in fe	eet)		
Centerline Dist. to Observe		44.0 feet				Autos:	0.0	000			
Barrier Distance to Observe		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (Above Pac		5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	: 0.0
Pad Elevation		0.0 feet									
Road Elevation		0.0 feet		L	ane Equ	uivalent E			eet)		
Road Grad		0.0%				Autos:					
Left View		-90.0 degree				n Trucks:					
Right View	v:	90.0 degree	S		Heav	y Trucks:	40.2	262			
HWA Noise Model Calculat	ions										
VehicleType REMEL	_	Traffic Flow	Distar		Finite		Fresn		Barrier Att		m Atter
	.46	-12.61		1.28		-1.20		-4.61		000	0.0
	.45	-32.00		1.31		-1.20		-4.87		000	0.00
	.25	-37.28		1.31		-1.20		-5.50	0.0	000	0.00
Inmitigated Noise Levels (w											
VehicleType Leq Peak		Leq Day	3.7	eq Ev		Leq N	ignt 47.7		Ldn 55.6		NEL 56
Medium Trucks:	55.9 47.6	-	5.6		52.8 42.5		39.6		47.4		47
			5.6		42.5		39.6		47.4		
Heavy Trucks:	47.1				53.4		48.7		46.2 56.6		46 57
Material Atalas	nicle Noise: 57.0 54.9		4.9		53.4		48.7		56.6	)	5/
Vehicle Noise:											
Vehicle Noise: Centerline Distance to Noise	Con	tour (in feet)		70 d	BA	65 dE	3 <i>A</i>	6	i0 dBA	55	dBA
	Con	, ,	.dn:	70 d	BA 6	65 dE	3A 12	6	i0 dBA 26		dBA 5

Wednesday, November 4, 2020

FH	IWA-RD-77-108	HIGHW	AY NO	ISE P	REDICTI	ON M	DDEL				
Scenario: Existing + Road Name: Encilia Av Road Segment: e/o Mozar	. 1						Alt1 N	loreno Vall	ey Trade		
SITE SPECIFIC I Highway Data	NPUT DATA		S.i.	to Con	N ditions			L INPUT	s		
Average Daily Traffic (Adt):  Peak Hour Percentage:  Peak Hour Volume:  Vehicle Speed:  Near/Far Lane Distance:	1,655 vehicle 10.00% 165 vehicles 45 mph			Ме	dium Tru avy Truc	ıcks (2	Autos Axles)	15			
	36 feet			Veh	icleType		Day	Evening	Night	Daily	
Site Data  Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			Autos: 72.0% 14.6% 13.5% 99.2  Medium Trucks: 76.2% 9.4% 14.4% 0.5  Heavy Trucks: 81.8% 7.7% 10.6% 0.1							
Centerline Dist. to Barrier:	44.0 feet		No	oise Sc	ource El	evatio	ns (in f	eet)			
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:		Autos: 0.000  Medium Trucks: 2.297  Heavy Trucks: 8.004 Grade Adjustment: (						: 0.0			
Road Elevation:	0.0 feet		La	ne Eq	uivalent	Dista	nce (in	feet)			
Road Grade: Left View: Right View:		0.0% -90.0 degrees 90.0 degrees			Autos m Trucks ry Trucks	s: 4	0.460 0.241 0.262				
FHWA Noise Model Calculatio	ns										
VehicleType REMEL	Traffic Flow	Distan	се	Finite	Road	Fre	snel	Barrier Att	en Bei	m Atten	
Autos: 68.4	6 -9.68		1.28		-1.20		-4.61	0.	000	0.000	
Medium Trucks: 79.4 Heavy Trucks: 84.2			1.31 1.31		-1.20 -1.20		-4.87 -5.50		000 000	0.000	
Unmitigated Noise Levels (wit	hout Topo and I	barrier a	ttenua	ation)							
VehicleType Leq Peak Ho	<u>_</u>		eq Eve		Leq	Night		Ldn	C	NEL	
Autos: 5	i8.9 5	56.6		55.7		50	.6	58.	5	59.1	
Medium Trucks: 4	7.6	45.6		42.5		39	.6	47.	4	47.7	
Heavy Trucks: 4	7.1	45.4		41.1		37	.8	46.	2	46.5	
Vehicle Noise: 5	9.4	57.3		56.1		51	.1	59.	1	59.6	
Centerline Distance to Noise C	Contour (in feet)										
		L	70 dB		65	dBA		60 dBA		dBA	
	-	Ldn: IEL:		8 9			8 9	38 41		82 89	

ay, November 4, 2020 Wednesday, November 4, 2020

Scenario: Existing + Project Project Name: Alt1 Moreno Valley Trade Road Name: Encilla Av. Job Number: 12975 Road Segment: w o Redlands Blvd.	
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS	
Highway Data Site Conditions (Hard = 10, Soft = 15)	
Average Daily Traffic (Adt): 3,063 vehicles Autos: 15	
Peak Hour Percentage: 10.00% Medium Trucks (2 Axles): 15	
Peak Hour Volume: 306 vehicles Heavy Trucks (3+ Axles): 15	
Vehicle Speed: 45 mph	
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night	Daily
Site Data Autos: 72.0% 14.6% 13.5%	99.11%
Barrier Height: 0.0 feet Medium Trucks: 76.2% 9.4% 14.4%	0.69%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 81.8% 7.7% 10.6%	0.20%
Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet)	
Centerline Dist. to Observer: 44.0 feet Autos: 0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustmen	t: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 40.460	
Left View: -90.0 degrees Medium Trucks: 40.241	
Right View: 90.0 degrees Heavy Trucks: 40.262	
FHWA Noise Model Calculations	
	rm Atten
Autos: 68.46 -7.02 1.28 -1.20 -4.61 0.000	0.000
Medium Trucks: 79.45 -28.60 1.31 -1.20 -4.87 0.000	0.000
Heavy Trucks: 84.25 -33.88 1.31 -1.20 -5.50 0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         Cd	NEL
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         C           Autos:         61.5         59.3         58.4         53.3         61.2	61.7
Autos. 01.0 05.0 00.4 00.0 01.2	51.1
Medium Trucks: 51.0 40.0 45.0 43.0 50.9	49.9
Medium Trucks:         51.0         49.0         45.9         43.0         50.8           Heavy Trucks:         50.5         48.8         44.5         41.2         49.6	
Medium Trucks:         51.0         49.0         45.9         43.0         50.8           Heavy Trucks:         50.5         48.8         44.5         41.2         49.6           Vehicle Noise:         62.2         60.0         58.8         53.9         61.8	62.4
Heavy Trucks:         50.5         48.8         44.5         41.2         49.6           Vehicle Noise:         62.2         60.0         58.8         53.9         61.8	62.4
Heavy Trucks:         50.5         48.8         44.5         41.2         49.6           Vehicle Noise:         62.2         60.0         58.8         53.9         61.8           Centerline Distance to Noise Contour (in feet)	62.4 5 dBA
Heavy Trucks:         50.5         48.8         44.5         41.2         49.6           Vehicle Noise:         62.2         60.0         58.8         53.9         61.8           Centerline Distance to Noise Contour (in feet)	62.4 5 dBA 125

	FHV	VA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION M	ODEL				
	o: Existing + F e: Alessandro t: e/o Lasselle	Blvd.						: Alt1 M : 12975	oreno Valle	y Trade		
	SPECIFIC IN	IPUT DATA							L INPUT	S		
	Percentage: our Volume: nicle Speed:	10,975 vehicle 10.00% 1,098 vehicle 50 mph 82 feet			М	edium Tr eavy Tru Mix	ucks (2	Autos: Axles):	15 15 15			
	e Distalice.	02 1001			Vel	nicleType		Day	Evening	Night	Daily	
Barrier Type (0-Wa		<b>0.0 feet</b> 0.0				ledium T Heavy T		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.35%	
Centerline Dist Centerline Dist. to Barrier Distance to Observer Height (A Pa	o Observer: o Observer:	67.0 feet 67.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Hea	ource E Auto Im Truck vy Truck	s: ( s: 2 s: 8	0.000 2.297 3.004	Grade Adj	ustment	: 0.0	
R	d Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre		L	Lane Equivalent Distance (in feet)  Autos: 53.226  Medium Trucks: 53.059  Heavy Trucks: 53.076							
FHWA Noise Mode						1						
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	-2.14 -15.51 -20.79		-0.51 -0.49 -0.49		-1.20 -1.20 -1.20	Fres	-4.71 -4.88 -5.29	0.0	900 000 000	0.000 0.000 0.000	
Unmitigated Noise	I avale (with	out Tono and	harrio	r attoni	(ation)							
	Leq Peak Hou			Leg Ev		Leq	Night		Ldn	C	NEL	
Autos: Medium Trucks: Heavy Trucks:	66 63 62	.4	64.1 61.8 61.2	.,	63.2 58.8 57.0	3	58 55 53	.8	66.0 63.6	)	66.6 64.0 62.3	
Vehicle Noise:	69		67.4		65.2		61		69.0		69.4	
Centerline Distance	e to Noise Co	ntour (in feet	)									
			Ldn:	70 d	<i>BA</i> 57	65	dBA 12		60 dBA 265		dBA 570	
		С	NEL:		61		13	2	285		613	

		WA-RD-77-108			J.O.L 1									
Road Nam	io: Existing + l ne: Alessandro nt: e/o Nason	Blvd.			Project Name: Alt1 Moreno Valley Trade Job Number: 12975									
	SPECIFIC II	NPUT DATA							L INPUT	s				
Highway Data				S	ite Con	ditions	(Hard :	= 10, Sc	oft = 15)					
Average Daily	Traffic (Adt):	9,841 vehicl	es					Autos:	15					
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15					
Peak H	lour Volume:	984 vehicle	es		He	avy Truc	cks (3+	Axles):	15					
Ve	hicle Speed:	50 mph		V	ehicle	Mix								
Near/Far La	ne Distance:	58 feet		F	Veh	icleType		Day	Evening	Night	Daily			
Site Data						-	Autos:	72.0%	14.6%	13.5%	94.419			
Bai	rrier Heiaht:	0.0 feet			М	edium Ti	rucks:	76.2%	9.4%	14.4%	4.319			
Barrier Type (0-W	all, 1-Berm):	0.0			- 1	Heavy Ti	rucks:	81.8%	7.7%	10.6%	1.289			
Centerline Di	st. to Barrier:	55.0 feet		M	nisa Si	ource El	lovatio	ne (in f	not)					
Centerline Dist.	to Observer:	55.0 feet			0/36 01	Auto		.000						
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck.		297						
Observer Height (	Above Pad):	5.0 feet				v Truck		.004	Grade Ad	liustment	0.0			
Pa	ad Elevation:	0.0 feet				,				,				
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)					
1	Road Grade:	0.0%				Auto		.000						
	Left View:	-90.0 degre	es			m Truck		3.811						
	Right View:	90.0 degre	es		Heav	y Truck	s: 46	3.830						
FHWA Noise Mode	el Calculation	ıs												
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten			
Autos:	70.20			0.30		-1.20		-4.67		000	0.00			
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.00			
Heavy Trucks:	85.38	-21.30	)	0.32		-1.20		-5.38	0.0	000	0.00			
Unmitigated Noise				r attenu	ation)									
VehicleType	Leq Peak Ho			Leg Eve			Night		Ldn		NEL			
Autos:		3.7	64.5		63.5		58		66.3	-	66.			
Medium Trucks:	-	4.1	62.1		59.1		56		63.9	-	64.			
Heavy Trucks:		3.2	61.5		57.3		53		62.3	-	62.			
Vehicle Noise:		9.7	67.7		65.6		61	.3	69.3	3	69			
Centerline Distand	ce to Noise C	ontour (in fee	t)	70 "	24		-ID 4		CO -/D 4		-10.4			
			Ldn:	70 dl		65	dBA		0 dBA		dBA			
		_	Lan:		49		10	-	228		492			
		C	IVEL.		53		11	4	246	,	529			

Wednesday, November 4, 2020

	FHV	VA-RD-77-108 H	IIGHWA	Y NOISE P	REDICT	ION MOD	DEL			
	e: Existing + F e: Alessandro t: e/o Moreno	Blvd.				Name: A lumber: 1		oreno Valle	y Trade	
	PECIFIC IN	PUT DATA						L INPUTS	;	
Highway Data  Average Daily 7	raffic (Adt):	6,067 vehicles	,	Site Cor	nditions	(Hard = 1	10, So lutos:	15 15		
Peak Hour F		10.00% 607 vehicles				ucks (2 A. cks (3+ A.	/	15 15		
	our Volume: icle Speed:	50 mph		Vehicle		UKS (ST A.	xies).	10		
Near/Far Lan	e Distance:	58 feet			nicleType	: L	Day	Evening	Night	Daily
Site Data							72.0%		13.5%	94.74%
Barr Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0			ledium Ti Heavy Ti		76.2% 31.8%		14.4% 10.6%	4.06% 1.20%
Centerline Dis		55.0 feet		Noise S	ource El	levations	(in fe	eet)		
Centerline Dist. to Barrier Distance to Observer Height (A	Observer:	55.0 feet 0.0 feet 5.0 feet 0.0 feet			Auto m Truck vy Truck	s: 2.2	97	Grade Adju	ustment:	0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in t	feet)		
R	oad Grade:	0.0%			Auto	s: 47.0	100			
	Left View: Right View:	-90.0 degrees			m Truck vy Truck	10.0				
FHWA Noise Mode	l Calculation:									
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresne		Barrier Atte		m Atten
Autos:	70.20	-4.70		0.30	-1.20		4.67	0.0		0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-18.38 -23.66		0.33 0.32	-1.20 -1.20		4.87 5.38	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier at	tenuation)						
VehicleType I	Leq Peak Hou	r Leq Day	Lec	Evening	Leq	Night		Ldn	CI	VEL
Autos:	64		2.4	61.5		56.4		64.2		64.8
Medium Trucks:	61		9.8	56.7		53.8		61.6		61.9
Heavy Trucks:	60		9.2 5.5	54.9 63.4		51.5 59.1		59.9 67.1		67.5
Centerline Distance										
			7	70 dBA	65	dBA	6	0 dBA	55	dBA
		CNI	dn:	35 38		75 81		162 175		350 377
		CNI	EL.	38		81		1/5		3//

ay, November 4, 2020 Wednesday, November 4, 2020

FH	WA-RD-77-108	HIGHW	AY NOISE F	REDICT	ION MOI	DEL			
Scenario: OY (2024) Road Name: San Timot Road Segment: n/o Alessa	eo Canyon Rd.				Name: /		reno Valle	y Trade	
SITE SPECIFIC II Highway Data	NPUT DATA		Site Co		IOISE N (Hard =		L INPUT	S	
Average Daily Traffic (Adt): Peak Hour Percentage:	15,849 vehicle 10.00%		М	edium Tr	ucks (2 A	Autos: (x/es):	15 15 15		
Peak Hour Volume: Vehicle Speed:	1,585 vehicles 45 mph		Vehicle		cks (3+ A	ixies):	15		
Near/Far Lane Distance:	44 feet		Ve	hicleType			Evening	Night	Daily
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0		٨	ledium T Heavy T	rucks:	72.0% 76.2% 81.8%	14.6% 9.4% 7.7%	13.5% 14.4% 10.6%	4.44%
Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	36.0 feet 36.0 feet 0.0 feet 5.0 feet		Media	Ource E Auto Im Truck vy Truck	s: 2.2	000	et) Grade Adj	iustment	: 0.0
Road Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree		Media	<b>quivalen</b> Auto ım Truck ıvy Truck	s: 28.6	931 624	eet)		
FHWA Noise Model Calculation	IS								
VehicleType REMEL Autos: 68.46 Medium Trucks: 79.45 Heavy Trucks: 84.25	-13.36	Distar	3.46 3.53 3.52	-1.20 -1.20 -1.20		el I -4.55 -4.86 -5.63	0.0	en Ber 000 000 000	0.000 0.000 0.000
Unmitigated Noise Levels (with	out Topo and I	barrier a	ttenuation)						
VehicleType Leq Peak Ho			eq Evening		Night		Ldn		NEL
Medium Trucks: 68	3.4	68.4 66.4 66.3	67.4 63.4	1	62.4 60.5 58.6		70.3 68.2 67.0	2	70.8 68.6 67.4
· —		71.9	69.		65.5		73.5		74.0
Centerline Distance to Noise C	ontour (in feet)			,				,	
	ı	_dn:	70 dBA 62		dBA 133	6	0 dBA 285		dBA 615

	FH\	WA-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION M	DDEL			
		eo Canyon Rd. lk Canyon Rd.						Alt1 M 12975	oreno Valle	ey Trade	
	PECIFIC IN	IPUT DATA			·- 0				L INPUT	S	
	Percentage: our Volume: icle Speed:	19,852 vehicle 10.00% 1,985 vehicle 55 mph 36 feet			Ме	nditions edium Tr eavy Tru Mix	ucks (2	Autos: Axles):	15 15 15		
	e Distalice.	36 1661			Ver	nicleType		Day	Evening	Night	Daily
Barrier Type (0-Wa		<b>0.0 feet</b> 0.0				ledium T Heavy T		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%
	o Observer: o Observer: Above Pad): d Elevation:	55.0 feet 55.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Hea	Auto Auto m Truck vy Truck	s: 0 s: 2 s: 8	0.000 2.297 3.004	Grade Ad	iustment	: 0.0
R	d Elevation: load Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre- 90.0 degre-			Mediu	Auto Auto m Truck vy Truck	s: 52	2.211 2.041 2.058	reet)		
FHWA Noise Mode	REMEL	S Traffic Flow	D:-	tance	Fi-14-	Road	Fres		Barrier Att	0	m Atten
VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	0.01 -13.26 -18.54		-0.39 -0.36 -0.37		-1.20 -1.20 -1.20	ries	-4.67 -4.87 -5.38	0.0	000 000 000	0.000 0.000 0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						
	Leq Peak Hou		_	Leq Ev		Leq	Night		Ldn	C	NEL
Autos: Medium Trucks:	70 67 66	i.2 '.6	68.0 65.6 64.6		67.1 62.5	i	62 59 57	.6	69.9 67.4 65.4	1	70.4 67.8 65.1
Heavy Trucks: Vehicle Noise:	73		71.1		69.0		64		72.7		73.2
Centerline Distance	e to Noise Co	ontour (in feet	)								
		( 100)		70 di		65	dBA		60 dBA		dBA
		C	Ldn: NEL:		83 90		17 19	-	386 415		832 895

Scenario: OY (2) Road Name: Redlai Road Segment: s/o Sa											
Road Segment: s/o Sa	nas Bıv								oreno Valle	ey Trade	
						Job Nu	nber:	12975			
SITE SPECIFI			1.								
Highway Data	C INF	PUT DATA		-	ita Can	NC ditions (F			L INPUT	S	
• .				-	nie com	uiuoiis (i					
Average Daily Traffic (A	,	20,216 vehicles	•					Autos:	15		
Peak Hour Percenta	-	10.00%				dium Truc		,	15		
Peak Hour Volur		2,022 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Spe		55 mph		١	/ehicle N	Лix					
Near/Far Lane Distan	ce:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	tos:	72.0%	14.6%	13.5%	94.24
Barrier Heig	ht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wall, 1-Ber		0.0			H	łeavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Dist. to Barr	ier:	55.0 feet			Inisa Sn	urce Ele	rations	(in fo	of)		
Centerline Dist. to Observ	/er:	55.0 feet		-	10/36 00	Autos:		000	ci)		
Barrier Distance to Observ	/er:	0.0 feet			Modium	n Trucks:		97			
Observer Height (Above Pa	ad):	5.0 feet				y Trucks:		004	Grade Ad	iustment	. 0.0
Pad Elevati	on:	0.0 feet		L	11cav	y Trucks.	0.0	704	0,440,714,	doimon.	. 0.0
Road Elevati	on:	0.0 feet		L	ane Equ	uivalent L	istand	e (in f	eet)		
Road Gra	de:	0.0%				Autos:	52.2	211			
Left Vi	ew:	-90.0 degrees	,		Mediun	n Trucks:	52.0	)41			
Right Vi	ew:	90.0 degrees			Heav	y Trucks:	52.0	058			
FHWA Noise Model Calcula	ations										
VehicleType REME	L	Traffic Flow	Distan	се	Finite	Road	Fresn	el .	Barrier Att	en Bei	m Atter
Autos: 7	1.78	0.09		-0.39	9	-1.20		-4.67	0.0	000	0.00
Medium Trucks: 8	2.40	-13.18		-0.36	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 8	6.40	-18.46		-0.37	7	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise Levels	witho	ut Topo and b	arrier a	tteni	uation)						
VehicleType Leg Peal	k Hour	- 7 - 7	_	eq Ev	rening	Leq N	-		Ldn		NEL
, ,	70.3		B.1		67.1		62.0		69.9		70
Autos:		-	5.7		62.6		59.7		67.5	-	67.
Autos: Medium Trucks:	67.7		4.7		60.4		57.1		65.5		65
Autos: Medium Trucks: Heavy Trucks:	66.4										
Autos: Medium Trucks:			1.2		69.1		64.8		72.8	3	73
Autos: Medium Trucks: Heavy Trucks:	73.2	2 7	1.2			05.0					
Autos:  Medium Trucks:  Heavy Trucks:  Vehicle Noise:	73.2	2 7 ntour (in feet)		70 d	IBA .	65 di	3A		0 dBA	55	73.
Autos:  Medium Trucks:  Heavy Trucks:  Vehicle Noise:	73.2	2 7 ntour (in feet)	dn:	70 d		65 di				55	

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MODE	EL		
	o: OY (2024) e: Redlands E t: n/o Ironwoo					Name: Alt lumber: 12	1 Moreno Val 975	ley Trad	B
	SPECIFIC IN	IPUT DATA					DEL INPUT	rs	
Highway Data				Site Cor	nditions	(Hard = 10	), Soft = 15)		
Average Daily 1	Fraffic (Adt):	21,242 vehicle	S			Au	tos: 15		
Peak Hour F	Percentage:	10.00%		Me	edium Tn	ucks (2 Axl	es): 15		
Peak Ho	our Volume:	2,124 vehicles		He	eavy Truc	cks (3+ Axl	es): 15		
Veh	nicle Speed:	50 mph		Vehicle	Mix				
Near/Far Lan	ne Distance:	58 feet			nicleType	Da	ay Evening	Night	Dailv
Site Data				-			2.0% 14.6%		. ,
Pan	rier Height:	0.0 feet		N	ledium Ti	rucks: 76	6.2% 9.4%	14.49	6 4.44%
Barrier Type (0-Wa		0.0			Heavy Ti	rucks: 81	.8% 7.7%	10.69	% 1.32%
Centerline Dis	. ,	55.0 feet		Maiaa O		evations (	· · · · · · · · · ·		
Centerline Dist. t	o Observer:	55.0 feet		Noise S					
Barrier Distance t	o Observer:	0.0 feet			Auto	0.00			
Observer Height (A	Above Pad):	5.0 feet			ım Truck			di 4	-4. 0.0
Pa	d Elevation:	0.0 feet		Hea	vy Truck	s: 8.004	4 Grade Al	ıjustiriei	и. О.О
Roa	d Elevation:	0.0 feet		Lane Ed	quivalent	Distance	(in feet)		
F	Road Grade:	0.0%			Auto	s: 47.00	0		
	Left View:	-90.0 degree	s	Mediu	ım Truck	s: 46.81	1		
	Right View:	90.0 degree	S	Hea	vy Truck	s: 46.83	0		
FHWA Noise Mode	l Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier A	ten Be	erm Atten
Autos:	70.20	0.72		0.30	-1.20	-4.	.67 0	.000	0.000
Medium Trucks:	81.00	-12.55		0.33	-1.20	-4.	.87 0	.000	0.000
Heavy Trucks:	85.38	-17.83		0.32	-1.20	-5.	.38 0	.000	0.000
Unmitigated Noise			arrier a	ttenuation)					
.,	Leq Peak Hou			q Evening		Night	Ldn		CNEL
Autos:			7.8	66.9		61.8	69		70.2
Medium Trucks:	67		5.6	62.5		59.6	67		67.8
Heavy Trucks:	66		5.0	60.7		57.4	65		66.1
Vehicle Noise:	73		1.1	69.0	)	64.7	72	.7	73.1
Centerline Distanc	e to Noise Co	ontour (in feet)		70 dBA	65	dBA	60 dBA	-	5 dBA
		,	dn:	70 dBA 83	03	179	80 dBA		829
			an: EL:	89		179	38		829 891
		CN	LL.	89		192	41	+	091

	FHW	A-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION MC	DDEL			
Road Nam	o: OY (2024) e: Redlands Bl nt: s/o Ironwood						Name: lumber:		oreno Vall	ey Trad	е
SITE S	SPECIFIC IN	PUT DATA			ita Car				L INPUT oft = 15)	s	
Average Daily Peak Hour Peak H	Percentage:	17,625 vehicle 10.00% 1,763 vehicle 50 mph			Ме	edium Tr eavy Tru	ucks (2	Autos Axles)	15		
Near/Far Lar	ne Distance:	58 feet		Ε,		icleType		Day	Evening	Night	Daily
Site Data  Bar Barrier Type (0-W)	rier Height:	0.0 feet 0.0			М		Autos: rucks:	72.0% 76.2% 81.8%	6 14.6% 6 9.4%	13.5°	% 94.24% % 4.44%
Centerline Dist. Centerline Dist. Barrier Distance Observer Height (	st. to Barrier: to Observer: to Observer: Above Pad):	55.0 feet 55.0 feet 0.0 feet 5.0 feet		1	Mediu	ource E Auto m Truck	s: 0	ns (in t .000 .297 .004	eet) Grade Ad	ljustme	nt: 0.0
Roa	nd Elevation: ad Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	Mediu	Auto Marto Ma Marto Mart	s: 47	.000 .811 .830	feet)		
FHWA Noise Mode	el Calculations										
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	7raffic Flow -0.09 -13.36 -18.64		0.30 0.33 0.33	)	-1.20 -1.20 -1.20	Fres	nel -4.67 -4.87 -5.38	0.	ten B 000 000 000	0.000 0.000 0.000
Unmitigated Noise	I avale (with	ut Tono and	harri	or atton	uation)						
	Leg Peak Hou			Leg Ev		Leg	Night		Ldn		CNEL
Autos: Medium Trucks:	69. 66.	2	67.0 64.8	- 4	66.1 61.7		61. 58.	.8	68 66	6	69.4 66.9
Heavy Trucks:_ Vehicle Noise:	65. 72.		70.3		59.9 68.1		56. 63.	-	65. 71.		65.3 72.3
Centerline Distance	e to Noise Co	ntour (in feet	)				10.4				
			Ldn:	70 a	<i>IBA</i> 73	65	dBA 15		60 dBA 34i		5 dBA 732
			NEL:		79		170	-	36	-	787

Scenario	o: OY (2024)					Projec	t Name	Δlt1 M	oreno Valle	v Trade	
	e: Redlands E	Rivd					lumber:		Jieno vane	y made	
Road Segmen			amps			0001	varriber.	12010			
SITE S	SPECIFIC IN	IPUT DATA					NOISE	MODE	L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily 1	raffic (Adt):	18,155 vehic	les					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	edium Ti	ucks (2	Axles):	15		
Peak Ho	our Volume:	1,816 vehicle	es		He	eavy Tru	cks (3+	Axles):	15		
Veh	icle Speed:	50 mph		V	ehicle	Miv					
Near/Far Lan	e Distance:	58 feet		F		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	-	13.5%	
Pan	rier Heiaht:	0.0 feet			M	ledium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis	. ,	55.0 feet		-							
Centerline Dist. t	o Observer:	55.0 feet		N	ioise S	ource E		_ •	et)		
Barrier Distance to	o Observer:	0.0 feet				Auto		0.000			
Observer Height (A	Above Pad):	5.0 feet				m Truck		2.297	Grade Ad	ivetment	. 0 0
Pa	d Elevation:	0.0 feet			неа	vy Truck	is: E	3.004	Grade Ad	justrnent	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in	feet)		
R	Road Grade:	0.0%				Auto	s: 47	7.000			
	Left View:	-90.0 degre	ees		Mediu	m Truck	s: 46	3.811			
	Right View:	90.0 degre	ees		Hea	vy Truck	rs: 46	3.830			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	0.04		0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-18.51		0.32	!	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise			l barrie	er attenu	ıation)						
	Leq Peak Hοι		,	Leq Ev			Night		Ldn		NEL
Autos:	69		67.1		66.2		61		69.0		69.
Medium Trucks:		6.9	64.9		61.8		58		66.7		67.
Heavy Trucks:	66		64.3		60.1		56		65.		65.4
	72	2.4	70.4		68.3	}	64	.0	72.0	)	72.
Vehicle Noise:			41								
Vehicle Noise: Centerline Distance	e to Noise Co	ontour (in fee	u I	70 '	D.4		-/ 0.4		0 40 4		-/0.4
	e to Noise Co	ontour (in fee	Ldn:	70 d	BA 75	65	dBA 16		60 dBA 347		dBA 747

	FHW	A-RD-77-108 H	IIGHWA	Y NOISE F	REDICT	TON MO	JDEL			
	io: OY (2024) ne: Redlands Blv	ad.					Alt1 M	oreno Valle	y Trade	
	nt: n/o Eucalyptu				JOD IN	iuiriber.	12975			
	SPECIFIC INP	UT DATA						L INPUT	S	
Highway Data				Site Co.	nditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	6,324 vehicles					Autos:	15		
Peak Hour	Percentage: 1	0.00%		M	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume: 1	,632 vehicles		H	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	58 feet			hicleType	•	Day	Evening	Night	Daily
Site Data						Autos:	72.0%	14.6%	13.5%	94.249
Bai	rrier Height:	0.0 feet		٨	1edium T	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W	•	0.0			Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	st. to Barrier:	55.0 feet		Noise S	ource E	levatio	ns (in f	oet)		
Centerline Dist.	to Observer:	55.0 feet		710,000	Auto		0.000	,,,,		
Barrier Distance	to Observer:	0.0 feet		Medii	ım Truck		2.297			
Observer Height (	(Above Pad):	5.0 feet			vy Truck		3.004	Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet		7700	vy much	J. C	7.004	0,000,10,	dolimom	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Ed	quivalen	t Distar	nce (in	feet)		
ı	Road Grade:	0.0%			Auto	s: 47	7.000			
	Left View:	-90.0 degrees		Mediu	ım Truck	s: 46	3.811			
	Right View:	90.0 degrees		Hea	vy Truck	s: 46	3.830			
FHWA Noise Mode	el Calculations			- 1						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	70.20	-0.42		0.30	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-13.69		0.33	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-18.97		0.32	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	e Levels (withou	ıt Topo and b	arrier at	tenuation)						
	Leq Peak Hour	Leq Day		q Evening		Night		Ldn		NEL
Autos:	68.9	-	5.7	65.7		60		68.5		69.
Medium Trucks:	66.4	-	1.5	61.4		58		66.2	-	66.
Heavy Trucks:	65.5	-	3.9	59.6		56		64.6		65.
Vehicle Noise:	72.0	-	9.9	67.8	5	63	.σ	71.5	)	72.
Centerline Distanc	ce to Noise Con	tour (in feet)		70 dBA	65	dBA	1	60 dBA	55	dBA
		1.	dn:	70 UBA 70		UDA 15		323		696 696
		CNI		70		16	-	347		748
		CIVI		75		10		547		140

Wednesday, November 4, 2020

	FHW	VA-RD-77-108 H	IIGHWA	Y NOISE P	REDICT	ON MODE	L	
	o: OY (2024) e: Redlands Bl nt: s/o Eucalypt					Name: Alt1 umber: 129	Moreno Valle 75	y Trade
	SPECIFIC IN	PUT DATA			N	OISE MO	DEL INPUTS	3
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage:	15,044 vehicles 10.00% 1,504 vehicles 50 mph	•		avy Truc	Aut ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lan	ne Distance:	58 feet			icleType	Da	y Evening	Night Daily
Site Data  Barrier Type (0-Wa	rier Height:	0.0 feet		м		Autos: 72. rucks: 76.	0% 14.6% 2% 9.4% 8% 7.7%	13.5% 94.24% 14.4% 4.44% 10.6% 1.32%
Centerline Dis	. ,	55.0 feet						
Roa F	to Observer: Above Pad): ad Elevation: ad Elevation: Road Grade: Left View: Right View:	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees Traffic Flow	Distano	Mediu Hear Lane Eq Mediu Hear	Auto m Truck vy Truck	s: 2.297 s: 8.004 Distance ( s: 47.000 s: 46.811	Grade Adji in feet)  Barrier Atte	
Medium Trucks:	81.00	-14.05		0.33	-1.20	-4.	87 0.0	0.000
Heavy Trucks:	85.38	-19.33		0.32	-1.20	-5.	38 0.0	0.000
Unmitigated Noise					10-	Minht	l de	CNE
VehicleType Autos:	Leq Peak Hou		6.3	Evening 65.4		Night 60.3	Ldn 68.2	CNEL 68.7
Medium Trucks:	66.	-	o.o 4.1	61.0		58.1	65.9	
Heavy Trucks:	65.		3.5	59.2		55.9	64.3	
Vehicle Noise:	71.		9.6	67.5		63.2	71.2	
Centerline Distance	e to Noise Co	ntour (in feet)						
				70 dBA	65	dBA	60 dBA	55 dBA
		_	dn:	66		142	306	659
		CN	EL:	71		153	329	708

	FH\	WA-RD-77-108	HIGH	A YAWH	IOISE P	REDICT	ION MC	DEL			
	o: OY (2024) e: Redlands E t: s/o Dwy. 7	Blvd.					t Name: lumber:		loreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	iditions	(Hard =	: 10, S	oft = 15)		
Average Daily 1		15,044 vehicle	es					Autos:			
Peak Hour I		10.00%					ucks (2				
	our Volume:	1,504 vehicle	S		He	eavy Tru	cks (3+	Axles).	15		
	nicle Speed:	50 mph		1	Vehicle .	Mix					
Near/Far Lar	ne Distance:	58 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	4 14.6%	13.5%	94.24%
Ban	rier Heiaht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0				Heavy 1	rucks:	81.8%	6 7.7%	10.6%	1.32%
Centerline Dis		55.0 feet		1	Voise S	ource E	levation	s (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	s: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (	Above Pad): d Elevation:	5.0 feet 0.0 feet			Hear	vy Truck	rs: 8	.004	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet		- 1	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		.000	,		
	Left View:	-90.0 degree	26		Mediu	m Truck		.811			
	Right View:	90.0 degree			Hea	vy Truck	s: 46	.830			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-0.78		0.3	D	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-14.05		0.3	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-19.33		0.3	2	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise			_								
	Leq Peak Hοι			Leq E	/ening		Night		Ldn	_	NEL
Autos:	68		66.3		65.4		60.	-	68.2	-	68.7
Medium Trucks:	66		64.1		61.0		58.		65.9		66.3
Heavy Trucks:			63.5		59.2		55.	-	64.3		64.6
Vehicle Noise:	71		69.6		67.5		63.	2	71.2	2	71.6
Centerline Distanc	e to Noise Co	ontour (in feet	)	70 0	HRΔ	65	dBA	_	60 dBA	55	i dBA
			Ldn:	701	66	00	142		306		659
			NEL:		71		153	-	329		708
		C			, ,		100	,	328		100

	FH\	WA-RD-77-1	08 HIG	HWAY I	NOISE P	REDICT	TION MO	DDEL			
	: OY (2024) : Redlands E : s/o Dwy. 7	Blvd.					t Name: Number:		loreno Valle	ey Trade	
	PECIFIC IN	IPUT DAT	A.		0				L INPUT	S	
Veh	Percentage: ur Volume: icle Speed:	15,044 veh 10.00% 1,504 vehic 50 mph				edium Ti eavy Tru	rucks (2 icks (3+	Autos: Axles):	15		
Near/Far Lan	e Distance:	58 feet			Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data  Barr  Barrier Type (0-Wa  Centerline Dist		0.0 feet 0.0 55.0 feet				edium 1	Autos: Trucks: Trucks:	72.0% 76.2% 81.8%	6 9.4%	13.5% 14.4% 10.6%	4.449
Centerline Dist. to Barrier Distance to Observer Height (A Pac	Observer: Observer:	55.0 feet 0.0 feet 5.0 feet 0.0 feet				Auto m Truci vy Truci	os: () ks: 2 ks: 8	0.000 2.297 3.004	Grade Ad	ljustment	: 0.0
	oad Grade: Left View: Right View:	0.0% -90.0 deg 90.0 deg				Auto m Truck vy Truck	ks: 46	7.000 3.811 3.830			
FHWA Noise Model					1		_	. 1			
VehicleType Autos:	REMEL 70.20	Traffic Flov		istance 0.3		Road -1.20	Fres	-4.67	Barrier Att	en Bei	m Atten
Medium Trucks: Heavy Trucks:	81.00 85.38	-14.0	05	0.3 0.3	33	-1.20 -1.20 -1.20		-4.87 -5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo ar	nd barr	ier atter	nuation)						
VehicleType L	.eq Peak Hou	ır Leq D	ay ay	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos: Medium Trucks: Heavy Trucks:	68 66		66.3 64.1 63.5		65.4 61.0 59.2		60 58 55	.1	68.2 65.9 64.3	9	68. 66. 64.
Vehicle Noise:	71		69.6		67.5		63		71.2		71.
Centerline Distance	to Noise Co	ontour (in fe	et)								
			- 7	70	dBA	65	dBA		60 dBA	55	dBA
			Ldn:		66		14	2	306	3	659
			CNEL:		71		15	3	329	)	708

		VA-RD-77-108			- O- O- I						
	io: OY (2024)								oreno Valle	ey Trade	
	ne: Redlands B					Job Nu	mber: 1	2975			
Road Segme	nt: s/o Encelia	AV.									
SITE Highway Data	SPECIFIC IN	PUT DATA			Sito Con	NC ditions (F			L INPUT	S	
	- m / m			-	nie Con	uiuons (i					
Average Daily	. ,	12,891 vehicle	S					lutos:	15		
	Percentage:	10.00%				dium Truc		,	15		
	lour Volume:	1,289 vehicles			He	avy Truck	'S (3+ A	xles):	15		
	hicle Speed:	50 mph		١	/ehicle l	Иiх					
Near/Far La	ne Distance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	72.0%	14.6%	13.5%	94.24
Ra	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-W		0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Di	st. to Barrier:	55.0 feet			loise Sc	urce Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		- F	.0.00 00	Autos:		•	0.0		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks:		97			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		104	Grade Ad	iustment	. 0 0
P	ad Elevation:	0.0 feet			11001	y mucho.	0.0	10-1	0,440,714,	dottriont	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	47.0	000			
	Left View:	-90.0 degree	s		Mediui	m Trucks:	46.8	311			
	Right View:	90.0 degree	s		Heav	y Trucks:	46.8	330			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresn	_	Barrier Att		m Atter
Autos:		-1.45		0.30		-1.20		-4.67		000	0.00
Medium Trucks:		-14.72		0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-20.00		0.32	2	-1.20		-5.38	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou		_	Leq Ev	_	Leq N	•		Ldn		NEL
Autos:			5.6		64.7		59.6		67.5	-	68
Medium Trucks:			3.4		60.4		57.4		65.2	-	65
Heavy Trucks:			32.8		58.6		55.2		63.6		64
Vehicle Noise:			88.9		66.8		62.5		70.5	Ď.	71
Centerline Distan	ce to Noise Co	ntour (in feet)		70 d	IRΔ	65 dl	24	6	0 dBA	55	dBA
		,	.dn:	,,,,	59	00 01	128		276		59
			IEL:		64		138		276		63
		Ch			04		130		291		03

Wednesday, November 4, 2020

	FHW	/A-RD-77-108 I	HIGHWAY	' NOISE PI	REDICTI	ON MOD	EL		
Road Nam	io: OY (2024) e: Redlands Bl nt: n/o Alessan					Name: Al umber: 12	It1 Moreno V 2975	/alley ⅂	Frade
	SPECIFIC IN	PUT DATA					ODEL INP		
	Percentage:	11,794 vehicles 10.00% 1.179 vehicles	3	Ме	dium Tru	•	,	)	
	hicle Speed:	50 mph 58 feet		Vehicle		,	ay Evenii	ng N	ight Daily
Site Data  Bai Barrier Type (0-W	rier Height: 'all, 1-Berm):	0.0 feet 0.0			edium Ti Heavy Ti	ucks: 7	2.0% 14.6 6.2% 9.4 1.8% 7.7	1% 1	3.5% 94.24% 4.4% 4.44% 0.6% 1.32%
	to Observer: to Observer: Above Pad): ad Elevation:	55.0 feet 55.0 feet 0.0 feet 5.0 feet 0.0 feet		Mediu Heav	Autos m Trucks vy Trucks	s: 2.29 s: 8.00	00 97 04 <i>Grade</i>	Adjust	ment: 0.0
	ad Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degrees 90.0 degrees		Mediu	Autos Trucks y Trucks	s: 46.8	00		
FHWA Noise Mode	el Calculations			•					
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	-1.84 -15.10 -20.39	Ċ	Finite 1.30 1.33 1.32	-1.20 -1.20 -1.20		1 Barrier 4.67 4.87 5.38	0.000 0.000 0.000	0.000
Unmitigated Noise	l evels (witho	ut Tono and h	arrier att	enuation)					
VehicleType	Leq Peak Hour	r Leq Day	Leq	Evening	,	Night	Ldn		CNEL
Autos: Medium Trucks: Heavy Trucks:	67. 65. 64.	0 6	5.2 3.1 2.5	64.3 60.0 58.2		59.2 57.1 54.8		67.1 64.8 63.2	67.7 65.2 63.6
Vehicle Noise:	70. ce to Noise Co		8.5	66.4		62.2		70.1	70.6
Conto mile Distant		, ,		0 dBA	65	dBA	60 dBA		55 dBA
		CN	dn: EL:	56 60		121 130		260 280	560 602

ay, November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DEL						
	o: OY (2024) e: Redlands E nt: s/o Alessar						t Name: lumber:		oreno Valle	ey Trade				
SITE S	SPECIFIC IN	NPUT DATA			ita Car	i nditions			L INPUT	S				
Average Daily Peak Hour Peak H	Percentage: our Volume:	10,196 vehicle 10.00% 1,020 vehicle			Ме	edium Tr eavy Tru	ucks (2	Autos: Axles):	15 15					
Vei Near/Far Lar	hicle Speed:	50 mph 58 feet		ν	'ehicle									
	ie Distance.	JO IEEL			Vel	nicleType		Day	Evening	Night	Daily			
Site Data  Barrier Type (0-Wi	rier Height:	0.0 feet 0.0				Iedium T Heavy T		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%			
Centerline Dis		55.0 feet			·-: 0			C £	41					
Centerline Dist. t Barrier Distance t	Centerline Dist. to Observer: 55.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet						Noise Source Elevations (in feet)  Autos: 0.000  Medium Trucks: 2.297  Heavy Trucks: 8.004 Grade Adjustment: 0.0							
Pa	d Elevation:	0.0 feet			пеа	vy IIuck	.s. o	.004	Grade Au	justinen	. 0.0			
	nd Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree		L	Lane Equivalent Distance (in feet) Autos: 47.000 Medium Trucks: 46.811 Heavy Trucks: 46.830									
FHWA Noise Mode	l Calculation	s												
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten			
Autos:	70.20			0.30		-1.20		-4.67		000	0.000			
Medium Trucks: Heavy Trucks:	81.00 85.38			0.33 0.32		-1.20 -1.20		-4.87 -5.38		000 000	0.000			
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	ıation)									
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL			
Autos:	66	5.8	64.6		63.7	7	58.	6	66.	5	67.1			
Medium Trucks:	64	1.4	62.4		59.3	3	56.	4	64.	2	64.6			
Heavy Trucks:_ Vehicle Noise:			61.8		57.5 65.8		54. 61.		62.	-	62.9 70.0			
								-	30.	-				
Centerline Distance	e to Noise Co	ontour (in feet	)	70 d	BA	65	dBA	1 6	60 dBA	55	dBA			
			Ldn:		51	1	110		236		508			
		C	NEL:		55		118	3	254	ı	547			

	FHWA	-RD-77-108	HIGHW	AY NOISE F	REDICT	TION MC	DEL			
	OY (2024) John F Kenne s/o Cactus Av					t Name: Number:		oreno Valle	y Trade	
SITE SE Highway Data	ECIFIC INP	UT DATA		04- 0-	I nditions			L INPUT	s	
Average Daily Tr Peak Hour Pe Peak Hou	ercentage: 10 or Volume: ole Speed:	7,080 vehicle 0.00% 708 vehicles 45 mph 36 feet		M H Vehicle	edium Ti eavy Tru <b>Mix</b>	rucks (2 icks (3+	Autos: Axles): Axles):	15 15 15	Allented	0-#-
Site Data				vei	hicleType	Autos:	72.0%	Evening 14.6%	Night 13.5%	Daily 94.24%
	er Height: !, 1-Berm):	0.0 feet 0.0			Medium T Heavy T	rucks:	76.2% 81.8%	9.4%	14.4% 10.6%	4.44%
	Observer: Observer:		Media Hea	Auto Auto um Truck avy Truck quivalen	os: 0 ks: 2 ks: 8	.000 .297 .004	Grade Ad	iustment	: 0.0	
Ro	ad Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree		Media	Auto um Truck vy Truck	s: 40	.460 .241 .262			
FHWA Noise Model		raffic Flow	Dista		e Road	Fres	/	Barrier Att	0	m Atten
VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	-3.59 -16.86 -22.14	Distai	1.28 1.31 1.31	-1.20 -1.20 -1.20		-4.61 -4.87 -5.50	0.0	000 000 000	0.000 0.000 0.000
Unmitigated Noise L	evels (withou	t Topo and I	barrier	attenuation)						
VehicleType Le	eq Peak Hour	Leq Day	L	eq Evening	Leq	Night		Ldn	C	NEL
Autos: Medium Trucks: Heavy Trucks:	64.9 62.7 62.2		62.7 60.7 60.6	61.6 57.6 56.3	3	56. 54. 52.	7	64.6 62.5	5	65.2 62.9 61.7
Vehicle Noise:	68.2		66.2	64.0		59.	-	67.8		68.3
Centerline Distance	to Noise Con	tour (in feet)								
		ı	Ldn:	70 dBA 31		dBA 67		60 dBA 145		dBA 313
		CN	IEL:	34	73	3	156		337	

Scenario	OY (2024)					Project N	ame:	Alt1 Ma	oreno Valle	ev Trade	
Road Name:		ach Dr.				Job Nur			7 0110 Y UIII	oy mado	
Road Segment:	n/o SR-60 V	Vestbound Rar	nps								
	PECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Cond	ditions (F	lard =	10, So	ft = 15)		
Average Daily Tr	affic (Adt):	18,159 vehicle	s				,	Autos:	15		
Peak Hour P	ercentage:	10.00%			Med	dium Truc	ks (2 A	(xles	15		
Peak Hot	ur Volume:	1,816 vehicles			Hea	avy Truck	s (3+ A	(xles	15		
Vehi	cle Speed:	40 mph		V	ehicle N	Nix					
Near/Far Lane	Distance:	48 feet		Ť		cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	72.0%	14.6%	13.5%	94.24
Barri	er Heiaht:	0.0 feet			Ме	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-Wai		0.0			H	leavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Dist.	to Barrier:	50.0 feet		N	oise So	urce Elev	ations	s (in fe	et)		
Centerline Dist. to	Observer:	50.0 feet		F		Autos:		000			
Barrier Distance to	Observer:	0.0 feet			Mediun	n Trucks:		97			
Observer Height (A	bove Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustment	. 0.0
Pad	Elevation:	0.0 feet		L		,				,	
Road	Elevation:	0.0 feet		L	ane Equ	ıivalent D	istand	e (in t	eet)		
Ro	oad Grade:	0.0%				Autos:	44.	147			
	Left View:	-90.0 degree	s		Mediun	n Trucks:	43.9	947			
F	Right View:	90.0 degree	S		Heav	y Trucks:	43.9	966			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresn	_	Barrier Att		m Atter
Autos:	66.51	1.01		0.71		-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-12.26		0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-17.54		0.73		-1.20		-5.43	0.0	000	0.00
Inmitigated Noise I											
• • • • • • • • • • • • • • • • • • • •	eq Peak Hou			eq Eve	ening	Leq N	_		Ldn		NEL
	67		34.8		63.9		58.8		66.7		67
Autos:			3.0		59.9		57.0		64.8	-	65
Medium Trucks:	65				59.1		55.7		64.1	1	64
Medium Trucks: Heavy Trucks:	65	.0 (	3.3								_
Medium Trucks: Heavy Trucks: Vehicle Noise:	65 70	.0 6	83.3 88.6		66.3		62.1		70.	1	70
Medium Trucks: Heavy Trucks:	65 70	.0 6		70 dl	66.3	65 45	62.1		70.		
Medium Trucks: Heavy Trucks: Vehicle Noise:	65 70	.0 (entour (in feet)		70 dl	66.3	65 dE	62.1			55	70 dBA 50

Wednesday, November 4, 2020

	FHW	/A-RD-77-108	HIGHWA'	Y NOISE P	REDICT	ION MODEL		
	OY (2024) Moreno Bea s/o SR-60 E		nps			t Name: Alt1 I lumber: 1297	Moreno Valley 5	Trade
SITE S	PECIFIC IN	PUT DATA				NOISE MOD	EL INPUTS	
Highway Data				Site Cor	nditions	(Hard = 10, 5	Soft = 15)	
	ercentage:	32,941 vehicle 10.00% 3,294 vehicles		He	eavy Tru	Autos rucks (2 Axles cks (3+ Axles	): 15	
Near/Far Lane		50 mph 82 feet		Vehicle				
Neal/Fal Lalle	Distance.	82 1661		Veh	nicleType	e Day	Evening I	Night Daily
Site Data						Autos: 72.0		13.5% 94.24%
Barri	ier Height:	0.0 feet			ledium 1			14.4% 4.44%
Barrier Type (0-Wa	II, 1-Berm):	0.0			Heavy 1	rucks: 81.8	% 7.7%	10.6% 1.32%
Centerline Dist.	to Barrier:	67.0 feet		Noise S	ource F	levations (in	feet)	
Centerline Dist. to	Observer:	67.0 feet		110,000	Auto		7000	
Barrier Distance to	Observer:	0.0 feet		Modiu	ım Truck			
Observer Height (A	bove Pad):	5.0 feet			vv Truck		Grade Adju	stment: 0.0
Pad	Elevation:	0.0 feet			,			
Road	Elevation:	0.0 feet		Lane Eq	uivalen	t Distance (ir	ı feet)	
Ro	oad Grade:	0.0%			Auto			
	Left View:	-90.0 degree	s		ım Truck			
F	Right View:	90.0 degree	es	Hea	vy Truck	s: 53.076		
FHWA Noise Model	Calculations			-1				
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	70.20	2.62	-(	0.51	-1.20	-4.7	0.00	0.000
Medium Trucks:	81.00	-10.64	-(	0.49	-1.20	-4.88	3 0.00	0.000
Heavy Trucks:	85.38	-15.93	-(	0.49	-1.20	-5.29	9 0.00	0.000
Unmitigated Noise	Levels (witho	out Topo and	barrier att	tenuation)				
	eq Peak Houi			Evening		Night	Ldn	CNEL
Autos:	71.		68.9	68.0		62.9	70.8	71.3
Medium Trucks:	68.		66.7	63.6		60.7	68.5	68.8
Heavy Trucks:	67.		66.1	61.8		58.5	66.9	67.2
Vehicle Noise:	74.	2	72.2	70.0	)	65.8	73.8	74.2
Centerline Distance	to Noise Co.	ntour (in feet)		O dBA		dBA	60 dBA	55 dBA
			Ldn:	119	00	257	554	33 <i>abA</i>
			Lan: VFL:	119		25 <i>1</i> 277	596	1,195
		Ci	vLL.	128		211	596	1,284

ay, November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	1 YAW	NOISE P	REDICTI	ON MO	DDEL			
Road Na	nrio: OY (2024) me: Moreno Be ent: s/o Alessar							Alt1 M 12975	oreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA			04- 0	N			L INPUT	S	
Highway Data					Site Cor	iaitions	Hara -				
	y Traffic (Adt):	25,697 vehicle	es					Autos:			
	r Percentage:	10.00%				edium Tru		,			
	Hour Volume:	2,570 vehicles	S		He	eavy Truc	ks (3+	Axles):	15		
V	ehicle Speed:	50 mph		ŀ	Vehicle	Mix					
Near/Far L	ane Distance:	82 feet		ŀ	Veh	icleType		Dav	Evening	Niaht	Dailv
Site Data							utos:	72.0%	-	13.5%	94.24%
D	arrier Height:	0.0 feet			М	ledium Tr	ucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-1		0.0				Heavy Ti	ucks:	81.8%	7.7%	10.6%	1.32%
Centerline D	Dist. to Barrier:	67.0 feet		-	Maiaa C	ource El	ovetio	na (in f	n o é l		
Centerline Dist	t. to Observer:	67.0 feet		-	Noise 3	Auto:		.000	eei)		
Barrier Distance	e to Observer:	0.0 feet			A 4 Ci -	m Trucks		.297			
Observer Height	(Above Pad):	5.0 feet						.297	Crada Ad	iuotmon	t. 0.0
ŀ	Pad Elevation:	0.0 feet			неа	vy Trucks	5.	.004	Grade Ad	usunen	1. 0.0
Ro	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Autos	5: 53	3.226			
	Left View:	-90.0 degree	es		Mediu	m Trucks	3: 53	.059			
	Right View:	90.0 degree	es		Hea	vy Trucks	5: 53	3.076			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos	70.20	1.55		-0.5	i1	-1.20		-4.71	0.0	000	0.000
Medium Trucks	: 81.00	-11.72		-0.4	.9	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	85.38	-17.00		-0.4	9	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois	se Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos			67.8		66.9		61	-	69.7		70.3
Medium Trucks	: 67	.6	65.6		62.5	,	59	.6	67.4	1	67.8
Heavy Trucks	:66	i.7	65.0		60.7		57	.4	65.8	3	66.1
Vehicle Noise	: 73	.1	71.1		69.0	)	64	.7	72.7	7	73.2
Centerline Distar	nce to Noise Co	ontour (in feet,	)								
			L	70	dBA	65 (	iBA	_	60 dBA		dBA
	Ldn:				101 218 470			1,012			
		CI	VEL:		109 234 505				1,088		

		A-RD-77-108	J OI								
Scenario: OY (2)									oreno Valle	ey Trade	
Road Name: Moren						Job I	lumber	: 12975			
Road Segment: s/o Ca	ictus A	.V.									
SITE SPECIFI	C INF	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (A	dt): 2	22,022 vehicle	es					Autos:			
Peak Hour Percenta	-	10.00%						Axles):			
Peak Hour Volun		2,202 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Vehicle Spe		50 mph		1	Vehicle I	Mix					
Near/Far Lane Distan	ce:	82 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Barrier Heig	ht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1-Ber	m):	0.0			1	Heavy 1	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barr		67.0 feet		1	Voise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to Observ		67.0 feet				Auto	s: (	0.000			
Barrier Distance to Observ	rer:	0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (Above Pa	,	5.0 feet			Heav	y Truck	(S: 8	3.004	Grade Ad	iustment	: 0.0
Pad Elevati		0.0 feet				•					
Road Elevati		0.0 feet		1	Lane Eq				reet)		
Road Gra		0.0%				Auto		3.226			
Left Vie		-90.0 degre				m Truck	-	3.059			
Right Vie	ew:	90.0 degre	es		Heav	y Truck	(S: 5)	3.076			
FHWA Noise Model Calcula											
VehicleType REME		Traffic Flow	Dis	stance		Road	Fre		Barrier Att		m Atten
	0.20	0.88		-0.5		-1.20		-4.71		000	0.00
	1.00	-12.39		-0.4	-	-1.20		-4.88		000	0.00
	5.38	-17.67		-0.4		-1.20		-5.29	0.0	000	0.00
Unmitigated Noise Levels										_	NFL.
VehicleType Leq Peal Autos:	69.4		67.1	Leq E	ening 66.2		Night 61	1	Ldn 69.0		NEL 69.1
Autos: Medium Trucks:	66.9		64.9		61.9			.1	66.7		67.
Heavy Trucks:	66.0		64.3		60.1			i.7	65.1		65.
Vehicle Noise:	72.4		70.4		68.3		64		72.0		72.
					00.0		0-1		72.0		72.
Centerline Distance to Nois	se con	nour (iii reet	,	70 0	iBA	65	dBA		60 dBA	55	dBA
			Ldn:		91		19	17	424		913

	FHV	VA-RD-77-108 I	IIGHW	MAY N	OISE PI	REDICTIO	M MOI	ÆL.			
	o: OY (2024)								oreno Valle	y Trade	
	e: Moreno Bea					Job Nu	mber: 1	2975			
Road Segmen	t: s/o John F	Kennedy Dr.									
SITE S Highway Data	SPECIFIC IN	PUT DATA			ito Con	NC ditions (F			L INPUT	S	
• •				-	nte con	uitions (i					
Average Daily 1	. ,	26,091 vehicles	3					lutos:	15		
Peak Hour F		10.00%				dium Truc		,	15		
	our Volume:	2,609 vehicles			He	avy Truck	'S (3+ A	xles):	15		
	nicle Speed:	50 mph		ν	ehicle I	Nix					
Near/Far Lan	ne Distance:	82 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	72.0%	14.6%	13.5%	94.24
Ran	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-Wa		0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Dis	t. to Barrier:	67.0 feet			loico Sa	urce Ele	vations	(in fo	nof)		
Centerline Dist. t	o Observer:	67.0 feet			ioise su	Autos:		100	eu		
Barrier Distance t	o Observer:	0.0 feet			Modium	n Trucks:		97			
Observer Height (A	Above Pad):	5.0 feet				v Trucks:		104	Grade Ad	iustmant	. 0 0
Pa	d Elevation:	0.0 feet			ricav	y IIUCKS.	0.0	104	Orace Au	astmont	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent L	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	53.2	226			
	Left View:	-90.0 degrees	3		Mediur	n Trucks:	53.0	)59			
	Right View:	90.0 degrees	5		Heav	y Trucks:	53.0	076			
FHWA Noise Mode	l Calculation:	3									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	70.20	1.61		-0.51		-1.20		4.71	0.0	000	0.00
Medium Trucks:	81.00	-11.66		-0.49	)	-1.20		4.88	0.0	000	0.00
Heavy Trucks:	85.38	-16.94		-0.49	)	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier	attenı	uation)						
	Leq Peak Hou			.eq Ev	ening	Leq N	•		Ldn		NEL
Autos:	70		7.9		67.0		61.9		69.8		70
Medium Trucks:	67	.7 6	5.7		62.6		59.7		67.5	5	67
Heavy Trucks:	66		5.1		60.8		57.4		65.8		66
Vehicle Noise:	73	.2 7	1.2		69.0		64.8		72.8	3	73
Centerline Distanc	e to Noise Co	ntour (in feet)									
			. L	70 d		65 dl		6	i0 dBA		dBA
			dn:		102		220		475		1,02
		CN	EL:		110		237		510		1.09

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MO	DEL			
Scenario Road Name Road Segmen		St.					Name: lumber:		loreno Valle	y Trade	В
SITE S	PECIFIC IN	IPUT DATA							L INPUTS	S	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily 1 Peak Hour F Peak Ho	. ,	29,723 vehicle 10.00% 2,972 vehicle					ucks (2 ) cks (3+ )	,	: 15		
Veh	icle Speed:	50 mph		v	'ehicle l	Miv					
Near/Far Lan	e Distance:	82 feet		F		icleType	•	Dav	Evening	Night	Daily
Site Data							Autos:	72.09	_	13.59	
Barı	ier Heiaht:	0.0 feet			M	edium T	rucks:	76.29	6 9.4%	14.49	6 4.44%
Barrier Type (0-Wa		0.0			I	Heavy T	rucks:	81.89	6 7.7%	10.69	% 1.32%
Centerline Dis	t. to Barrier:	67.0 feet		^	loise So	ource E	levation	s (in t	eet)		
Centerline Dist. to	o Observer:	67.0 feet		Ē		Auto		000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck	-	297			
Observer Height (A	Above Pad):	5.0 feet				v Truck		004	Grade Adj	ustmer	nt: 0.0
	d Elevation:	0.0 feet		L		,					
	d Elevation:	0.0 feet		L	ane Eq		t Distan	_	feet)		
R	load Grade:	0.0%				Auto		226			
	Left View:	-90.0 degre				m Truck		059			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 53.	076			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Distai		Finite		Fresi	-	Barrier Atte		erm Atten
Autos:	70.20	2.18		-0.51		-1.20		-4.71	0.0		0.000
Medium Trucks:	81.00	-11.09		-0.49		-1.20		-4.88	0.0		0.000
Heavy Trucks:	85.38	-16.37		-0.49	1	-1.20		-5.29	0.0	000	0.000
Unmitigated Noise								,			
	Leq Peak Hou			eq Ev		Leq	Night		Ldn		CNEL
Autos:	70		68.5		67.5		62.4	-	70.3		70.9
Medium Trucks:	68	-	66.2		63.2		60.0		68.0		68.4
Heavy Trucks:	67		65.6		61.4		58.0		66.4		66.8
Vehicle Noise:	73		71.7		69.6		65.4	1	73.3	3	73.8
Centerline Distance	e to Noise Co	ontour (in feet	)	70 -	D.4		-/0.4		60 dBA		5 dBA
			Ldn:	70 d	112	05	dBA 240		<i>60 ава</i> 518		5 <i>aBA</i>
		^	Lan: NEL:		120		258		518		1,115
		C	VĽL.		120		∠58		357		1,199

	FHW	A-RD-77-108	HIGI	1 YAWH	NOISE P	REDICT	TION M	ODEL			
Scenario: O' Road Name: Iri Road Segment: e/	s Àv.	St.					t Name: Number:		oreno Valle	ey Trade	•
SITE SPE	CIFIC INF	UT DATA			0:4- 0				L INPUT	s	
Highway Data					Site Cor	naitions	(Hara				
Average Daily Traffi	' '	2,358 vehicle	es					Autos:			
Peak Hour Perce	-	0.00%				edium Ti		,			
Peak Hour V		,236 vehicles	S		He	eavy Tru	icks (3+	Axles):	15		
Vehicle	,	50 mph			Vehicle	Mix					
Near/Far Lane Di	stance:	82 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Barrier I	Heiaht.	0.0 feet			М	ledium 7	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1	-Berm):	0.0				Heavy 7	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to		67.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. to Ob		67.0 feet		T I		Auto	os: C	0.000	,		
Barrier Distance to Ob		0.0 feet			Mediu	m Truck	ks: 2	2.297			
Observer Height (Abov	,	5.0 feet			Hear	vy Truck	ks: 8	3.004	Grade Ad	justmen	t: 0.0
Pad Ele		0.0 feet		-		•					
Road Ele		0.0 feet		_	Lane Eq			_ •	feet)		
	Grade:	0.0%				Auto		3.226			
	ft View:	-90.0 degree				m Truck		3.059			
Righ	nt View:	90.0 degree	es		Hea	vy Truck	ks: 53	3.076			
FHWA Noise Model Ca					1			1			
		Traffic Flow	Di	stance		Road	Fres		Barrier Att		rm Atten
Autos:	70.20	3.72		-0.5		-1.20		-4.71		000	0.000
Medium Trucks:	81.00	-9.55		-0.4	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-14.83		-0.4		-1.20		-5.29	0.0	000	0.000
VehicleType Leg	<b>els (witho</b> i Peak Hour				vening	100	Night		Ldn		NEL
Autos:	72.2		70.0	Ley L	69.1		fvigit 64	0	71.		72.4
Medium Trucks:	69.8		67.8		64.7		61		69.1	-	69.9
Heavy Trucks:	68.9		67.2		62.9		59		68.	-	68.3
Vehicle Noise:	75.3		73.3		71.1		66		74.	-	75.3
Centerline Distance to	Noise Con	tour (in feet)	)								
				70	dBA	65	dBA	(	60 dBA	55	dBA
			Ldn:		141		30	4	656	i	1,413
		CI	VEL:		152		32	7	705	5	1,519

	FH	WA-RD-77-1	08 HIG	HWAY I	NOISE P	REDICT	ION M	ODEL			
Scenari Road Nam Road Segmer								: Alt1 M : 12975	oreno Valle	y Trade	
	SPECIFIC II	NPUT DAT	A.						L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	36,225 veh	icles					Autos:			
	Percentage:	10.00%					,	Axles):			
	our Volume:	3,623 vehic	les		He	avy Tru	icks (3+	- Axles):	15		
	hicle Speed:	50 mph		ı	Vehicle	Mix					
Near/Far La	ne Distance:	82 feet		ı	Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Bai	rier Height:	0.0 feet			М	edium 1	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		67.0 feet			Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.		67.0 feet		Ī		Auto	os: (	0.000			
Barrier Distance		0.0 feet			Mediu	m Truck	ks: 2	2.297			
Observer Height (	Above Pad): ad Elevation:	5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0						
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		-	Lane Eq	uivalon	t Nieta	nce (in	foot)		
	Road Grade:	0.0 reer		ŀ	Lane Lq	Auto		3.226	1001)		
,	Left View:	-90.0 deg	rooc		Mediu	m Truck		3.059			
	Right View:	90.0 deg				y Truck	-	3.076			
FHWA Noise Mode	el Calculation	18									
VehicleType	REMEL	Traffic Flov	v Di	istance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	70.20	3.0	)4	-0.5	1	-1.20		-4.71	0.0	000	0.00
Medium Trucks:	81.00			-0.4	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38			-0.4	-	-1.20		-5.29	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Ho		,		vening		Night		Ldn		NEL
Autos:	-	1.5	69.3		68.4			3.3	71.2	-	71.8
Medium Trucks:		9.1	67.1		64.0		61		68.9		69.
Heavy Trucks:		8.2	66.5		62.2			3.9	67.3		67.0
Vehicle Noise:		4.6	72.6		70.5		66	6.2	74.2	<u> </u>	74.7
Centerline Distanc	e to Noise C	ontour (in fe	et)	70	dBA	65	dBA	-	60 dBA	55	dBA
			Ldn:		127	- 00	27		591	- 00	1.273
			CNEL:		137		29		635		1,368
								-	200		.,200

Scenario: OY (2024	1)					Project N	ame: A	dt1 Mo	reno Valle	y Trade	
Road Name: Eucalypti						Job Nui				•	
Road Segment: e/o Naso	n St.										
SITE SPECIFIC Highway Data	INPUT	T DATA			Cita Can	NC ditions (F			L INPUT	s	
-					Site Con	aitions (r					
Average Daily Traffic (Adt).	,	34 vehicles	S					lutos:	15		
Peak Hour Percentage.						dium Truc		/	15		
Peak Hour Volume.	,	13 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Speed.		10 mph		1	Vehicle N	Лix					
Near/Far Lane Distance.	: 4	l8 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	72.0%	14.6%	13.5%	94.24
Barrier Height.		0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-Wall, 1-Berm)	: (	0.0			F	leavy Tru	cks:	31.8%	7.7%	10.6%	1.32
Centerline Dist. to Barrier	: 50	0.0 feet		-	Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observer	: 50	0.0 feet		ľ		Autos:		•	,		
Barrier Distance to Observer	: (	0.0 feet			Mediur	n Trucks:					
Observer Height (Above Pad)	: 5	5.0 feet				y Trucks:	8.0		Grade Ad	iustment	. 0.0
Pad Elevation	: (	0.0 feet		L	ricav	y Trucks.	0.0	04	07440714	doimon.	. 0.0
Road Elevation	: (	0.0 feet		I	Lane Equ	uivalent E	istanc	e (in f	eet)		
Road Grade	: 0.0	0%				Autos:	44.1	47			
Left View	: -90	0.0 degrees	S		Mediun	n Trucks:	43.9	47			
Right View	90	0.0 degrees	S		Heav	y Trucks:	43.9	166			
FHWA Noise Model Calculation	ons										
VehicleType REMEL	_	ffic Flow	Dist	tance	Finite		Fresn		Barrier Att		m Atter
Autos: 66.5		-1.00		0.7		-1.20		4.65		000	0.0
Medium Trucks: 77.1	_	-14.27		0.7		-1.20		4.87		000	0.0
Heavy Trucks: 82.9		-19.55		0.7		-1.20		5.43	0.0	000	0.0
Unmitigated Noise Levels (wi			arrie								
VehicleType Leq Peak H		Leq Day	0.0	Leq E	vening	Leq N	_		Ldn		NEL
	65.0	-	2.8		61.9		56.8		64.7		65
	63.0	-	1.0		57.9		55.0		62.8 62.1	-	63
	63.0		1.3		57.0		53.7				62
Vehicle Noise:	68.5		6.6		64.3		60.1		68.	I	68
Centerline Distance to Noise	Conto	ur (in feet)	П	70.0	IBA	65 dF	3 <i>A</i>	6	0 dBA	55	dBA
Centerline Distance to Noise	Conto	, ,	dn:	70 0	BA 37	65 dE	3 <i>A</i> 80	6	0 dBA 173		dBA 37

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	HWAY	NOISE PI	REDICTI	ON M	DDEL			
Road Na	nrio: OY (2024) me: Eucalyptus ent: e/o Fir Av.	Av.						Alt1 N	loreno Vall	ey Trade	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
Average Dail Peak Hou Peak	y Traffic (Adt): ir Percentage: Hour Volume: 'ehicle Speed:	17,687 vehicle 10.00% 1,769 vehicle 40 mph			Ме	edium Tru eavy Truc	icks (2	Autos Axles)	15		
Near/Far L	ane Distance:	48 feet		-		icleType		Day	Evening	Night	Dailv
Site Data B. Barrier Type (0-	arrier Height:	0.0 feet 0.0			М			72.09 76.29 81.89	6 14.6% 6 9.4%	13.5%	94.24% 4.44%
Centerline L	Dist. to Barrier:	50.0 feet			Noise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist Barrier Distance Observer Height	e to Observer:	50.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks vy Trucks	: 2	0.000 2.297 3.004	Grade Ad	ljustmen	t: 0.0
R	oad Elevation:	0.0 feet			Lane Eq				feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Autos m Trucks y Trucks	: 43	1.147 3.947 3.966			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	ten Be	rm Atten
Autos	: 66.51	0.89		0.7	71	-1.20		-4.65	0.	000	0.000
Medium Trucks	: 77.72	-12.38		0.7	74	-1.20		-4.87	0.	000	0.000
Heavy Trucks				0.7		-1.20		-5.43	0.	000	0.000
Unmitigated Nois								_			
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos Medium Trucks			64.7		63.8 59.8		58 56		66. 64.	-	67.1 65.1
			63.2		59.8 58.9		55		64.		64.3
Heavy Trucks Vehicle Noise			68.4		66.2		62		70.	-	70.4
Centerline Distar	nce to Noise Co	ontour (in feet	)								
				70	dBA	65 0	BA.		60 dBA	55	dBA
			Ldn:		50		10	7	231	ı	499
		С	NEL:		54		11	5	248	3	535

Vednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGI	HWAY I	NOISE PI	REDICT	ION MO	DEL					
Road Nan	io: OY (2024) ne: Eucalyptus nt: w/o Moreno						Name: lumber:		oreno Valle	ey Trade			
	SPECIFIC IN	IPUT DATA			04- 0				L INPUT	s			
Highway Data					Site Con	aitions	•						
Average Daily		6,371 vehicl	es					Autos:					
	Percentage:	10.00%					ucks (2 )	/					
	lour Volume:	637 vehicle	s		He	avy Tru	cks (3+ )	Axles):	15				
	hicle Speed:	40 mph		ľ	Vehicle	Mix							
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%		
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%		
Barrier Type (0-W		0.0			Heavy Trucks: 81.8% 7.7% 10.6% 1.32								
Centerline Di	. ,	50.0 feet		-	Noise Source Elevations (in feet)								
Centerline Dist.		50.0 feet		-	Noise Source Elevations (in feet)  Autos: 0.000								
Barrier Distance	Barrier Distance to Observer: 0.0 feet												
Observer Height	Above Pad):	5.0 feet				m Truck		297	0		4. 0.0		
P	ad Elevation:	0.0 feet			Heal	y Truck	s: 8.	004	Grade Ad	justmen	0.0		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distan	ce (in	feet)				
	Road Grade:	0.0%				Auto	s: 44.	147					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43.	947					
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.	966					
FHWA Noise Mod	el Calculation	s		'									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresr	_	Barrier Att		rm Atten		
Autos:	66.51			0.7		-1.20		-4.65		000	0.000		
Medium Trucks:				0.7		-1.20		-4.87		000	0.000		
Heavy Trucks:	82.99	-22.09	1	0.7	73	-1.20		-5.43	0.0	000	0.000		
Unmitigated Nois			barri	er attei	nuation)								
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL		
Autos:		2.5	60.3		59.3		54.2	-	62.1		62.7		
Medium Trucks:		).4	58.5		55.4		52.5		60.2	_	60.6		
Heavy Trucks:		).4	58.8		54.5		51.		59.5		59.9		
Vehicle Noise:		3.0	64.0		61.7		57.6	3	65.5	5	66.0		
Centerline Distan	ce to Noise Co	ontour (in fee	t)										
			L	70	dBA	65	dBA	6	60 dBA		dBA		
			Ldn:		25		54		117		252		
	CNEL:				27		58		126		271		

		WA-RD-77-10	o riigi	HWAT N	OISE P	KEDICI	ION M	JUEL			
Road Nam	o: OY (2024) e: Eucalyptus						t Name: lumber:		oreno Valle	y Trade	
Road Segmen	nt: e/o Auto M	all Dr.									
	SPECIFIC IN	NPUT DATA	1						L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	2,943 vehi	cles					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tı	ucks (2	Axles):	15		
Peak H	our Volume:	294 vehic	les		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	e	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Rai	rier Heiaht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W		0.0			1	Heavy 7	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	st. to Barrier:	50.0 feet			Voise S	urco E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	50.0 feet		,	V0/36 30	Auto		0.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height (	Above Pad):	5.0 feet				ry Truck		3.004	Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet			rical	ry Truck	is. C	5.004	07440714	dotimont	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in i	feet)		
I	Road Grade:	0.0%				Auto	s: 44	1.147			
	Left View:	-90.0 degr	ees		Mediu	m Truck	(s: 43	3.947			
	Right View:	90.0 degr	ees		Heav	y Truck	(s: 43	3.966			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	66.51		-	0.71		-1.20		-4.65		000	0.00
Medium Trucks:	77.72		-	0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-25.4	5	0.73	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise								_			
	Leq Peak Hou		,	Leq Ev			Night		Ldn		VEL
Autos:		9.1	56.9		56.0		50		58.8		59.
Medium Trucks:		7.1	55.1		52.0		49		56.9		57.
Heavy Trucks:		7.1	55.4		51.1		47		56.2		56.
Vehicle Noise:	62	2.6	60.7		58.4		54	.2	62.2	2	62.
Centerline Distanc	e to Noise Co	ontour (in fe	et)	=-			10.4				10.4
			[	70 a		65	dBA		60 dBA		dBA
			Ldn:		15		3	-	70		
			Ldn: CNEL:		16		3	-	70 75		151 162

	FH\	VA-RD-77-108	HIG	HWAY I	NOISE PF	REDICT	ION MC	DEL			
Road Nan	rio: OY (2024) ne: Eucalyptus ent: e/o Dwy. 1	Av.					Name: lumber:		oreno Valle	ey Trade	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	S	
	- m				Site Con	uiuoiis	•				
Average Daily		2,822 vehicle	S					Autos:			
	Percentage:	10.00%					ucks (2				
	Hour Volume:	282 vehicles			He	avy Tru	cks (3+ .	Axles):	15		
	ehicle Speed:	40 mph		Ī	Vehicle I	Лiх					
Near/Far La	ane Distance:	48 feet		İ	Vehi	cleТуре		Day	Evening	Night	Daily
Site Data						,	Autos:	72.0%	14.6%	13.5%	94.24
Ва	rrier Height:	0.0 feet			Me	edium T	rucks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-V	Vall, 1-Berm):	0.0			F	leavy T	rucks:	81.8%	7.7%	10.6%	1.32
Centerline Di	ist. to Barrier:	50.0 feet		ŀ	Noise So	roo E	lovetion	a (in f	n o él		
Centerline Dist.	to Observer:	50.0 feet		ŀ	Noise 30				eu)		
Barrier Distance	to Observer:	0.0 feet			A deceller	Auto n Truck		000 297			
Observer Height	(Above Pad):	5.0 feet							Grade Ad	ivotmont	
P	ad Elevation:	0.0 feet			Heav	y Truck	S: 8.	004	Grade Adj	usimeni	0.0
Ro	ad Elevation:	0.0 feet			Lane Equ	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44	.147			
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 43	947			
	Right View:	90.0 degree	s		Heav	y Truck	s: 43	.966			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atter
Autos:	66.51	-7.08		0.7	<b>'</b> 1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-20.35		0.7	74	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-25.63		0.7	73	-1.20		-5.43	0.0	000	0.0
Jnmitigated Nois	e Levels (with	out Topo and I	barr	ier atter	nuation)						
VehicleType	Leg Peak Hou	ır Leq Day		Leg E	vening	Leq	Night		Ldn	C	NEL
Autos:	58	.9 !	6.7		55.8		50.	7	58.6	3	59
Medium Trucks:	56	.9	54.9		51.9		48.	9	56.7	7	57
Heavy Trucks:	56	.9 :	55.2		51.0		47.	6	56.0	)	56
Vehicle Noise:	62	.5	30.5		58.2		54.	0	62.0	)	62
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70	dBA	65	dBA	(	60 dBA	55	dBA
			.dn:		15		32	)	68		14

Wednesday, November 4, 2020

FHI	WA-RD-77-108 HIG	1 YAWHE	NOISE PE	REDICTI	ON MODEL		
Scenario: OY (2024) Road Name: Eucalyptus Road Segment: w/o Dwy. 5	Av.				Name: Alt1 umber: 1297	Moreno Valle	/ Trade
SITE SPECIFIC IN	IPUT DATA					EL INPUTS	i
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	3,834 vehicles 10.00% 383 vehicles				Auto icks (2 Axle: ks (3+ Axle:	s): 15	
Vehicle Speed:	40 mph	l l	Vehicle I	Mix			
Near/Far Lane Distance:	48 feet		Veh	icleType	Dav	Evening	Night Daily
Site Data					lutos: 72.0		13.5% 94.24%
Barrier Height:	0.0 feet		Me	edium Ti	ucks: 76.2	9.4%	14.4% 4.44%
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Ti	rucks: 81.8	3% 7.7%	10.6% 1.32%
Centerline Dist. to Barrier:	50.0 feet		Noise Sc	urce El	evations (in	feet)	
Centerline Dist. to Observer:	50.0 feet			Auto	0.000		
Barrier Distance to Observer:	0.0 feet		Mediu	n Truck:			
Observer Height (Above Pad):	5.0 feet		Heav	y Trucks	8.004	Grade Adiu	stment: 0.0
Pad Elevation:	0.0 feet			•			
Road Elevation:	0.0 feet	<u> </u>	Lane Eq	uivalent	Distance (i	n feet)	
Road Grade:	0.0%			Autos	3: 44.147		
Left View:	-90.0 degrees		Mediui	n Trucks	3: 43.947		
Right View:	90.0 degrees		Heav	y Truck	43.966		
FHWA Noise Model Calculation	s	- 1					
VehicleType REMEL	Traffic Flow D	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos: 66.51	-5.75	0.7	1	-1.20	-4.6	5 0.0	0.000
Medium Trucks: 77.72	-19.02	0.7	4	-1.20	-4.8	7 0.0	0.000
Heavy Trucks: 82.99	-24.30	0.7	3	-1.20	-5.4	3 0.0	0.000
Unmitigated Noise Levels (with	out Topo and bar	rier atter	nuation)				
VehicleType Leq Peak Hou			vening	Leq	Night	Ldn	CNEL
Autos: 60			57.1		52.0	59.9	60.5
	3.2 56.3		53.2		50.3	58.0	58.4
	3.2 56.6		52.3		48.9	57.3	57.7
Vehicle Noise: 63	8.8 61.8	3	59.5		55.4	63.3	63.8
Centerline Distance to Noise Co	ontour (in feet)	70	dBA	65	dBA	60 dBA	55 dBA
	Ldn		18	00 (	39	84	180
	Lan		18		39	84	180

y, November 4, 2020 Wednesday, Novem

FH	WA-RD-77-108	HIGH	WAY N	OISE PI	REDICT	ION MO	DEL			
Scenario: OY (2024) Road Name: Eucalyptus Road Segment: w/o Redlar	Av.					Name: lumber:		oreno Valle	y Trade	
SITE SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data			S	Site Con	ditions	(Hard =	= 10, Sc	ft = 15)		
Average Daily Traffic (Adt):	3,834 vehicle	es					Autos:	15		
Peak Hour Percentage:	10.00%				dium Tr	,		15		
Peak Hour Volume:	383 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Vehicle Speed:	40 mph		ν	/ehicle	Wix					
Near/Far Lane Distance:	48 feet		Ė	Veh	icleType		Day	Evening	Night	Daily
Site Data						Autos:	72.0%	14.6%	13.5%	94.24%
Barrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1-Berm):	0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barrier:	50.0 feet		۸	loise So	ource E	evation	ns (in fe	et)		
Centerline Dist. to Observer:	50.0 feet 0.0 feet				Auto	s: 0	.000	,		
Barrier Distance to Observer:		Mediu	m Truck	s: 2	.297					
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet				•					
Road Elevation:	0.0 feet		L	ane Eq				eet)		
Road Grade:	0.0%				Auto		.147			
Left View:	-90.0 degree				m Truck		.947			
Right View:	90.0 degree	es		Heav	y Truck	s: 43	.966			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	rm Atten
Autos: 66.51	-5.75		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks: 77.72	-19.02		0.74	1	-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 82.99	-24.30		0.73	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise Levels (with		_								
VehicleType Leq Peak Ho		_	Leq Ev		Leq	Night		Ldn		NEL
		58.1		57.1		52.		59.9		60.5
		56.3		53.2		50.	-	58.0		58.4
	3.2	56.6		52.3		48.	-	57.3		57.7
Vehicle Noise: 63	3.8	61.8		59.5		55.	4	63.3	3	63.8
	3.8		70 d							63.8
Vehicle Noise: 63	3.8 ontour (in feet		70 d			55. dBA	6	63.3 60 dBA 84	55	63.8 dBA 180

	c: OY (2024) e: Eucalyptus d: e/o Redland						t Name: lumber:		oreno Valle	y Trade	
	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	6,042 vehic	les					Autos:	15		
Peak Hour F	Percentage:	10.00%					ucks (2 ,				
Peak Ho	ur Volume:	604 vehicle	es		He	avy Tru	cks (3+ ,	Axles):	15		
Veh	icle Speed:	40 mph		v	ehicle	Mix					
Near/Far Lan	e Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Pan	ier Heiaht:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis	. ,	50.0 feet		-							
Centerline Dist. to		50.0 feet		N	oise So		levation		eet)		
Barrier Distance to		0.0 feet				Auto		000			
Observer Height (A	Above Pad):	5.0 feet				m Truck		297	0		
Pai	d Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Adj	ustment	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in i	feet)		
R	oad Grade:	0.0%				Auto	s: 44.	147			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	947			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	966			
FHWA Noise Mode	l Calculations	5									
VehicleType	REMEL	Traffic Flow		stance	Finite	Road	Fresi		Barrier Atte		m Atten
Autos:	66.51	-3.77		0.71		-1.20		-4.65	0.0		0.000
Medium Trucks:	77.72	-17.04		0.74		-1.20		-4.87	0.0		0.000
Heavy Trucks:	82.99	-22.32	2	0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise								,			
	∟eq Peak Hou		,	Leq Eve		Leq	Night		Ldn		VEL
Autos:	62	_	60.0		59.1		54.0	-	61.9		62.5
Medium Trucks:	60	_	58.2		55.2		52.	_	60.0		60.4
Heavy Trucks:	60.		58.5		54.3		50.9		59.3		59.7
Vehicle Noise:	65.		63.8		61.5		57.	3	65.3	5	65.8
Centerline Distance	e to Noise Co	ntour (in fee	t)				10.4				
Octiterinie Distance				70 di	RΔ						
centerime Distance			Ldn:	70 di	BA 24	65	dBA 53		60 dBA 113		dBA 244

	FHV	VA-RD-77-108	HIG	HWAY	NOISE P	REDICT	ION MC	DEL				
Road Nan	rio: OY (2024) ne: Encilia Av. nt: e/o Essen L	ane					Name: lumber:		oreno Valle	y Trade		
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data					Site Con	ditions	(Hard =	10, Sc	ft = 15)			
Average Daily	Traffic (Adt):	240 vehicle	es					Autos:	15			
Peak Hour	Percentage:	10.00%				dium Tr						
	Hour Volume:	24 vehicles	S		He	avy Truc	cks (3+	Axles):	15			
Ve	ehicle Speed:	45 mph			Vehicle	Mix						
Near/Far La	ane Distance:	36 feet				icleType		Day	Evening	Night	Daily	
Site Data						-	Autos:	72.0%	14.6%	13.5%	94.249	
Ва	rrier Height:	0.0 feet			Medium Trucks: 76.2% 9.4% 14.4% 4.							
Barrier Type (0-VI		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.329	
	ist. to Barrier:	44.0 feet			Noise So	roo El	lavration	a (in f	net)			
Centerline Dist.	to Observer:	44.0 feet			Noise 3	Auto:		000	ei)			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck.		297				
Observer Height	(Above Pad):	5.0 feet				y Truck		004	Grade Ad	iustmant	0.0	
P	ad Elevation:	0.0 feet			i icai	y ITUCK	3. 0.	004	Orade Adj	ustriiciit.	0.0	
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	t Distan	ce (in i	eet)			
	Road Grade:	0.0%				Auto	s: 40	460				
	Left View:	-90.0 degree	es			m Truck		.241				
	Right View:	90.0 degree	es		Hear	y Truck	s: 40	.262				
FHWA Noise Mod	el Calculations	5										
VehicleType	REMEL	Traffic Flow	D.	istance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten	
Autos:	68.46	-18.29		1.3	28	-1.20		-4.61	0.0	000	0.00	
Medium Trucks:	79.45	-31.56		1.3	31	-1.20		-4.87	0.0	000	0.00	
Heavy Trucks:	84.25	-36.84		1.3	31	-1.20		-5.50	0.0	000	0.00	
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atte	nuation)							
VehicleType	Leq Peak Hou	r Leq Day	′	Leq E	vening	Leq	Night		Ldn	CI	VEL	
Autos:	50	.2	48.0		47.1		42.	0	49.9	)	50.	
Medium Trucks:		.0	46.0		43.0		40.	0	47.8	3	48.	
Heavy Trucks:	47	.5	45.9		41.6		38.	2	46.6	3	47.	
Vehicle Noise:	53	.5	51.5		49.3		45.	1	53.1		53.	
Centerline Distan	ce to Noise Co	ntour (in feet)	)									
				70	dBA	65	dBA -		i0 dBA		dBA	
			Ldn:		3		7	,	15		3:	

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGH	WAY I	NOISE PI	REDICTI	ON M	ODEL			
	o: OY (2024) e: Encilia Av. nt: e/o Mozart	Wy.						Alt1 M	loreno Valli	ey Trade	)
SITE S	SPECIFIC IN	PUT DATA			Site Con				EL INPUT	s	
Average Daily	Troffic (Adt):	240 vehicle			Site Con	uilions	(паги	Autos			
	Percentage:	10.00%	5		Me	dium Tru	icks (2				
	our Volume:	24 vehicles				avy Truc		,			
	hicle Speed:	45 mph		L			,,,o (o .	710.00)			
Near/Far Lar		36 feet		L	Vehicle I				1 1		
		00			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	72.09		13.59	
Bar	rier Height:	0.0 feet				edium Ti		76.29			
Barrier Type (0-W	. ,	0.0			,	Heavy Ti	ucks:	81.89	6 7.7%	10.69	6 1.32%
Centerline Dis		44.0 feet		ľ	Noise So	ource El	evatio	ns (in i	feet)		
Centerline Dist. t		44.0 feet		Ī		Auto		0.000			
Barrier Distance t		0.0 feet			Mediu	m Truck:	s: 2	2.297			
Observer Height (		5.0 feet				y Truck		3.004	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	nd Elevation:	0.0 feet		L	Lane Eq				feet)		
F	Road Grade:	0.0%				Autos		0.460			
	Left View:	-90.0 degree	S			m Trucks		).241			
	Right View:	90.0 degree	S		Heav	y Truck	s: 4(	0.262			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dist	tance		Road	Fres		Barrier Att		rm Atten
Autos:	68.46	-18.29		1.2	-	-1.20		-4.61		000	0.000
Medium Trucks:	79.45	-31.56		1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-36.84		1.3		-1.20		-5.50	0.	000	0.000
Unmitigated Noise VehicleType	Leg Peak Hou		arrie		vening	100	Night	1	Ldn		NEL
Autos:	50		18.0	Ley E	47.1	Leq	rvigrit 42	0	49. <sup>1</sup>		JVEL 50.5
Medium Trucks:	48		16.0		47.1		40		49.		48.2
Heavy Trucks:	40		15.9		41.6		38		46.	-	47.0
Vehicle Noise:	53		51.5		49.3		45		53.	-	53.6
Centerline Distanc	e to Noise Co	ntour (in feet)									
				70	dBA	65	dBA		60 dBA	5	5 dBA
		L	dn:		3			7	15	5	33
		CV	IEL:		4			8	16		35

	FH	WA-RD-77-108	HIGH	I YAWH	NOISE PI	REDICT	ION MO	DEL			
Road Nam	io: OY (2024) ne: Encilia Av. nt: w/o Redlar	nds Blvd.					Name: lumber:		oreno Valle	ey Trade	:
	SPECIFIC II	NPUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	•				
Average Daily	. ,	524 vehicle	es					Autos:			
	Percentage:	10.00%					ucks (2 )	/			
	lour Volume:	52 vehicle	S		He	avy Tru	cks (3+ )	Axles):	15		
	hicle Speed:	45 mph			Vehicle	Vlix					
Near/Far La	ne Distance:	36 feet		İ	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0			-	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Di		44.0 feet		ŀ	M-: 0			- /: #	4		
Centerline Dist.	to Observer:	44.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height	Above Pad):	5.0 feet				m Truck		297	0		4. 0.0
P	ad Elevation:	0.0 feet			Heal	y Truck	s: 8.	004	Grade Ad	justmen	r: 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distan	ce (in	feet)		
	Road Grade:	0.0%		Ī		Auto	s: 40.	460			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod	el Calculation	s		'							-
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresr	_	Barrier Att		rm Atten
Autos:	68.46			1.2	-	-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-33.45		1.3	1	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening	Leq	Night		Ldn		NEL
Autos:			51.4		50.5		45.4		53.0	-	53.9
Medium Trucks:	-		49.4		46.3		43.4		51.2	_	51.6
Heavy Trucks:			49.2		45.0		41.6		50.0		50.4
Vehicle Noise:	56	3.9	54.9		52.7		48.5	5	56.	5	56.9
Centerline Distant	ce to Noise C	ontour (in feet	)								
			L	70	dBA	65	dBA		60 dBA		5 dBA
			Ldn:		6		12		26		55
		C	NEL:		6		13		28		59

	FHWA-F	RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MOD	EL			
Scenario: OY (20) Road Name: Alessar Road Segment: e/o Las	dro Blvo	d.					t Name: A lumber: 1		reno Valle	y Trade	
SITE SPECIFIC	INPU	T DATA					NOISE M	ODEL	INPUTS	3	
Highway Data					Site Cor	ditions	(Hard = 1	10, Sof	t = 15)		
Average Daily Traffic (Adi Peak Hour Percentag Peak Hour Volum Vehicle Spee	e: 10.0 e: 1,8	164 vehicle 00% 16 vehicles 50 mph			He	avy Tru	Arucks (2 A. rucks (3+ A.		15 15 15		
Near/Far Lane Distanc		82 feet		١	/ehicle						
	J. (	oz ieet			Veh	icleType		-		Night	Daily
Site Data								72.0%	14.6%	13.5%	
Barrier Heigh	t:	0.0 feet				edium 7		6.2%	9.4%	14.4%	
Barrier Type (0-Wall, 1-Berm	):	0.0				Heavy 1	rucks: 8	31.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barrie	r: 6	7.0 feet		,	Voise S	nurce F	levations	(in fee	of)		
Centerline Dist. to Observe	r: 6	7.0 feet		ŕ	.0.00	Auto		•	.,,		
Barrier Distance to Observe	r:	0.0 feet			Mediu	m Truck	0.0				
Observer Height (Above Pac	D:	5.0 feet				vy Truck			Grade Adju	ıstment	0.0
Pad Elevatio	n:	0.0 feet		L		-					
Road Elevatio		0.0 feet		1	.ane Eq		t Distanc	•	et)		
Road Grad	0.	0%				Auto					
Left View	0	0.0 degree				m Truck	00.0				
Right View	v: 9	0.0 degree	es		Hea	vy Truck	s: 53.0	76			
FHWA Noise Model Calculat	ions										
VehicleType REMEL	Tra	affic Flow	Dis	tance	Finite	Road	Fresne	el E	Barrier Atte	n Ber	m Atten
Autos: 70	.20	0.04		-0.5	1	-1.20	-	4.71	0.0	00	0.000
Medium Trucks: 81	.00	-13.23		-0.49	9	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks: 85	.38	-18.51		-0.49	9	-1.20	-	5.29	0.0	00	0.000
Unmitigated Noise Levels (v	vithout '	Topo and	barrie	er atten	uation)						
VehicleType Leq Peak	Hour	Leq Day		Leg Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	68.5		66.3		65.4		60.3		68.2		68.8
Medium Trucks:	66.1		64.1		61.0		58.1		65.9		66.3
Heavy Trucks:	65.2		63.5		59.2		55.9		64.3		64.6
Vehicle Noise:	71.6	(	69.6		67.5		63.2		71.2		71.7
Centerline Distance to Noise	Conto	ur (in feet)	1								
·			$\neg$	70 c	iBA .	65	dBA	60	dBA	55	dBA
			Ldn:		80		173		373		803
		CI	VEL:		86		186		401		864

	01//005 ::										_
	o: OY (2024)	B							oreno Valle	ey Trade	
	e: Alessandro nt: e/o Nason s					JOD N	umber:	12975			
Road Segiller	ii. e/o ivason s	5l.									
SITE :	SPECIFIC IN	PUT DATA			Site Con				L INPUT	S	
• •				- '	Site Con	aitions					
Average Daily	. ,	17,498 vehicle	S					Autos:	15		
	Percentage:	10.00%				dium Tru		,			
	our Volume:	1,750 vehicles			He	avy Truc	ks (3+ )	Axles):	15		
	hicle Speed:	50 mph		-	Vehicle I	Mix					
Near/Far La	ne Distance:	58 feet		ı	Vehi	cleType		Day	Evening	Night	Daily
Site Data							lutos:	72.0%	14.6%	13.5%	94.24
Rai	rier Height:	0.0 feet			Me	edium Ti	ucks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-W	-	0.0			F	leavy Ti	ucks:	81.8%	7.7%	10.6%	1.32
Centerline Dis	st. to Barrier:	55.0 feet		H	Noise So	El	ovetie n	a (in fe	net)		
Centerline Dist.	to Observer:	55.0 feet		ľ	Noise 30	Auto:		000	ei)		
Barrier Distance	to Observer:	0.0 feet				Auto: n Truck:		000 297			
Observer Height (	Above Pad):	5.0 feet							Grade Ad	i voteno nt	
Pa	ad Elevation:	0.0 feet			neav	y Truck	5. 8.	004	Grade Adj	usunen	0.0
Roa	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distan	ce (in t	eet)		
F	Road Grade:	0.0%				Autos	s: 47.	000			
	Left View:	-90.0 degree	s		Mediur	n Trucks	s: 46.	811			
	Right View:	90.0 degree	s		Heav	y Truck:	s: 46.	830			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	70.20	-0.12		0.3	0	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-13.39		0.3	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-18.67		0.3	2	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and I	arrie	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	69	.2 6	7.0		66.0		60.9	9	68.8	3	69
Medium Trucks:	66	.7	64.8		61.7		58.8	3	66.5	5	66
Heavy Trucks:	65		64.2		59.9		56.5	5	64.9	9	65
Vehicle Noise:	72	.3	0.2		68.1		63.9	9	71.8	3	72
Centerline Distanc	e to Noise Co	ntour (in feet)									
			L	70 (	dBA	65	dBA		i0 dBA		dBA
			dn:		73		157		338		72
		_	IEL:		78		169		364		78

Wednesday, November 4, 2020

FHV	VA-RD-77-108 HIG	HWAY N	NOISE PI	REDICT	ION MODEL		
Scenario: OY (2024) Road Name: Alessandro Road Segment: e/o Moreno					Name: Alt1 lumber: 1297	Moreno Valley 75	Trade
SITE SPECIFIC IN	PUT DATA			N	IOISE MOD	EL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt):  Peak Hour Percentage:  Peak Hour Volume:  Vehicle Speed:	7,674 vehicles 10.00% 767 vehicles 50 mph	-		avy Truc	Auto ucks (2 Axle: cks (3+ Axle:	s): 15	
Near/Far Lane Distance:	58 feet		Veh	icleType	Day	Evening N	light Daily
Site Data					Autos: 72.0		13.5% 94.24%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			edium Ti Heavy Ti			14.4% 4.44% 10.6% 1.32%
Centerline Dist. to Barrier:	55.0 feet		Noise So	ource El	evations (in	feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	55.0 feet 0.0 feet 5.0 feet 0.0 feet		Heav	Auto m Truck ry Truck	s: 2.297	Grade Adjus	stment: 0.0
Road Grade:	0.0 reet	F		Auto			
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck	s: 46.811		
FHWA Noise Model Calculations	s						
VehicleType REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos: 70.20	-3.70	0.3	0	-1.20	-4.6	7 0.00	0.000
Medium Trucks: 81.00	-16.97	0.3	3	-1.20	-4.8	7 0.00	0.000
Heavy Trucks: 85.38	-22.25	0.3	2	-1.20	-5.3	0.00	0.000
Unmitigated Noise Levels (with		_					
VehicleType Leq Peak Hou			vening		Night	Ldn	CNEL
Autos: 65			62.5		57.4	65.2	65.8
Medium Trucks: 63		-	58.1		55.2	63.0	63.3
Heavy Trucks: 62			56.3		52.9	61.3	61.7
Vehicle Noise: 68	.7 66.7	<u> </u>	64.5		60.3	68.3	68.7
Centerline Distance to Noise Co	ntour (in feet)	70	-10.4	-	-(D.4	CO -ID4	FF 4D4
	I also		dBA	65	dBA 04	60 dBA	55 dBA
	Ldn CNEL		42 45		91 97	195 210	421 452

y, November 4, 2020 Wednesday, November 4, 2020

	FH	WA-RD-77-10	8 HIG	HWAY	NOISE P	REDICT	ION MO	DEL			
Road Na	ario: OYP (2024 me: San Timot ent: n/o Alessa	eo Canyon Rd					Name: lumber:		oreno Valle	ey Trade	!
	SPECIFIC II	NPUT DATA			04- 0				L INPUT	S	
Highway Data					Site Cor	aitions	•				
	y Traffic (Adt):	16,079 vehic	les					Autos:	15		
	ır Percentage:	10.00%				dium Tr			15		
	Hour Volume:	1,608 vehicle	es		He	avy Tru	cks (3+ ,	Axles):	15		
	ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far L	ane Distance:	44 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%		94.33%
R	arrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.38%
Barrier Type (0-		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.30%
	Dist. to Barrier:	36.0 feet		-							
Centerline Dis		36.0 feet			Noise S				et)		
Barrier Distanc	e to Observer:	0.0 feet				Auto		000			
Observer Heigh	t (Above Pad):	5.0 feet				m Truck		297	0		
-	Pad Elevation:	0.0 feet			Hea	y Truck	s: 8.	004	Grade Ad	justmeni	0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in f	eet)		
	Road Grade:	0.0%				Auto	s: 28.	.931			
	Left View:	-90.0 degre	ees		Mediu	m Truck	s: 28	624			
	Right View:	90.0 degre	ees		Hear	y Truck	s: 28	654			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	_	stance		Road	Fresi	_	Barrier Att		rm Atten
Autos			-	3.4		-1.20		-4.55		000	0.000
Medium Trucks			-	3.5		-1.20		-4.86		000	0.000
Heavy Trucks				3.5		-1.20		-5.63	0.0	000	0.000
Unmitigated Noi: VehicleType							A E fe A	_	Ldn		NEL
venicie i ype Autos	Leq Peak Ho	ur Leq Da 0.7	68.5	Leq E	vening 67.6	_	Night 62.4	4	70.3		NEL 70.9
Medium Trucks		0. <i>1</i> B.4	66.4		63.4		60.		68.2		68.6
Heavy Trucks		7.9	66.3		62.0		58.0		67.0		67.4
Vehicle Noise		4.0	72.0		69.8		65.0		73.5		74.0
Centerline Dista	nce to Noise C	ontour (in fee	t)								
				70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		62		133	-	287	. —	618
		(	ONEL:		66		143		308		664

Scenario: OYP (2024) Project Name: Alt1 Morer Road Name: San Timoteo Canyon Rd. Job Number: 12975	no Valley T	
Road Segment: s/o Live Oak Canyon Rd.	mo valloy i	rade
SITE SPECIFIC INPUT DATA NOISE MODEL II		
Highway Data Site Conditions (Hard = 10, Soft =	= 15)	
Peak Hour Percentage: 10,00% Medium Trucks (2 Axles): Peak Hour Volume: 2,025 vehicles Heavy Trucks (3+ Axles):	15 15 15	
Vehicle Speed: 55 mph Vehicle Mix		
Mear/Far Lane Distance: 36 foot	vening Ni	ght Daily
Site Data Autos: 72.0%	14.6% 1	3.5% 94.36%
Barrier Height: 0.0 feet Medium Trucks: 76.2%	9.4% 1	4.4% 4.35%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 81.8%	7.7% 1	0.6% 1.29%
Centerline Dist. to Barrier: 55.0 feet Noise Source Elevations (in feet)	1	
Centerline Dist. to Observer: 55.0 feet Autos: 0.000	,	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297		
Observer Height (Above Pad): 5.0 feet	rade Adjust	mont: 0.0
Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Gra	aue Aujusi	ment. 0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet	t)	
Road Grade: 0.0% Autos: 52.211		
Left View: -90.0 degrees Medium Trucks: 52.041		
Right View: 90.0 degrees Heavy Trucks: 52.058		
FHWA Noise Model Calculations		
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Bar	rrier Atten	Berm Atten
Autos: 71.78 0.10 -0.39 -1.20 -4.67	0.000	0.00
Medium Trucks: 82.40 -13.26 -0.36 -1.20 -4.87	0.000	0.00
Heavy Trucks: 86.40 -18.54 -0.37 -1.20 -5.38	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)		
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ld	dn	CNEL
Autos: 70.3 68.1 67.2 62.0	69.9	70.5
Medium Trucks: 67.6 65.6 62.5 59.6	67.4	67.
Heavy Trucks: 66.3 64.6 60.4 57.0	65.4	65.
Vehicle Noise: 73.2 71.1 69.1 64.8	72.7	73.
Centerline Distance to Noise Contour (in feet)		
70 dBA 65 dBA 60 d		55 dBA
Ldn: 84 181	389	838
CNEL: 90 194	419	902

Scenario: OYP (202	4)				Project N	ama: /	H1 M	oreno Valle	ov Trada	
Road Name: Redlands					Job Nui			JIEIIO VAII	ey made	
Road Segment: s/o San Ti		Rd.			JOD IVUI	IIDEI. I	2513			
SITE SPECIFIC I					NC	ISE N	IODE	L INPUT	s	
Highway Data			s	ite Con	ditions (F					
Average Daily Traffic (Adt):	20,216 vehicl	les				A	Autos:	15		
Peak Hour Percentage:	10.00%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume:	2,022 vehicle	es		Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Speed:	55 mph		ν	ehicle N	Mix					
Near/Far Lane Distance:	36 feet		Ė		cleType		Day	Evening	Night	Daily
Site Data					Au	tos:	72.0%	14.6%	13.5%	94.24
Barrier Height:	0.0 feet			Ме	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-Wall, 1-Berm):	0.0			H	leavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Dist. to Barrier:	55.0 feet		N	nisa Sn	urce Elev	rations	(in fo	of)		
Centerline Dist. to Observer:	55.0 feet		-	0/36 00	Autos:			cij		
Barrier Distance to Observer:	0.0 feet			Mediur	n Trucks:					
Observer Height (Above Pad):	5.0 feet				y Trucks:	8.0		Grade Ad	iustment	. 00
Pad Elevation:	0.0 feet								Juotimom	. 0.0
Road Elevation:	0.0 feet		L	ane Equ	uivalent E	istanc	e (in f	eet)		
Road Grade:	0.0%				Autos:	52.2	211			
Left View:	-90.0 degre	es			n Trucks:					
Right View:	90.0 degre	es		Heav	y Trucks:	52.0	)58			
HWA Noise Model Calculation	ns		- 1							
VehicleType REMEL	Traffic Flow	Distai		Finite		Fresn		Barrier Att		rm Atter
Autos: 71.78			-0.39		-1.20		-4.67		000	0.00
Medium Trucks: 82.4			-0.36		-1.20		-4.87		000	0.00
Heavy Trucks: 86.4			-0.37		-1.20		-5.38	0.0	000	0.00
Inmitigated Noise Levels (with										
VehicleType Leq Peak Ho			eq Ev		Leq N	_		Ldn		NEL
	0.3 7.7	68.1 65.7		67.1 62.6		62.0 59.7		69.9 67.9	-	70 67
									-	
	3.2	64.7 71.2		69.1		57.1 64.8		65.5 72.5		65 73
				09.1		04.8		72.8	5	73
Centerline Distance to Noise C	Contour (in fee	t)	70 di	D/I	65 dE	2.4	-	0 dBA	55	dBA
		Ldn:	, , ,	84	00 02	181		391		84

Wednesday, November 4, 2020

	FH\	VA-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MODE	L	
Road Nan	no: OYP (2024 ne: Redlands E nt: n/o Ironwoo	lvd.				Name: Alt lumber: 12	1 Moreno Valle 975	y Trade
	SPECIFIC IN	PUT DATA					DEL INPUT	S
Highway Data  Average Daily	Traffic (Adt):	21,702 vehicle	s	Site Co	nditions	•	tos: 15	
Peak Hour	Percentage:	10.00%		Me	edium Tr	ucks (2 Axl	es): 15	
Peak F	lour Volume:	2,170 vehicles		He	eavy Tru	cks (3+ Axl	es): 15	
Ve	hicle Speed:	50 mph		Vehicle	Mix			
Near/Far La	ne Distance:	58 feet			nicleType	Da	y Evening	Night Daily
Site Data							.0% 14.6%	13.5% 94.37%
Pa	rrier Height:	0.0 feet		N	ledium T	rucks: 76	.2% 9.4%	14.4% 4.35%
Barrier Type (0-V	/all, 1-Berm):	0.0			Heavy T	rucks: 81	.8% 7.7%	10.6% 1.29%
Centerline Di		55.0 feet		Noise S	ource El	levations (	in feet)	
Centerline Dist.		55.0 feet			Auto	s: 0.000	)	
Barrier Distance		0.0 feet		Mediu	ım Truck	s: 2.29	7	
Observer Height	. ,	5.0 feet		Hea	vy Truck	s: 8.004	4 Grade Adj	ustment: 0.0
-	ad Elevation:	0.0 feet		I ana Ea	ivalan	t Distance	(in fact)	
	ad Elevation: Road Grade:	0.0 feet		Lane Et	Auto		. ,	
	Left View:	0.0%		Modis	m Truck			
	Right View:	-90.0 degree 90.0 degree			vy Truck	- 10.01	-	
FHWA Noise Mod	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:		0.82		0.30	-1.20			0.000
Medium Trucks:		-12.55		0.33	-1.20			0.000
Heavy Trucks:		-17.83		0.32	-1.20	-5.	.38 0.0	0.000
Unmitigated Nois	e Levels (with Leg Peak Hou				1	Minht	Ldn	CNEL
VehicleType Autos:	Leq Peak Hou		7.9	Evening 67.0		Night 61.9	Lan 69.8	
Medium Trucks:	67		65.6	62.5		59.6	67.4	
Heavy Trucks:			55.0	60.7		57.4	65.8	
Vehicle Noise:			1.1	69.0		64.8	72.7	
Centerline Distan	ce to Noise Co	ntour (in feet)						
				70 dBA	65	dBA	60 dBA	55 dBA
		_	.dn:	84		180	388	836
		CN	IEL:	90		194	417	898

ednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGH	A YAW	IOISE PI	REDICT	ION MC	DDEL			
Road Nam	io: OYP (2024 le: Redlands B nt: s/o Ironwoo	lvd.					Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,085 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	1,809 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	58 feet		F		icleType	,	Dav	Evening	Niaht	Dailv
Site Data							Autos:	72.0%		13.5%	94.399
Rai	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.339
Barrier Type (0-W		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.289
Centerline Di	. ,	55.0 feet		H	Noise So	urco E	lovation	ac (in fr	not)		
Centerline Dist.	to Observer:	55.0 feet		Ľ.	voise 30	Auto		.000	eu		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height (	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iuetmant	. 0 0
Pa	ad Elevation:	0.0 feet			rical	y IIUCK	3. 0	.004	Orauc Au	astment	. 0.0
Roa	ad Elevation:	0.0 feet		Į.	Lane Eq	uivalen	t Distar	ice (in i	feet)		
	Road Grade:	0.0%				Auto	s: 47	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degre	es		Heav	y Truck	s: 46	.830			
FHWA Noise Mode	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.03		0.3	0	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-13.36		0.3	-	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-18.64		0.3	2	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:	69		67.1		66.2		61.		69.0		69.
Medium Trucks:	66		64.8		61.7		58.	-	66.6		66.
Heavy Trucks:	65		64.2		59.9		56.	-	65.0		65.
Vehicle Noise:	72		70.3		68.2		64.	.0	71.9	)	72.
Centerline Distanc	ce to Noise Co	ntour (in feet	)	70	-(D.4		-ID 4		20 404		-10.4
			L	700	dBA	05	dBA		i0 dBA		dBA
		0	Ldn: NFL:		74 79		159 17		343 369		739 795

	FHWA	A-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION M	ODEL			
Scenario: ( Road Name: F Road Segment: s			nps					Alt1 N 12975	loreno Valle	ey Trad	е
	CIFIC INP	UT DATA							L INPUT	S	
Highway Data  Average Daily Tral  Peak Hour Per  Peak Hour  Vehick  Near/Far Lane D	centage: 10 Volume: 1, e Speed:	9,677 vehicle 0.00% 968 vehicles 50 mph 58 feet			Me He ehicle	edium Tr eavy Tru <b>Mix</b>	ucks (2 cks (3+	Autos Axles) Axles)	15 15		
Site Data				-	ven	icleType	Autos:	72.09	Evening 14.6%	Night 13.59	
	Height: 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks:	76.29 81.89	6 9.4%	14.49 10.69	% 4.55%
Centerline Dist. to		55.0 feet		N	oise S	ource E	levatio	ns (in f	eet)		
Road E Roa L	Observer: ove Pad): Elevation: Elevation: d Grade:	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	Head ane Eq Mediu	Auto m Truck vy Truck uivalen Auto m Truck vy Truck	s: 2 s: 8 t Distar s: 4	0.000 2.297 3.004 nce (in 7.000 5.811 5.830	Grade Ad	justmei	nt: 0.0
FHWA Noise Model C	alculations										
VehicleType F	REMEL T	raffic Flow	Dist	ance	Finite	Road	Fres	snel	Barrier Att	en Be	erm Atten
Autos:	70.20	0.31		0.30		-1.20		-4.67		000	0.00
Medium Trucks: Heavy Trucks:	81.00 85.38	-12.78 -14.67		0.33		-1.20 -1.20		-4.87 -5.38		000	0.00
Unmitigated Noise Le	vels (withou	t Topo and	barriei	r attenu	ation)						
VehicleType Led	Peak Hour	Leq Day		Leq Eve	ening	Leq	Night		Ldn	(	CNEL
Autos:	69.6		67.4		66.5		61		69.3		69.
Medium Trucks:	67.3		65.4		62.3		59		67.2	_	67.
Heavy Trucks: Vehicle Noise:	69.8 73.8		68.2 71.9		63.9		60 65		68.9 73.3		69. 73.
					09.3	'	00		13.	,	13.
Centerline Distance to	Noise Cont	tour (in feet)		70 di	BA	65	dBA		60 dBA	5	5 dBA
			Ldn:		91		19		424		914
		CI	IEL:		98		21	1	455		979

Scenario: OYP (2	2024)					Project N	lame: I	Alt1 Mc	oreno Valle	v Trade	
Road Name: Redian		d				Job Nui			JI CITO VAIIC	y made	
Road Segment: n/o Eur						000 / 10/		20.0			
SITE SPECIFIC	C INP	UT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily Traffic (Ad	ft): 1	8,506 vehicle	s				-	Autos:	15		
Peak Hour Percentag	ge: 1	0.00%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hour Volum	ne: 1	,851 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Spee	ed:	50 mph		V	ehicle N	lix					
Near/Far Lane Distant	ce:	58 feet		- 1		cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	72.0%	14.6%	13.5%	92.14
Barrier Heigi	ht:	0.0 feet			Ме	dium Tru	cks:	76.2%	9.4%	14.4%	4.49
Barrier Type (0-Wall, 1-Berr		0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	3.37
Centerline Dist. to Barri	er:	55.0 feet		N	oise So	urce Elev	/ations	(in fe	et)		
Centerline Dist. to Observ	er:	55.0 feet		<u> </u>		Autos:		000			
Barrier Distance to Observ	er:	0.0 feet			Mediur	n Trucks:		97			
Observer Height (Above Pa	- /	5.0 feet			Heav	v Trucks:	8.0	004	Grade Ad	iustment	0.0
Pad Elevation		0.0 feet									
Road Elevation	on:	0.0 feet		L	ane Equ	ıivalent E			eet)		
Road Grad		0.0%				Autos:					
Left Vie		-90.0 degree				n Trucks:					
Right Vie	W.	90.0 degree	s		Heav	y Trucks:	46.8	330			
FHWA Noise Model Calcula	tions										
VehicleType REMEL		Traffic Flow	Dista		Finite		Fresn	_	Barrier Att		m Atter
	0.20	0.02		0.30		-1.20		-4.67		000	0.00
	1.00	-13.10		0.33		-1.20		-4.87		000	0.00
	5.38	-14.35		0.32		-1.20		-5.38	0.0	000	0.00
Inmitigated Noise Levels ( VehicleType Leg Peak						1 N			Ldn		NEL
VehicleType Leq Peak  Autos:	69.3	Leq Day	57.1	.eq Eve	66.2	Leq N	1gnt 61.1		69.0	_	VEL 69
Medium Trucks:	67.0	-	5.1		62.0		59.1		66.8		67
Heavy Trucks:	70.2	-	8.5		64.2		60.8		69.2	-	69
Vehicle Noise:	73.8		1.9		69.2		65.2		73.2		73
Centerline Distance to Nois	e Con	tour (in feet)									
		,		70 dl	24	65 dF	3.4	6	0 dBA	55	dBA
				/ U UL	JA	OJ UL					
		L	.dn:	70 01	91	00 01	195		420		90

Wednesday, November 4, 2020

	FH\	VA-RD-77-108	HIGHWA	Y NOISE F	PREDICT	ION MODE	L	
Road Nan	rio: OYP (2024 ne: Redlands E nt: s/o Eucalyp	lvd.				Name: Alt lumber: 12	1 Moreno Vall 975	ey Trade
	SPECIFIC IN	IPUT DATA					DEL INPUT	S
Highway Data				Site Co	nditions	(Hard = 10	), Soft = 15)	
Average Daily	Traffic (Adt):	18,264 vehicle	s				tos: 15	
	Percentage:	10.00%				ucks (2 Axl	,	
	lour Volume:	1,826 vehicles		Н	eavy Tru	cks (3+ Axl	es): 15	
	ehicle Speed:	50 mph		Vehicle	Mix			
Near/Far La	ane Distance:	58 feet		Ve	hicleType	e Da	ay Evening	Night Daily
Site Data						Autos: 72	2.0% 14.6%	13.5% 95.26%
Ва	rrier Height:	0.0 feet		٨	∕ledium T	rucks: 76	6.2% 9.4%	14.4% 3.66%
Barrier Type (0-V	-	0.0			Heavy T	rucks: 81	.8% 7.7%	10.6% 1.08%
Centerline Di	ist. to Barrier:	55.0 feet		Noise S	Source E	levations (	in feet)	
Centerline Dist.	to Observer:	55.0 feet			Auto			
Barrier Distance	to Observer:	0.0 feet		Medi	um Truck			
Observer Height		5.0 feet			avy Truck			justment: 0.0
-	ad Elevation:	0.0 feet						,
	ad Elevation:	0.0 feet		Lane E		Distance	, ,	
	Road Grade:	0.0%			Auto			
	Left View:	-90.0 degree			um Truck	- 10.01		
	Right View:	90.0 degree	S	Hea	avy Truck	s: 46.83	0	
FHWA Noise Mod	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distanc	e Finit	e Road	Fresnel	Barrier Att	en Berm Atten
Autos:		0.11		0.30	-1.20			0.000
Medium Trucks:		-14.05		0.33	-1.20			0.000
Heavy Trucks:	85.38	-19.33		0.32	-1.20	-5	.38 0.	0.000
Unmitigated Nois			arrier at	tenuation)	)			
VehicleType	Leq Peak Hou			q Evening		Night	Ldn	CNEL
Autos:			37.2	66.	-	61.2	69.	
Medium Trucks:			64.1	61.	-	58.1	65.	
Heavy Trucks:			3.5	59.		55.9	64.	
Vehicle Noise:	72	.1 7	0.0	68.	U	63.7	71.	6 72.1
Centerline Distan	ce to Noise Co	ontour (in feet)		70 -104	-	-(0.4	CO -/DA	55 404
		,	dn:	70 dBA 71		dBA 153	60 dBA 329	55 dBA 708
		-	.an: IEL:	71		153 164	329	
		CA	EL.	76	)	104	304	102

ay, November 4, 2020 Wednesday, November 4, 2020

	FH	WA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MO	DDEL			
Road Nar	rio: OYP (2024 ne: Redlands E ent: s/o Dwy. 7	,					Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC II	NPUT DATA			04- 0				L INPUT	s	
Highway Data				- 1	Site Con	ditions	(Hara =				
Average Daily	. ,	18,897 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%				dium Tr					
Peak I	Hour Volume:	1,890 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		1	Vehicle I	Mix					
Near/Far La	ane Distance:	58 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	72.0%	14.6%	13.5%	95.42%
D.	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	3.53%
Barrier Type (0-V		0.0			-	Heavy T	rucks:	81.8%	7.7%	10.6%	1.05%
** *	ist. to Barrier:	55.0 feet		-	v-: 0	F		C £			
Centerline Dist.		55.0 feet		1	voise So	ource El			eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Ahove Pad):	5.0 feet				m Truck		.297			
-	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		1	Lane Ea	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 47	.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degree			Heav	y Truck	s: 46	.830			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.27		0.3	0	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-14.05		0.3	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-19.33		0.3	2	-1.20		-5.38	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	,	Leg E	/ening	Leq	Night		Ldn	C	NEL
Autos:			67.3		66.4		61.	.3	69.2	_	69.8
Medium Trucks:			64.1		61.0		58.	.1	65.9	9	66.3
Heavy Trucks:	65	5.2	63.5		59.2		55.	9	64.3	3	64.6
Vehicle Noise:	72	2.1	70.1		68.1		63.	.8	71.7	7	72.2
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 c		65	dBA	(	0 dBA	55	dBA
			Ldn:		72		15	5	333	_	717
		C	VEL:		77		166	3	359	1	773

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PI	REDICT	ION MODEL		
	o: OYP (2024 e: Redlands E t: s/o Dwy. 7						Name: Alt1 lumber: 1297	Moreno Valley 5	Trade
SITE S	PECIFIC IN	NPUT DATA					IOISE MOD	EL INPUTS	
Highway Data				Sit	e Con	ditions	(Hard = 10, 3	Soft = 15)	
Peak Ho	Fraffic (Adt): Percentage: our Volume: nicle Speed:	19,012 vehicle 10.00% 1,901 vehicle 50 mph		Ve		avy Tru	Auto ucks (2 Axles cks (3+ Axles	:): 15	
Near/Far Lar	e Distance:	58 feet		-		icleType	Dav	Evening N	light Daily
Site Data Barrier Type (0-Wa	rier Height:	0.0 feet			М		Autos: 72.0 rucks: 76.2	% 14.6% % 9.4%	13.5% 95.45% 14.4% 3.51% 10.6% 1.04%
Centerline Dis		55.0 feet				,			
Centerline Dist. t		55.0 feet		No	ise Sc	ource El	levations (in	feet)	
Barrier Distance t Observer Height (A	o Observer:	0.0 feet 5.0 feet 0.0 feet				Auto m Truck y Truck	s: 2.297	Grade Adjus	tment: 0.0
Roa	d Elevation:	0.0 feet		La	ne Eq	uivalent	Distance (ii	n feet)	
F	Road Grade:	0.0%				Auto	s: 47.000		
	Left View: Right View:	-90.0 degree		1		m Truck ry Truck			
FHWA Noise Mode	I Calculation	s							
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.29		0.30		-1.20	-4.6	7 0.000	0.000
Medium Trucks:	81.00	-14.05		0.33		-1.20	-4.8	7 0.000	0.000
Heavy Trucks:	85.38	-19.33		0.32		-1.20	-5.3	0.000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenua	ition)				
VehicleType	Leq Peak Hou	ur Leq Day	/ L	eq Eve	ning	Leq	Night	Ldn	CNEL
Autos:	69	9.6	67.4		66.5		61.3	69.2	69.8
Medium Trucks:	66	5.1	64.1		61.0		58.1	65.9	66.3
Heavy Trucks:	65	5.2	63.5		59.2		55.9	64.3	64.6
Vehicle Noise:	72	2.2	70.1		68.1		63.8	71.7	72.2
Centerline Distanc	e to Noise Co	ontour (in feet	)						
		,,		70 dB.	Α	65	dBA	60 dBA	55 dBA
			Ldn:		72		155	334	719
			NEL:		77			360	

Site Data		FHW	A-RD-77-108	HIGH	WAY N	OISE P	REDICTI	ON MC	DEL			
	Road Name: Red	lands Blv								oreno Valle	y Trade	
Average Daily Traffic (Adt): 14,271 vehicles   Peak Hour Percentage: 10,00%   Medium Trucks: (2 Axles): 15   Heavy Trucks (3 Axles): 15		FIC INF	UT DATA			ita Car					S	
Peak Hour Percentage: 10.00%   Medium Trucks (2 Axles): 15   Heavy Trucks (3+ Axles): 15					3	ne con	uiuons					
Peak Hour Volume: 1,427 vehicles		. ,	,	s								
Vehicle Speed:   S0 mph   Site Data									,			
Near/Far Lane Distance:   58 feet     VehicleType   Day   Evening   Night   Day			,	3		He	avy Truc	ks (3+ .	Axles):	15		
Site Data   Autos: 72.0%   14.6%   13.5%   94.					ν	ehicle	Mix					
Barrier Height:   0.0   feet   Heavy Trucks:   76.2%   9.4%   14.4%   4.	Near/Far Lane Dist	ance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Barrier Trype (C-Wall, 1-Berm): 0.0 c	Site Data						F	utos:	72.0%	14.6%	13.5%	94.809
Barrier Type (0-Wall, 1-Berm): 0.0   Centerline Dist. to Barrier: 55.0 feet Centerline Dist. to Dasverver: 55.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0%   Left View: 90.0 degrees Right View: 90.0 degrees Redurn Tucks: 46.830   Medium Trucks: 46.830	Rarrier He	eiaht.	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.019
Centerline Dist. to Observer: Barrier Distance to Observer: Borner Distance to Observer: Do Server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Redium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 feet Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 46.810   Medium Trucks: 46.811   Heavy Trucks: 46.830   Medium						1	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.199
Centerline Dist. to Observer:   5.0 feet   Barrier Distance to Observer:   0.0 feet   Cobserver Height (Above Pad):   5.0 feet   Heavy Trucks:   8.004   Grade Adjustment:   0.0 feet   Heavy Trucks:   8.004   Grade Adjustment:   0.0 feet   Cobserver Height (Above Pad):   5.0 feet   Heavy Trucks:   8.004   Grade Adjustment:   0.0 feet   Cobserver Height (Above Pad):   6.0 feet   6.0	Centerline Dist. to Ba	arrier:	55.0 feet		۸	loise S	ource Ele	evation	s (in fe	et)		
Barrier Distance to Observer: 0.0 feet   Medium Trucks: 2.297   Heavy Trucks: 8.004   Grade Adjustment: 0.0 feet   Pad Elevation: 0.0 feet   Lane Equivalent Distance (in feet)	Centerline Dist. to Obse	erver:	55.0 feet						- 1 -			
Diserver Height (Above Pad): 5.0 feet	Barrier Distance to Obse	erver:	0.0 feet			Mediu						
Pad Elevation: 0.0 feet	Observer Height (Above	Pad):	5.0 feet							Grade Ad	iustment	0.0
Road Grade:	Pad Elev	ation:	0.0 feet			77001	ry mache	. 0.	004	0/440 / 14,	dotmont.	0.0
Left View: Right View: 90.0 degrees	Road Elev	ation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in f	eet)		
Friedrick   Friedrick   Friedrick   Friedrick   Friedrick   Freshol   Barrier Atten   Bern Atten   Bern Atten   Bern Atten   Bern Atten   Bern Atten   Autos:   70.20   -0.98   0.30   -1.20   -4.67   0.000	Road G	rade:	0.0%				Autos	: 47	.000			
FHWA Noise Model Calculations	Left	View:	-90.0 degree	s		Mediu	m Trucks	: 46	.811			
VehicleType	Right	View:	90.0 degree	es		Hear	y Trucks	: 46	.830			
Autos: 70.20	FHWA Noise Model Calc	ulations										
Medium Trucks:   81.00				Dis			_	Fresi	_			
Heavy Trucks: 85.38												0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)   VehicleType	Medium Trucks:	81.00										0.00
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         68.3         66.1         65.2         60.1         68.0           Medium Trucks:         65.4         63.4         60.4         57.4         65.2           Heavy Trucks:         64.5         62.8         58.6         55.2         63.6           Vehicle Noise:         71.2         69.1         67.1         62.8         70.7    Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	85.38	-20.00		0.32		-1.20		-5.38	0.0	000	0.00
Autos:         68.3         66.1         65.2         60.1         68.0           Medium Trucks:         65.4         63.4         60.4         57.4         65.2           Heavy Trucks:         64.5         62.8         58.6         55.2         63.6           Vehicle Noise:         71.2         69.1         67.1         62.8         70.7           Centerline Distance to Noise Contour (in feet)	-	•										
Medium Trucks:         65.4         63.4         60.4         57.4         65.2           Heavy Trucks:         64.5         62.8         58.6         55.2         63.6           Vehicle Noise:         71.2         69.1         67.1         62.8         70.7           Centerline Distance to Noise Contour (in feet)				_	Leq Ev			_				
Heavy Trucks:         64.5         62.8         58.6         55.2         63.6           Vehicle Noise:         71.2         69.1         67.1         62.8         70.7           Centerline Distance to Noise Contour (in feet)												68.
Vehicle Noise:         71.2         69.1         67.1         62.8         70.7           Centerline Distance to Noise Contour (in feet)											-	65.
Centerline Distance to Noise Contour (in feet)	· —											64. 71.
						37.1		02.		70.1		, , ,
	Centerline Distance to N	uise Cor	nour (in reet)		70 d	BA	65 (	iBA	6	i0 dBA	55	dBA
Ldn: 62 133 286				Ldn:		62		133	3	286		617
CNEL: 66 143 308												664

Wednesday, November 4, 2020

	FHW	A-RD-77-108 H	IIGHWAY	NOISE P	REDICTI	ON MODEL		
Road Name	o: OYP (2024) e: Redlands Blv t: n/o Alessand					Name: Alt1 umber: 1297	Moreno Valle '5	y Trade
	SPECIFIC INF	UT DATA			N	OISE MOD	EL INPUTS	3
Highway Data				Site Con	ditions (	Hard = 10,	Soft = 15)	
	Percentage: 1 our Volume: 1	2,139 vehicles 0.00% 1,214 vehicles				Auto icks (2 Axles ks (3+ Axles	s): 15	
	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lar	e Distance:	58 feet		Veh	icleType	Day	Evening	Night Daily
Site Data					Α	utos: 72.0	% 14.6%	13.5% 94.41%
Bar	rier Height:	0.0 feet		М	edium Tr	ucks: 76.2	9.4%	14.4% 4.31%
Barrier Type (0-Wa		0.0		1	Heavy Tr	ucks: 81.8	% 7.7%	10.6% 1.28%
Centerline Dis		55.0 feet		Noise S	ource Ele	evations (in	feet)	
Centerline Dist. t		55.0 feet			Autos	0.000		
Barrier Distance t		0.0 feet		Mediu	m Trucks			
Observer Height (/		5.0 feet			vy Trucks		Grade Adj	ustment: 0.0
	d Elevation:	0.0 feet						
	d Elevation:	0.0 feet		Lane Eq		Distance (ii	n reet)	
F	Road Grade:	0.0%			Autos			
	Left View: Right View:	-90.0 degrees			m Trucks /y Trucks			
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	70.20	-1.70	0	.30	-1.20	-4.6	7 0.0	00 0.000
Medium Trucks:	81.00	-15.10	0	.33	-1.20	-4.8	7 0.0	0.000
Heavy Trucks:	85.38	-20.39	0	.32	-1.20	-5.3	8 0.0	0.000
Unmitigated Noise	Levels (withou	ut Topo and b	arrier att	enuation)				
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq I	Vight	Ldn	CNEL
Autos:	67.6	6	5.4	64.5		59.3	67.2	67.8
Medium Trucks:	65.0	6	3.1	60.0		57.1	64.8	65.2
Heavy Trucks:	64.1		2.5	58.2		54.8	63.2	
Vehicle Noise:	70.6	6	3.6	66.5		62.2	70.2	70.7
Centerline Distanc	e to Noise Con	tour (in feet)		0 dBA	65 (	4D.4	60 dBA	55 dBA
			dn:	0 aBA 57	05 (	122	60 dBA 263	55 dBA 566
		CNI		57 61		122	263	609
		CNI	EL.	01		131	282	609

Scenario: OYP (2024) Road Name: Redlands Blvd. Road Segment: s/o Alessandro								
				Job Numb		oreno Valle	ey Trade	
SITE SPECIFIC INPU	T DATA					L INPUT	S	
Highway Data			Site Con	ditions (Har	d = 10, S	oft = 15)		
Average Daily Traffic (Adt): 10,	426 vehicles				Autos:	15		
Peak Hour Percentage: 10	.00%		Me	dium Trucks	(2 Axles):	15		
Peak Hour Volume: 1,0	343 vehicles		He	avy Trucks (	3+ Axles).	15		
Vehicle Speed:	50 mph		Vehicle	Mix				
Near/Far Lane Distance:	58 feet			icleType	Day	Evening	Night	Daily
Site Data				Autos	3: 72.0%	4 14.6%	13.5%	94.37%
Barrier Height:	0.0 feet		М	edium Trucks	6: 76.2%	9.4%	14.4%	4.34%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Truck	81.8%	6 7.7%	10.6%	1.29%
Centerline Dist. to Barrier:	55.0 feet		Noise So	ource Elevat	ions (in f	eet)		
Centerline Dist. to Observer:	55.0 feet			Autos:	0.000	,		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet			y Trucks:	8.004	Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet			-				
Road Elevation:	0.0 feet		Lane Eq	uivalent Dis	tance (in	feet)		
Road Grade: 0	.0%			Autos:	47.000			
Left View: -	90.0 degrees		Mediu	m Trucks:	46.811			
Right View:	00.0 degrees		Heav	y Trucks:	46.830			
FHWA Noise Model Calculations								
// .		Distance			resnel	Barrier Att		m Atten
Autos: 70.20	-2.37		.30	-1.20	-4.67		000	0.00
Medium Trucks: 81.00	-15.74		.33	-1.20	-4.87		000	0.000
Heavy Trucks: 85.38	-21.02	С	.32	-1.20	-5.38	0.0	000	0.000
Unmitigated Noise Levels (without	•				. 1			
VehicleType Leq Peak Hour	Leq Day		Evening	Leq Nigh		Ldn	_	NEL
Autos: 66.9 Medium Trucks: 64.4	64 62		63.8		58.7 56.4	66.6 64.2	-	67.2 64.6
			59.3				_	
Heavy Trucks: 63.5	61		57.5		54.2	62.6		62.9
Vehicle Noise: 70.0	67	.9	65.8		61.6	69.	)	70.0
Centerline Distance to Noise Conto	our (in feet)	7	0 dBA	65 dBA		60 dBA	55	dBA
	Ld		51		110	238		512

	/A-RD-//-108	HIGHW	AY NOISE	PREDICT	ION MODE		
Scenario: OYP (2024) Road Name: John F Kenr Road Segment: s/o Cactus A	nedy Dr.				t Name: Alt1 lumber: 129	Moreno Valle 75	y Trade
SITE SPECIFIC IN	PUT DATA		011 0			DEL INPUTS	S
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	7,310 vehicle 10.00% 731 vehicles 45 mph 36 feet		N H Vehicle	ledium Ti leavy Tru e <b>Mix</b>	(Hard = 10, Autorucks (2 Axle	os: 15 es): 15 es): 15	
Site Data			Ve	hicleType	P Dag	, ,	Night Daily 13.5% 94.43
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0		,	Medium 1 Heavy 1	rucks: 76.	2% 9.4%	14.4% 4.30 10.6% 1.27
Centerline Dist. to Barrier:	44.0 feet		Noise S	Source E	levations (ii	n feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade: Left View: Right View:	44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		Lane E	Auto avy Truck quivalen Auto um Truck avy Truck	(s: 2.297 (s: 8.004 t Distance ( 0s: 40.460 (s: 40.241	Grade Adj	iustment: 0.0
FHWA Noise Model Calculations	;						
VehicleType REMEL	Traffic Flow	Dista	nce Finit	e Road	Fresnel	Barrier Atte	en Berm Atter
Autos: 68.46	-3.45		1.28	-1.20	-4.0		
Medium Trucks: 79.45 Heavy Trucks: 84.25	-16.86 -22.14		1.31 1.31	-1.20 -1.20	-4.8 -5.8		
Unmitigated Noise Levels (witho	ut Topo and	barrier	attenuation	)			
VehicleType Leq Peak Hou	Leq Day	L	eq Evening	Leq	Night	Ldn	CNEL
Autos: 65.		32.9	61.	-	56.8	64.7	
Medium Trucks: 62.		30.7	57.	-	54.7	62.5	
Heavy Trucks: 62. Vehicle Noise: 68.		60.6 66.3	56. 64.	-	52.9 59.9	61.3	
	ntary (in fact)		-				
Centerline Distance to Noise Co.	ntour (in feet)		70 dBA	65	dBA	60 dBA	55 dBA
		.dn:	32	2	68	147	31
		IEL:	34		73	158	34

Scenario: O	VD (2024)					Project N	ama: /	It I M	reno Valle	v Trada	
Road Name: M						Job Nur			neno vane	y made	
Road Segment: n/			nns			000 1401	inder. I	2310			
	CIFIC IN	PUT DATA	•	Т		NO	ISE N	ODE	L INPUT	s	
Highway Data					Site Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily Traffi	ic (Adt):	18,332 vehicle:	s				A	utos:	15		
Peak Hour Perce	entage:	10.00%			Me	dium Truc	ks (2 A	xles):	15		
Peak Hour V	/olume:	1,833 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle	Speed:	40 mph		-	Vehicle I	Miv					
Near/Far Lane Di	istance:	48 feet		- F		cleType		Day	Evening	Night	Daily
Site Data								72.0%	14.6%	13.5%	,
Barrier I	Heiaht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.40
Barrier Type (0-Wall, 1	-	0.0			F	leavy Tru	cks:	31.8%	7.7%	10.6%	1.30
Centerline Dist. to	Barrier:	50.0 feet		,	Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Ob	bserver:	50.0 feet		F.	10,00 00	Autos:		•			
Barrier Distance to Ob	bserver:	0.0 feet			Mediur	n Trucks:					
Observer Height (Abov	re Pad):	5.0 feet				y Trucks:	8.0		Grade Ad	iustment	. 0 0
Pad Ele	evation:	0.0 feet		L	77007	y Trucks.	0.0	04	07440714	dolimom	. 0.0
Road Ele	evation:	0.0 feet		I	Lane Equ	uivalent E	istanc	e (in f	eet)		
Road	Grade:	0.0%				Autos:	44.1	47			
Le	ft View:	-90.0 degrees	S		Mediur	n Trucks:	43.9	147			
Righ	ht View:	90.0 degrees	s		Heav	y Trucks:	43.9	166			
FHWA Noise Model Ca	Iculations	i									
VehicleType RI	EMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el .	Barrier Att	en Ber	m Atter
Autos:	66.51	1.05		0.7		-1.20		4.65		000	0.0
Medium Trucks:	77.72	-12.26		0.74		-1.20		4.87		000	0.00
Heavy Trucks:	82.99	-17.54		0.73	3	-1.20		5.43	0.0	000	0.0
Unmitigated Noise Lev	•		arrie								
	Peak Hou			Leg E	vening	Leq Ni	_		Ldn		NEL
Autos:	67.		34.9		63.9		58.8		66.7		67
Medium Trucks:	65.	-	3.0		59.9		57.0		64.8		65
Heavy Trucks:	65.		3.3		59.1		55.7		64.1		64
Vehicle Noise:	70.	6 6	8.8		66.3		62.1		70.	l	70
Centerline Distance to	Noise Co	ntour (in feet)		70 -	4D.4	CF -15			0 -/04		-10.4
		,	dn:	70 c		65 dE		6	0 dBA		dBA
		_	.an: IEL:		51 55		110 118		236 254		50 54

Wednesday, November 4, 2020

FH	WA-RD-77-108 H	IGHWAY	NOISE P	REDICT	ION MODEL		
Scenario: OYP (202- Road Name: Moreno Be Road Segment: s/o SR-60	each Dr.	s			Name: Alt1 lumber: 129	Moreno Valley 75	Trade
SITE SPECIFIC I	NPUT DATA			ı	IOISE MOI	DEL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	34,952 vehicles 10.00% 3,495 vehicles 50 mph			avy Tru	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance:	82 feet			icleType	Day	Evening	Night Daily
Site Data					Autos: 72.	0% 14.6%	13.5% 93.59% 14.4% 4.39%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			Heavy T			10.6% 2.02%
Centerline Dist. to Barrier:	67.0 feet		Noise S	ource El	evations (ir	r feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	67.0 feet 0.0 feet 5.0 feet 0.0 feet		Hear	Auto m Truck ry Truck	s: 2.297		stment: 0.0
Road Elevation: Road Grade:	0.0 feet 0.0%		Laile Ly	Auto		ii reet)	
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck ry Truck	s: 53.059		
FHWA Noise Model Calculation	ıs						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos: 70.20	2.85	-0.	51	-1.20	-4.7	71 0.00	0.000
Medium Trucks: 81.00 Heavy Trucks: 85.38		-0. -0.		-1.20 -1.20	-4.8 -5.2		
Unmitigated Noise Levels (with				-1.20	-5.2	:9 0.00	0.000
VehicleType Leg Peak Ho			Evening	Lea	Night	Ldn	CNEL
	1.3 69		68.2		63.1	71.0	71.6
		5.9	63.8		60.9	68.7	69.0
		3.2	63.9		60.6	69.0	69.3
Vehicle Noise: 7	4.9 72	2.9	70.6		66.4	74.4	74.9
Centerline Distance to Noise C	ontour (in feet)					,	
			) dBA	65	dBA	60 dBA	55 dBA
		in:	133		286	615	1,326
	CNE	L:	142		307	660	1,423

November 4, 2020 Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	HWAY I	NOISE P	REDICT	ION MO	ODEL			
Road Na	ario: OYP (2024 me: Moreno Be ent: s/o Alessa	ach Dr.						Alt1 M 12975	oreno Valle	ey Trade	
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard :	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	26,100 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	10.00%			Me	edium Tru	ucks (2	Axles):	15		
Peak	Hour Volume:	2,610 vehicles	S		He	avy Truc	cks (3+	Axles):	15		
ν	ehicle Speed:	50 mph		H	Vehicle	Mix					
Near/Far L	ane Distance:	82 feet		H		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	72.0%	-	13.5%	94.33%
R	arrier Height:	0.0 feet			М	edium Ti	rucks:	76.2%	9.4%	14.4%	4.37%
Barrier Type (0-		0.0				Heavy Ti	rucks:	81.8%	7.7%	10.6%	1.30%
** '	Dist. to Barrier:	67.0 feet		-	Noise S	ouroo El	ovetio	na (in f	n a #1		
Centerline Dist	t. to Observer:	67.0 feet			Noise 3	Auto:			eu)		
Barrier Distance	e to Observer:	0.0 feet			11-4			0.000			
Observer Height	t (Above Pad):	5.0 feet				m Truck		2.297	0		
-	Pad Elevation:	0.0 feet			Hea	vy Truck	s: 8	3.004	Grade Ad	justment	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 53	3.226			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 53	3.059			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 53	3.076			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Bei	m Atten
Autos	3: 70.20	1.62		-0.5	51	-1.20		-4.71	0.0	000	0.000
Medium Trucks	81.00	-11.72		-0.4	19	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	85.38	-17.00		-0.4	19	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois	se Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos			67.9		67.0		61		69.8	-	70.3
Medium Trucks			65.6		62.5		59		67.4	-	67.8
Heavy Trucks			65.0		60.7		57		65.8		66.1
Vehicle Noise	e: 73	3.2	71.1		69.0		64	.8	72.7	7	73.2
Centerline Distar	nce to Noise C	ontour (in feet,	)					1			
			L	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		102		21	-	472		1,018
		CI	VEL:		109		23	6	508		1,094

	- FHV	WA-RD-77-108	HIGH	1 YAVVE	IOISE P	REDIC	ION M	ODEL			
	: OYP (2024 : Moreno Be : s/o Cactus	ach Dr.						: Alt1 M : 12975	oreno Valle	ey Trade	
	PECIFIC IN	IPUT DATA			0:4 0				L INPUT	s	
		22,425 vehicl 10.00% 2,242 vehicle 50 mph				dium Ti avy Tru	rucks (2	Autos: Axles): Axles):	15 15		
Near/Far Lane	Distance:	82 feet		-		icleTyp	e	Dav	Evening	Night	Dailv
Site Data	ier Height:	0.0 feet					Autos:	72.0%	14.6%	13.5%	94.35%
Barrier Type (0-Wai	II, 1-Berm):	0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.29%
Centerline Dist.		67.0 feet		1	Noise S	ource E	levatio	ns (in f	eet)		
	Observer: bove Pad):   Elevation:	0.0 feet 5.0 feet 0.0 feet			Hea	Auto m Truci vy Truci	ks: 2	0.000 2.297 3.004	Grade Adj	iustment	: 0.0
	l Elevation:	0.0 feet		1	Lane Eq				feet)		
	oad Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Auto m Truci y Truci	ks: 5	3.226 3.059 3.076			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.96		-0.5		-1.20		-4.71		000	0.00
Medium Trucks: Heavy Trucks:	81.00 85.38			-0.4 -0.4	-	-1.20 -1.20		-4.88 -5.29		000	0.00
Unmitigated Noise I	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType L	eq Peak Hou	ur Leq Day	V	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	69	).5	67.2		66.3		61	.2	69.1	ĺ	69.
Medium Trucks:	66		64.9		61.9			0.0	66.7		67.
Heavy Trucks:	66		64.3		60.1			5.7	65.1		65.
Vehicle Noise:	72		70.5		68.3		64	.1	72.1	I	72.
Centerline Distance	to Noise Co	ontour (in feet	)								
			L	70 (	dBA	65	dBA		60 dBA		dBA
		_	Ldn: NFL:		92 99		19		427		919
		C	IVEL:		99		21	3	459		988

		VA-RD-77-108	жопу		SIOL I I						
	o: OYP (2024)								oreno Valle	ey Trade	
	e: Moreno Bea					Job Nu	mber: 1	2975			
Road Segmen	it: s/o John F	Kennedy Dr.									
SITE S Highway Data	SPECIFIC IN	PUT DATA			Sito Con	NC ditions (F			L INPUT	S	
• •				-	nie con	uiuons (i					
Average Daily	. ,	26,724 vehicle	S					lutos:	15		
	Percentage:	10.00%				dium Truc		,	15		
	our Volume:	2,672 vehicles			He	avy Truck	s (3+ A	xles):	15		
	nicle Speed:	50 mph		١	/ehicle I	Иiх					
Near/Far Lar	ne Distance:	82 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Αι	tos:	72.0%	14.6%	13.5%	94.38
Ran	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.33
Barrier Type (0-Wa		0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.28
Centerline Dis	t. to Barrier:	67.0 feet			Inisa Sa	urce Ele	rations	(in fo	of)		
Centerline Dist. t	o Observer:	67.0 feet		-	10/36 00	Autos:		•	icij		
Barrier Distance t	o Observer:	0.0 feet			Modius	n Trucks:					
Observer Height (/	Above Pad):	5.0 feet				v Trucks:		104	Grade Ad	iustmant	. 0.0
Pa	d Elevation:	0.0 feet			ricav	y IIIUCKS.	0.0	104	Orace Au	ustment	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent L	Distanc	e (in t	eet)		
F	Road Grade:	0.0%				Autos:	53.2	226			
	Left View:	-90.0 degree	S		Mediur	n Trucks:	53.0	)59			
	Right View:	90.0 degree	S		Heav	y Trucks:	53.0	076			
FHWA Noise Mode	l Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	70.20	1.72		-0.51	I	-1.20		4.71	0.0	000	0.0
Medium Trucks:	81.00	-11.66		-0.49	9	-1.20		4.88	0.0	000	0.0
Heavy Trucks:	85.38	-16.94		-0.49	9	-1.20		-5.29	0.0	000	0.0
Unmitigated Noise	Levels (with	out Topo and b	arrier	atteni	uation)						
	Leq Peak Hou			Leq Ev	rening	Leq N	-		Ldn		NEL
Autos:	70	-	0.8		67.1		62.0		69.9		70
Medium Trucks:	67		5.7		62.6		59.7		67.5	-	67
Heavy Trucks:	66		5.1		60.8		57.4		65.8		66
Vehicle Noise:	73	.2 7	1.2		69.1		64.9		72.8	3	73
Centerline Distanc	e to Noise Co	ntour (in feet)									
			. L	70 d		65 dl		6	i0 dBA		dBA
			.dn:		103		222		479		1,03
		CN	EL:		111		239		515		1,10

Wednesday, November 4, 2020

	FHV	WA-RD-77-108	HIG	HWAY	NOISE PI	REDICTI	ON M	DDEL			
Road Na	rio: OYP (2024 me: Iris Av. ent: e/o Nason :	,						Alt1 M 12975	oreno Vall	ey Trade	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
Average Daily Peak Hou Peak I	r Percentage: Hour Volume: ehicle Speed:	30,241 vehicle 10.00% 3,024 vehicle 50 mph			Ме	dium Tru avy Truc	icks (2	Autos. Axles).	15 15		
Near/Far L	ane Distance:	82 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-V	arrier Height: Wall, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr		72.0% 76.2% 81.8%	9.4%		4.36%
Centerline D	ist. to Barrier:	67.0 feet			Noise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist Barrier Distance Observer Height	to Observer:	67.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks ry Trucks	s: 0 s: 2	.000 2.297 3.004	Grade Ad	ljustmen	t: 0.0
Ro	oad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos	s: 53	3.226	-		
	Left View: Right View:	-90.0 degre 90.0 degre				m Trucks ry Trucks		3.059 3.076			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	ten Be	rm Atten
Autos	70.20	2.26		-0.	51	-1.20		-4.71	0.	000	0.000
Medium Trucks	: 81.00	-11.09	1	-0.4	49	-1.20		-4.88	0.	000	0.000
Heavy Trucks	85.38	-16.37		-0.4	49	-1.20		-5.29	0.	000	0.000
Unmitigated Nois			barri	ier atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL
Autos			68.5		67.6		62		70.		71.0
Medium Trucks			66.2		63.2		60		68.	-	68.4
Heavy Trucks Vehicle Noise			65.6 71.8		61.4 69.6		58 65		66. 73.		66.8 73.8
Centerline Distar	nce to Noise Co	ontour (in foo	F)								
Centernile Distal	ice to Moise Co	ontour (III lee	9	70	dBA	65 (	dBA		60 dBA	55	dBA
			Ldn:		112	•	24	2	521	i .	1,122
		С	NEL:		121		26	0	560	)	1,207

Wednesday, November 4, 2020

	FHW	A-RD-77-108	HIGI	HWAY N	IOISE P	REDICTI	ON MC	DEL			
Road Name	o: OYP (2024) e: Iris Av. t: e/o Lasselle	St.					Name: umber:		oreno Valle	ey Trade	e
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily 1	Traffic (Adt): 4	12,646 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	10.00%			Me	edium Tru	ıcks (2	Axles):	15		
Peak Ho	our Volume:	4,265 vehicle	s		He	avy Truc	ks (3+	Axles):	15		
Veh	nicle Speed:	50 mph		1	Vehicle	Mix					
Near/Far Lar	ne Distance:	82 feet		F		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	72.0%	-	13.5%	6 94.28%
Ran	rier Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.49	6 4.41%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tr	ucks:	81.8%	7.7%	10.6%	6 1.31%
Centerline Dis		67.0 feet		1	Voise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist. t		67.0 feet				Autos	s: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Trucks	s: 2	.297			
Observer Height (/	,	5.0 feet			Hear	vy Trucks	s: 8	.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		1	Lane Eq	uivalent		_ •	feet)		
F	Road Grade:	0.0%				Autos		.226			
	Left View:	-90.0 degree				m Trucks		.059			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 53	.076			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		rm Atten
Autos:	70.20	3.75		-0.5		-1.20		-4.71		000	0.000
Medium Trucks:	81.00	-9.55		-0.49	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-14.83		-0.49		-1.20		-5.29	0.0	000	0.000
Unmitigated Noise							N 17 1- 4	_	Ldn		NEL
VehicleType Autos:	Leq Peak Hour		70.0	Leq E	ening 69.1		Night 64	0	71.	_	NEL 72.5
Medium Trucks:	69.1	_	67.8		64.7		61.	-	69.	-	69.9
	68.9	-	67.2		62.9		59.	-	68.	-	
Heavy Trucks:_ Vehicle Noise:	75.		73.3		71.2		66.		74.		68.3 75.3
Centerline Distanc	e to Noise Cor	ntour (in feet	)								
		,,		70 c	iBA	65 0	dBA	6	60 dBA	5	5 dBA
			Ldn:		142		305	5	657		1,416
		C	NEL:		152		328	3	707	•	1,522

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MODE	L		
Scenario Road Name Road Segment		•					t Name: Alt1 Number: 129	Moreno Valle 75	ey Trade	
SITE S	PECIFIC IN	NPUT DATA						DEL INPUT	S	
Highway Data				5	Site Cor	ditions	(Hard = 10,	Soft = 15)		
	ercentage: ur Volume:	36,283 vehicle 10.00% 3,628 vehicle					Auto rucks (2 Axle icks (3+ Axle	s): 15		
	cle Speed:	50 mph		١	/ehicle	Mix				
Near/Far Lane	Distance:	82 feet			Veh	icleType	e Day	y Evening	Night	Daily
Site Data							Autos: 72.	0% 14.6%	13.5%	94.25%
Rarr	ier Height:	0.0 feet			М	edium 7	rucks: 76.	2% 9.4%	14.49	4.43%
Barrier Type (0-Wa		0.0				Heavy 7	rucks: 81.	8% 7.7%	10.6%	1.31%
Centerline Dist	to Barrier:	67.0 feet		,	loise Si	ource F	levations (in	n feet)		
Centerline Dist. to	Observer:	67.0 feet		É	.0.00	Auto				
Barrier Distance to	Observer:	0.0 feet			Modiu	m Truck	0.000			
Observer Height (A	bove Pad):	5.0 feet				nn Truck vy Truck			iustmen	t· 0.0
Pad	l Elevation:	0.0 feet			rica	y mucr	13. 0.004	0,000,10	Juotimon	0.0
Road	l Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance (	in feet)		
Re	oad Grade:	0.0%				Auto	os: 53.226			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 53.059			
ı	Right View:	90.0 degre	es		Hea	vy Truck	ks: 53.076			
FHWA Noise Model	Calculation	s								
Vehicle Type	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier Att	en Be	rm Atten
Autos:	70.20	3.04		-0.51	ĺ	-1.20	-4.7	71 0.0	000	0.000
Medium Trucks:	81.00	-10.23		-0.49	9	-1.20	-4.8	38 0.0	000	0.000
Heavy Trucks:	85.38	-15.51		-0.49	9	-1.20	-5.2	29 0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)					
VehicleType L	eq Peak Hou	ur Leq Da	у	Leq Ev	ening	Leq	Night	Ldn	(	NEL
Autos:	71	1.5	69.3		68.4		63.3	71.2	2	71.8
Medium Trucks:	69	9.1	67.1		64.0		61.1	68.9	9	69.3
Heavy Trucks:	68	3.2	66.5		62.2		58.9	67.3	3	67.6
Vehicle Noise:	74	1.6	72.6		70.5		66.2	74.2	2	74.7
Centerline Distance	to Noise Co	ontour (in fee	t)							
				70 a	IBA	65	dBA	60 dBA	55	5 dBA
			Ldn:		127		274	591		1,273
		C	NEL:		137		295	635		1,369

	FHWA	A-RD-77-108	HIGH	VAY N	IOISE PF	REDICTIO	ом мо	DEL			
Scenario: OYP (; Road Name: Eucaly Road Segment: e/o Na	ptus A					Project N Job Nu			oreno Valle	ey Trade	
SITE SPECIFI	C INP	UT DATA			Sito Con	NC ditions (F			L INPUT	S	
	40. 4	4.004	_		site Com	uiuoiis (i					
Average Daily Traffic (Ad	,	1,664 vehicle	5			T		Autos:	15 15		
Peak Hour Percentag	, .	0.00%				dium Truc		,			
Peak Hour Volun		,166 vehicles			не	avy Truck	S (3+ A	ixies):	15		
Vehicle Spee		40 mph		١	/ehicle N	/lix					
Near/Far Lane Distant	ce:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	72.0%	14.6%	13.5%	94.36
Barrier Heig	ht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.35
Barrier Type (0-Wall, 1-Berl	n):	0.0			H	leavy Tru	cks:	81.8%	7.7%	10.6%	1.29
Centerline Dist. to Barri		50.0 feet		1	Voise So	urce Ele	vations	(in fe	et)		
Centerline Dist. to Observ	er:	50.0 feet				Autos		000	- /		
Barrier Distance to Observ	er:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (Above Pa	. ,	5.0 feet			Heav	v Trucks:	8.0	004	Grade Ad	iustmen	t: 0.0
Pad Elevation	on:	0.0 feet				,					
Road Elevation	on:	0.0 feet		L	ane Equ	ıivalent L			eet)		
Road Grad	de:	0.0%				Autos:					
Left Vie	W.	-90.0 degree	S			n Trucks:					
Right Vie	W.	90.0 degree	S		Heav	y Trucks:	43.9	966			
FHWA Noise Model Calcula											
VehicleType REME		raffic Flow	Dista		Finite		Fresn	_	Barrier Att		rm Atter
	6.51	-0.91		0.71		-1.20		-4.65		000	0.0
	7.72	-14.27		0.74		-1.20		-4.87		000	0.00
	2.99	-19.55		0.73	-	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels ( VehicleType Leg Peak			_				C		Ldn		NFL.
VehicleType Leq Peak Autos:	65.1	Leq Day	2.9	Leq Ev	ening 62.0	Leq N	1gnt 56.9		64.1		NEL 65
Autos: Medium Trucks:	63.0	-	12.9		57.9		55.0		62.6	-	63
	63.0	-	1.0		57.9		53.7		62.	-	62
Heavy Trucks: Vehicle Noise:	68.6		6.6		64.3		60.2		68.		68
			ט.ט		04.3		60.2		08.	1	68
Centerline Distance to Nois	e Con	tour (in feet)		70 c	iBA	65 dl	BA	6	0 dBA	55	dBA
		1	.dn:		38		81		174		37

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGHWA	AY N	OISE PI	REDICT	ION MO	DEL			
Road Nan	rio: OYP (2024 ne: Eucalyptus ent: e/o Fir Av.						Name: I lumber:		loreno Valle	y Trade	
SITE	SPECIFIC IN	IPUT DATA					NOISE N	/ODE	EL INPUTS	;	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt):	17,975 vehicle	s		Ме	dium Tr	ucks (2 A	Autos Axles)			
	Hour Volume:	1.797 vehicles	,		He	avy Tru	cks (3+ A	(xles	: 15		
Ve	ehicle Speed:	40 mph			/ehicle l						
Near/Far La	ane Distance:	48 feet		-		viix icleType		Dav	Evening	Night	Dailv
Site Data				_	ven			72.09		13.5%	. ,
				-		edium T		76.29		14.4%	
	rrier Height:	0.0 feet				Heavy T		81.89		10.6%	
Barrier Type (0-V	. ,	0.0			,	neavy i	rucks.	01.07	0 1.170	10.6%	1.2970
	ist. to Barrier:	50.0 feet		٨	loise So	ource E	levation	s (in f	eet)		
Centerline Dist.		50.0 feet				Auto	s: 0.0	000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2.5	297			
Observer Height		5.0 feet			Heav	y Truck	s: 8.0	004	Grade Adju	ustmen	t: 0.0
	Pad Elevation:	0.0 feet					4 Di-4	/:	£4\		
	ad Elevation:	0.0 feet			.ane ⊑q		t Distand		reet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				m Truck		947			
	Right View:	90.0 degree	S		Heav	ry Truck	s: 43.	966			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	iel .	Barrier Atte	n Be	rm Atten
Autos:	66.51	0.97		0.71		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	77.72	-12.38		0.74	ļ.	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-17.66		0.73	3	-1.20		-5.43	0.0	00	0.000
Unmitigated Nois			barrier a	ttenı	uation)						
VehicleType	Leq Peak Hou			q Ev	ening	Leq	Night		Ldn		NEL
Autos:			64.8		63.8		58.7		66.6		67.2
Medium Trucks:			52.9		59.8		56.9		64.7		65.1
Heavy Trucks:			53.2		58.9		55.6		64.0		64.3
Vehicle Noise:	70	).5	58.5		66.2		62.0	)	70.0		70.5
Centerline Distan	ce to Noise Co	ontour (in feet)		70 d	·D.4	C.F.	dBA	_	CO -ID 4	-	i dBA
			dn:	ı u a	<i>BA</i> 50	05	<i>ава</i> 108	<u> </u>	60 dBA 233	55	501
		-	Lan: IFL:		54		116		250		538
		Cr	ICL.		54		116		250		538

ednesday, November 4, 2020

	FH	WA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MC	DEL			
Road Nar	rio: OYP (2024 ne: Eucalyptus ent: w/o Moren	Av.					Name: umber:		oreno Valle	ey Trade	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	9,534 vehicle	es					Autos:	15		
Peak Hour	r Percentage:	10.00%				dium Tr					
Peak I	Hour Volume:	953 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	40 mph			Vehicle I	Mix					
Near/Far La	ane Distance:	48 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	72.0%	14.6%	13.5%	96.15%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	2.97%
Barrier Type (0-V		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	0.88%
	ist. to Barrier:	50.0 feet		-							
Centerline Dist.		50.0 feet		1	Voise So				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
-	Pad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justment	: 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44	.147			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	.947			
	Right View:	90.0 degree	es		Heav	y Truck	s: 43	.966			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	66.51	-1.70		0.7	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-16.81		0.7	4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-22.09		0.7	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	/ening	Leq	Night		Ldn	С	NEL
Autos:	64	1.3	62.1		61.2		56.	1	64.	0	64.5
Medium Trucks:	: 60	0.4	58.5		55.4		52.	5	60.	2	60.6
Heavy Trucks:	60	).4	58.8		54.5		51.	1	59.	5	59.9
Vehicle Noise:	66	3.9	64.9		62.9		58.	5	66.	5	67.0
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 c	IBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		29		63	3	135	5	291
		C	NEL:		31		68	3	146	;	314

Site Data   Autos: 72.0%   14.6%   13.5%   90.5		FH	WA-RD-77-108	HIGHV	VAY N	DISE P	REDICT	TION MO	DEL			
Autos: 15   Autos: 17   Autos: 18   Auto	Road Nam	e: Eucalyptus	Av.								y Trade	
Average Daily Traffic (Adt): 5,414 vehicles   Peak Hour Percentage: 10,00%   Medium Trucks: (2 Axles): 15   Vehicle Speed: 40 mph   Vehicle Speed: 40 mph   Vehicle Speed: 40 mph   Vehicle Type   Day   Evening   Night   Dail String   Night   Dail String   Night   SITE	SPECIFIC II	NPUT DATA					NOISE	MODE	L INPUTS	3		
Peak Hour Percentage: 10,00%   Peak Hour Volume: 541 vehicles   Peak Hour Volume: 541 vehicles   Seed: 40 mph Vehicle Speed: 40 mph Vehicle Fixed: 48 feet   Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type   Day   Evening   Night   Dai Vehicle Mix Vehicle	Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Near/Far Lane Distance:   48 feet     Vehicle MIX   Vehicle Type   Day   Evening   Night   Dai   Site Data     Nutrice Type   O-04     Autos: 72.0%   14.6%   13.5%   90.5     Nutrice Type   O-Wall, 1-Berm):   0.0   Heavy Trucks: 81.8%   7.7%   10.6%   5.7   Nutrice Type   O-Wall, 1-Berm):   50.0 feet   So.0 feet   So.0 feet   So.0 feet   So.0 feet   So.0 feet   So.0 feet   Autos: 0.000   Medium Trucks: 2.297   Heavy Trucks: 8.004   Grade Adjustment: 0.0   Medium Trucks: 2.297   Heavy Trucks: 8.004   Grade Adjustment: 0.0   Medium Trucks: 2.297   Heavy Trucks: 43.947   Heavy Trucks: 43.946   Heavy Trucks: 43.947   Peak Hour Peak H	Percentage: lour Volume:	10.00% 541 vehicle			He	avy Tru	rucks (2	Axles)	15			
Site Data					ν							
Barrier Height:   0.0   feet   Barrier Type (0-Wall, 1-Berm):   0.0   Centerline Dist. to Barrier:   50.0   feet   Centerline Dist. to Observer:   50.0   feet   Centerline Dist.   C	iveai/i ai La	ne Distance.	40 1661			Veh	icleType	е	Day	Evening	Night	Daily
Barrier Type (C-Wall, 1-Berm): 0.0   Centerline Dist. to Barrier: 50.0   feet Centerline Dist. to Observer: 50.0   feet Barrier Distance to Observer: 0.0   feet Pad Elevation: 0.0   feet Pad Elevati	Site Data							Autos:			13.5%	90.53%
Noise Source Elevations (in feet)	Bai	rrier Height:	0.0 feet			М	edium 7	rucks:	76.29	9.4%	14.4%	3.73%
Centerline Dist. to Observer:   50.0 feet	Barrier Type (0-W	'all, 1-Berm):	0.0			- 1	Heavy 7	rucks:	81.89	7.7%	10.6%	5.74%
Centerline Dist. to Observer:   50.0 feet   Barrier Distance to Observer:   0.0 feet   Distance to Observer:   0.0 feet   Distance to Observer:   0.0 feet   Pad Elevation:   0.0 feet   Road Grade:   0.0 feet   Road Grade:   0.0 feet   Elevation:   0.0 feet   Road Grade:   0.0 feet   Elevation:   Elevation:   0.0 feet   Elevation:   Elevat	Centerline Di	st. to Barrier:	50.0 feet			laica S	ourco E	lovation	e (in f	iont)		
Barrier Distance to Observer: 0.0 feet   Observer Height (Above Pad): 5.0 feet   Pad Elevation: 0.0 feet   Road Grade: 0.0%   Lane Equivalent Distance (in feet)   Lane Eq	Centerline Dist.	to Observer:	50.0 feet		- 1	UISE S				eeu		
Distance   Height (Above Pad):   5.0   feet   Heavy Trucks:   8.004   Grade Adjustment:   0.0    Barrier Distance	to Observer:	0.0 feet			A 4 45 - 1							
Pad Elevation: 0.0 feet   Road Glevation: 0.0 feet   Road Glevation: 0.0 feet   Road Glade: 0.0%   Left View: 90.0 degrees   Right View: 90.0 degrees   Heavy Trucks: 43.947   Heavy Trucks: 43.946   Heavy Trucks: 43.966   Heavy Trucks: 77.72   -18.28   0.71   -1.20   -4.65   0.000   0.000   0.000   Heavy Trucks: 82.99   -16.40   0.73   -1.20   -4.65   0.000   0.000   0.000   Heavy Trucks: 82.99   -16.40   0.73   -1.20   -5.43   0.000   0.000   0.000   Heavy Trucks: 82.99   -16.40   Deavy Trucks: 82.99   -16.40   0.73   -1.20   -5.43   0.000   0.000   0.000   Heavy Trucks: 61.6   59.4   58.5   53.3   61.2   60.000   Heavy Trucks: 61.6   59.4   58.5   53.3   61.2   60.000   Heavy Trucks: 66.1   64.5   60.2   56.8   65.2   60.000   60.2   60.000   60.2   60.000   60	Observer Height (	Above Pad):	5.0 feet							Grade Adi	uctmont	. 0.0
Road Grade: 0.0%	Pa	ad Elevation:	0.0 feet			nea	y iruci	(S: 8.	004	Grade Auj	ustinent	. 0.0
Left View: -90.0 degrees   Right View: 90.0 degrees   Right View: 90.0 degrees   Heavy Trucks: 43.947	Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
FHWA Noise Model Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten   Autos: 66.51   -4.42   0.71   -1.20   -4.65   0.000   0.00   0.000   0.	1	Road Grade:	0.0%				Auto	os: 44.	147			
FHWA Noise Model Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten   Berm Atten   Medium Trucks:   1.20   -4.65   0.000   0.000   0.00000   0.0000   0.0000   0.0000   0.0000   0.0000   0.0000   0.00000   0.0000   0.0000   0.0000   0.0000   0.0000   0.0000   0.00000   0.0000   0.0000   0.0000   0.0000   0.0000   0.0000   0.00000   0.0000   0.0000   0.0000   0.0000   0.0000   0.0000   0.00000   0.00000   0.0000   0.0000   0.0000   0.0000   0.0000   0.0000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.00000   0.000000   0.00000   0.000000   0.000000   0.000000   0.0000000   0.0000000   0.00000000		Left View:	-90.0 degre	es		Mediu	m Truck	ks: 43	947			
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -4.42         0.71         -1.20         -4.65         0.000         0.0           Medium Trucks:         77.72         -18.28         0.74         -1.20         -4.87         0.000         0.0           Heavy Trucks:         82.99         -16.40         0.73         -1.20         -5.43         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.4         58.5         53.3         61.2         6           Medium Trucks:         59.0         57.0         53.9         51.0         58.8         5           Heavy Trucks:         66.1         64.5         60.2         56.8         65.2         6           Vehicle Noise:         68.0         66.2         63.0         59.2         67.3         6           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA		Right View:	90.0 degre	es		Heav	y Truck	ks: 43	966			
Autos: 66.51	FHWA Noise Mode	el Calculation	IS									
Medium Trucks:         77.72         -18.28         0.74         -1.20         -4.87         0.000         0.01           Heavy Trucks:         82.99         -16.40         0.73         -1.20         -5.43         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.4         58.5         53.3         61.2         6           Medium Trucks:         59.0         57.0         53.9         51.0         58.8         5           Heavy Trucks:         66.1         64.5         60.2         56.8         65.2         6           Vehicle Noise:         68.0         66.2         63.0         59.2         67.3         6           Centerline Distance to Noise Contour (in feet)           Ldn:         33         72         154         33	VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Atte	en Bei	m Atten
Heavy Trucks:     82.99   -16.40   0.73   -1.20   -5.43   0.000   0.11	Autos:	66.51	-4.42		0.71		-1.20		-4.65	0.0	00	0.00
Unmitigated Noise   Levels (without Topo and barrier attenuation)	Medium Trucks:	77.72	-18.28		0.74		-1.20		-4.87	0.0	00	0.00
VehicleType	Heavy Trucks:	82.99	-16.40		0.73		-1.20		-5.43	0.0	00	0.00
Autos:         61.6         59.4         58.5         53.3         61.2         6           Medium Trucks:         59.0         57.0         53.9         51.0         58.8         65.2         6           Heavy Trucks:         66.1         64.5         60.2         56.8         65.2         6           Vehicle Noise:         68.0         66.2         63.0         59.2         67.3         6           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         33         72         154         3				barrier	attenu	ıation)						
Medium Trucks:         59.0         57.0         53.9         51.0         58.8         58.8           Heavy Trucks:         66.1         64.5         60.2         56.8         65.2         68.0           Vehicle Noise:         68.0         66.2         63.0         59.2         67.3         66.2           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         33         72         154         33	VehicleType	Leq Peak Ho	ur Leq Da		Leq Ev	ening	Leq					NEL
Heavy Trucks:   66.1   64.5   60.2   56.8   65.2   67.3   68.0   68.0   66.2   63.0   59.2   67.3   68.0		-							-			61.8
Vehicle Noise:         68.0         66.2         63.0         59.2         67.3         6           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         33         72         154         3									-			59.
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         33         72         154         3												65.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 33 72 154 3	Vehicle Noise:	68	3.0	66.2		63.0		59.	2	67.3		67.
Ldn: 33 72 154 3	Centerline Distant	e to Noise C	ontour (in fee	)	70 '	D.4		-104		CO -ID 4		-/0.4
				Later	/U di		65				55	
CNEL: 35 /6 164 3												332 354
			C	NEL:		35		/6		164		354

	- FH	WA-RD-77-108	HIGH	WAY N	DISE PI	REDICT	ON MO	DEL			
	o: OYP (2024 e: Eucalyptus t: e/o Dwy. 1	,					Name: . umber:		oreno Valle	y Trade	
	PECIFIC II	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily 1	raffic (Adt):	6,756 vehicl	es					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	dium Tru	ıcks (2 /	Axles):	15		
Peak Ho	our Volume:	676 vehicle	S		He	avy Truc	cks (3+ )	Axles):	15		
	icle Speed:	40 mph		ν	ehicle l	Wix					
Near/Far Lan	e Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	72.0%	14.6%	13.5%	86.189
Ban	rier Heiaht:	0.0 feet			M	edium Ti	ucks:	76.2%	9.4%	14.4%	4.219
Barrier Type (0-Wa	all, 1-Berm):	0.0			I	Heavy Ti	ucks:	81.8%	7.7%	10.6%	9.619
Centerline Dis	t. to Barrier:	50.0 feet			laisa Sa	ource El	ovation	e (in f	not)		
Centerline Dist. t	o Observer:	50.0 feet		-	0/36 00	Auto:		000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck:		297			
Observer Height (A	Above Pad):	5.0 feet				v Truck		004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		147			
	Left View:	-90.0 degre				m Truck		947			
	Right View:	90.0 degre	es		Heav	y Truck:	s: 43.	966			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow		tance		Road	Fresr		Barrier Atte		m Atten
Autos:	66.51			0.71		-1.20		-4.65	0.0		0.00
Medium Trucks:	77.72			0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise			_							_	
VehicleType Autos:	Leq Peak Ho	ur Leq Day	60.1	Leq Ev	ening 59.2	_	Night 54.1		Ldn 62.0		NEL 62
Medium Trucks:		1.5	58.5		55.4		52.f		60.3		60
Heavy Trucks:		9.3	67.7		63.4		60.0	-	68.4		68.
Vehicle Noise:		).6	68.8		65.3		61.6		69.8		70.
Centerline Distanc	e to Noise C	ontour (in feet	)								
		(		70 d	BA	65	dBA	(	60 dBA	55	dBA
			Ldn:		49		105		226		48
					70						

Wednesday, November 4, 2020

FH	WA-RD-77-108 H	HIGHWAY	NOISE P	REDICT	ION MOD	EL		
Scenario: OYP (2024 Road Name: Eucalyptus Road Segment: w/o Dwy. 5	Av.				Name: Al umber: 12		eno Valley <sup>*</sup>	Trade
SITE SPECIFIC IN	IPUT DATA						INPUTS	
Highway Data			Site Con	ditions	(Hard = 1	0, Soft	! = 15)	
Average Daily Traffic (Adt):	6,476 vehicles	3				ıtos:	15	
Peak Hour Percentage:	10.00%				ucks (2 Ax	/	15	
Peak Hour Volume:	648 vehicles		He	avy Truc	cks (3+ Ax	les):	15	
Vehicle Speed:	40 mph		Vehicle	Mix				
Near/Far Lane Distance:	48 feet		Veh	icleType	D	ay E	ening N	light Daily
Site Data				,	Autos: 7	2.0%	14.6% 1	3.5% 88.65%
Barrier Height:	0.0 feet		М	edium Ti	rucks: 7	6.2%	9.4% 1	4.4% 4.27%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Ti	rucks: 8	1.8%	7.7% 1	0.6% 7.08%
Centerline Dist. to Barrier:	50.0 feet		Noise S	ource El	evations	(in fee	t)	
Centerline Dist. to Observer:	50.0 feet			Auto	s: 0.00	00	,	
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck	s: 2.29	97		
Observer Height (Above Pad):	5.0 feet		Heav	y Truck	s: 8.00	)4 (	Grade Adjus	tment: 0.0
Pad Elevation:	0.0 feet							
Road Elevation:	0.0 feet		Lane Eq		Distance	•	et)	
Road Grade:	0.0%			Auto				
Left View:	-90.0 degrees			m Truck	- 10.0			
Right View:	90.0 degrees	3	near	y Truck	s: 43.96	96		
FHWA Noise Model Calculation			•					
VehicleType REMEL	Traffic Flow	Distance		Road	Fresne		arrier Atten	Berm Atten
Autos: 66.51		-	.71	-1.20		1.65	0.000	
Medium Trucks: 77.72		-	.74	-1.20		1.87	0.000	
Heavy Trucks: 82.99			.73	-1.20	-4	5.43	0.000	0.000
Unmitigated Noise Levels (with					T			01/5/
VehicleType Leq Peak Hot Autos: 62		0.1	Evening 59.1	,	Night 54.0	L	.dn 61.9	CNEL 62.5
		0.1 8.4	55.3		52.4		60.1	60.5
		6.4 6.2	61.9		58.5		66.9	67.3
		7.7	64.3		60.6		68.8	69.2
Centerline Distance to Noise Co	ontour (in feet)							
		70	0 dBA	65	dBA	60	dBA	55 dBA
	L	dn:	41		89		192	413
	CN	EL:	44		95		204	439

dnesday, November 4, 2020

	FH\	WA-RD-77-108	HIGI	A YAWH	NOISE P	REDICT	ION MO	DDEL			
	o: OYP (2024 e: Eucalyptus it: w/o Redlan	Av.					t Name: lumber:		oreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	5,444 vehicle	es					Autos:			
Peak Hour I	Percentage:	10.00%					rucks (2				
Peak Ho	our Volume:	544 vehicle	S		He	eavy Tru	cks (3+	Axles).	15		
	nicle Speed:	40 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		F	Ver	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	95.95%
Ban	rier Heiaht:	0.0 feet			M	ledium 7	rucks:	76.2%	9.4%	14.49	3.13%
Barrier Type (0-Wa		0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	0.93%
Centerline Dis		50.0 feet			Noise S	ource E	levation	ns (in f	eet)		
Centerline Dist. t		50.0 feet				Auto	s: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (A	Above Pad): d Elevation:	5.0 feet 0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%				Auto		.147	,		
,	Left View:	-90.0 degree	26		Mediu	m Truck		947			
	Right View:	90.0 degree			Hea	vy Truck	s: 43	.966			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-4.15		0.7	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-19.02		0.7		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99			0.7		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise			_								
	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:	61		59.7		58.7		53.	-	61.		62.1
Medium Trucks:	58	-	56.3		53.2		50.	-	58.0		58.4
Heavy Trucks:	58		56.6		52.3		48.	-	57.3		57.7
Vehicle Noise:	64		62.6		60.5	)	56.	2	64.	I	64.6
Centerline Distanc	e to Noise Co	ontour (in feet	)	70 /	dBA	65	dBA	Τ.	60 dBA	5	5 dBA
			Ldn:	,,,,	20	- 55	44		94		203
			NEL:		20		4		102		203
		O.	•		22				102		213

	o: OYP (2024 e: Eucalyptus						t Name. Number.		oreno Valle	ey Trade	
Road Segmer	nt: e/o Redlan	ds Blvd.									
SITE	SPECIFIC IN	NPUT DAT	A				NOISE	MODE	L INPUT	s	
Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	6,042 veh	icles					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Ti	rucks (2	Axles):	15		
Peak H	our Volume:	604 vehi	cles		He	eavy Tru	icks (3+	Axles):	15		
Vei	hicle Speed:	40 mph		-	Vehicle	Miv					
Near/Far Lar	ne Distance:	48 feet		F.		icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	-	13.5%	
Rar	rier Heiaht:	0.0 fee	+		M	ledium 1	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		50.0 fee	t	١,	Vaina C	ource E	lovetio	na (in f	n a #1		
Centerline Dist.	to Observer:	50.0 fee		,	voise 3				eu)		
Barrier Distance	to Observer:	0.0 fee			A 4 6:	Auto m Truck		0.000 2.297			
Observer Height (	Above Pad):	5.0 fee						3.004	Grade Ad	iuctmont	. 0.0
Pa	d Elevation:	0.0 fee			неа	vy Truck	(5: 6	3.004	Grade Au	Justinent	. 0.0
Roa	d Elevation:	0.0 fee		I	Lane Eq	uivalen	t Dista	nce (in i	feet)		
F	Road Grade:	0.0%				Auto	os: 44	1.147			
	Left View:	-90.0 deg	rees		Mediu	m Truck	ks: 43	3.947			
	Right View:	90.0 deg	rees		Hea	vy Truci	ks: 40	3.966			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flo	v D	istance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	66.51	-3.	77	0.7	1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-17.	04	0.74	4	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-22.	32	0.73	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo a	nd barr	ier atten	uation)						
	Leq Peak Ho			Leq Ev			Night		Ldn		NEL
Autos:		2.2	60.0		59.1		54		61.9		62.
Medium Trucks:		0.2	58.2		55.2		52		60.0		60.4
Heavy Trucks:		).2	58.5		54.3		50		59.3		59.
Vehicle Noise:	65	5.8	63.8		61.5	,	57	.3	65.3	3	65.
Centerline Distanc	e to Noise C	ontour (in f	eet)								
				70 c		65	dBA		60 dBA		dBA
			Ldn:		24		5	3 6	113 121		244 262
			CNFL:		26						

Road Nam	no: OYP (2024 ne: Encilia Av. nt: e/o Essen	,					Name: A umber: 1		reno Valle	y Trade	
	SPECIFIC IN	IPUT DATA			04- 0				LINPUT	S	
Highway Data	- m	111			Site Con	aitions	(Hard = 1				
Average Daily	. ,	873 vehicle	es			-ti T		utos:	15 15		
	Percentage:	10.00% 87 vehicles					icks (2 A: ks (3+ A:		15		
			5		пе	avy IIu	KS (3+ A)	ries).	10		
	hicle Speed: ne Distance:	45 mph 36 feet		1	Vehicle I	Иіх					
Near/Far La	ine Distance:	36 Teet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	Autos: 7	2.0%	14.6%	13.5%	98.429
Ba	rrier Height:	0.0 feet				edium Ti		6.2%		14.4%	
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Ti	rucks: 8	1.8%	7.7%	10.6%	0.369
Centerline Di	st. to Barrier:	44.0 feet			Noico Sc	urco El	evations	(in fo	ofl		
Centerline Dist.	to Observer:	44.0 feet		· · · · · · ·	WOISE SC	Auto:		•	eij		
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck:					
Observer Height	(Above Pad):	5.0 feet				y Truck			Grade Ad	iustmant	. 0 0
P	ad Elevation:	0.0 feet			ricav	y mack.	3. 0.0	0-1	0/440/14)	dolimom	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos	s: 40.4	60			
	Left View:	-90.0 degree	es		Mediui	n Trucks	s: 40.2	41			
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.2	62			
FHWA Noise Mod	el Calculation										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite		Fresne		Barrier Atte		m Atten
Autos:				1.2		-1.20		4.61		000	0.00
Medium Trucks:				1.3		-1.20		4.87		000	0.00
Heavy Trucks:	84.25	-36.84		1.3	1	-1.20	-	5.50	0.0	000	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Hot		_	Leq E	vening	Leq	Night		Ldn		NEL
Autos:			53.8		52.9		47.8		55.7		56.
Medium Trucks:			46.0		43.0		40.0		47.8		48.
Heavy Trucks:			45.9		41.6		38.2		46.6		47.
Vehicle Noise:	57	'.2	55.0		53.6		48.9		56.8	3	57.
Centerline Distan	ce to Noise C	ontour (in feet)	)	70 (	AD A	65	dBA	_	0 dBA		dBA
			Ldn:	700	лом 6	00 (	12 12	0	27	55	UDA 51

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE PI	REDICTI	ON M	ODEL			
Road Nai	rio: OYP (2024) me: Encilia Av. ent: e/o Mozart							Alt1 N	loreno Vall	ey Trad	Э
	SPECIFIC IN	PUT DATA			Site Con				EL INPUT	s	
Highway Data	- m	4.070 1:1			Site Con	uilions	паги	Autos			
Average Daily	r Percentage:	1,678 vehicle	es		Mo	dium Tru	icks (2				
	Hour Volume:	168 vehicle:				avy Truc		,			
	ehicle Speed:	45 mph	3				, ro (o .	Axics	. 10		
	ane Distance:	36 feet			Vehicle I						
	une Distance.	30 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	72.09		13.59	
Ba	arrier Height:	0.0 feet				edium Tr		76.29			
Barrier Type (0-V		0.0			- 1	Heavy Tr	ucks:	81.89	6 7.7%	10.69	6 0.19%
	ist. to Barrier:	44.0 feet			Noise So	ource Ele	evatio	ns (in i	eet)		
Centerline Dist		44.0 feet				Autos		0.000	,		
Barrier Distance		0.0 feet			Mediu	m Trucks		2.297			
Observer Height	. ,	5.0 feet				y Trucks		3.004	Grade Ad	ljustmer	t: 0.0
-	Pad Elevation:	0.0 feet									
Ro	oad Elevation:	0.0 feet			Lane Eq				feet)		
	Road Grade:	0.0%				Autos		0.460			
	Left View:	-90.0 degree				m Trucks		).241			
	Right View:	90.0 degree	es		Heav	y Trucks	5: 4(	0.262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		rm Atten
Autos		-9.63		1.3		-1.20		-4.61		000	0.000
Medium Trucks		-31.56		1.0		-1.20		-4.87		000	0.000
Heavy Trucks		-36.84			31	-1.20		-5.50	0.	000	0.000
Unmitigated Nois VehicleType	Leg Peak Hou				nuation) Evening	l ea	Night		Ldn		CNFL
Autos			56.7	2092	55.8	204	50	.7	58.		59.1
Medium Trucks			46.0		43.0		40		47.		48.2
Heavy Trucks	: 47	.5	45.9		41.6		38	.2	46.	6	47.0
Vehicle Noise			57.4		56.1		51		59.	2	59.7
Centerline Distar	ice to Noise Co	ntour (in feet,	)							_	
			L	70	dBA	65 (	dBA		60 dBA		5 dBA
			Ldn:		8			8	39		83
		Ci	NEL:		9		2	0	42	2	91

	FH\	WA-RD-77-108	HIGI	1 YAWH	NOISE P	REDICT	ION MC	DEL			
Road Na	ario: OYP (2024 me: Encilia Av. ent: w/o Redlan	,					Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				-	Site Cor	iditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	3,112 vehicle	es					Autos:			
Peak Hou	ır Percentage:	10.00%				edium Tr					
Peak	Hour Volume:	311 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
1	/ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far L	.ane Distance:	36 feet			Veh	icleType	•	Dav	Evenina	Night	Dailv
Site Data							Autos:	72.0%			99.03%
	arrier Height:	0.0 feet			М	edium T		76.2%		14.4%	
Barrier Type (0-		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	0.22%
** '	Dist. to Barrier:	44.0 feet		-							
	t. to Observer:	44.0 feet		<u> </u>	Noise S				eet)		
Barrier Distanc		0.0 feet				Auto		.000			
Observer Heigh	t (Above Pad):	5.0 feet				m Truck		.297			
	Pad Elevation:	0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justment	: 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 40	.460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 40	.262			
FHWA Noise Mo		s									
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		m Atten
Autos		-6.95		1.2	-	-1.20		-4.61		000	0.000
Medium Trucks				1.3		-1.20		-4.87		000	0.000
Heavy Trucks				1.3		-1.20		-5.50	0.0	000	0.000
Unmitigated Noi VehicleType	se Levels (with	-	_		vening	Log	Night	Т	Ldn		NEL
Autos			59.4	LUG L	58.4		53.	3	61.2		61.8
Medium Trucks			49.4		46.3		43.		51.2		51.6
Heavy Trucks			49.2		45.0		41.		50.0		50.4
Vehicle Noise			60.2		58.9		54.		61.9		62.5
Centerline Dista	nce to Noise Co	ontour (in feet	)							_	
			[	70	dBA	65	dBA		60 dBA		dBA
		_	Ldn:		13		27		59		127
		C	NEL:		14		30	)	64		139

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	JDEL			
	o: OYP (2024) e: Alessandro et: e/o Lasselle	Blvd.					Name: lumber:		oreno Valle	y Trade	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Cor	nditions	(Hard :	= 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	18,394 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	10.00%			Me	edium Tr	ucks (2	Axles):	15		
Peak Ho	our Volume:	1,839 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Veh	nicle Speed:	50 mph		ı	/ehicle	Mix					
Near/Far Lar	ne Distance:	82 feet		F		icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.32%
Ban	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.38%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.30%
Centerline Dis	t. to Barrier:	67.0 feet		^	loise S	ource E	levatio	ns (in fe	et)		
Centerline Dist. t	o Observer:	67.0 feet				Auto		0.000	.,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet				•					
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen		_ •	eet)		
F	Road Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degre	es			m Truck	00	3.059			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 53	3.076			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	0.10		-0.51		-1.20		-4.71		000	0.00
Medium Trucks:	81.00	-13.23		-0.49		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-18.51		-0.49		-1.20		-5.29	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			Leq Ev		,	Night		Ldn		NEL
Autos:	68		66.4		65.5		60		68.2	-	68.
Medium Trucks:	66		64.1		61.0		58		65.9		66.
Heavy Trucks:	65		63.5		59.2		55		64.3		64.I
Vehicle Noise:	71		69.6		67.5	1	63	.3	71.2	<u> </u>	71.
Centerline Distanc	e to Noise Co	ntour (in feet	)	70 d	IRΔ	65	dBA	-	0 dBA	55	dBA
			L	, , , u		1 33	J-//	_		1 33	32/1
			Ldn:		81	•	17	4	375		807

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PI	REDICTI	ON MO	DEL			
	o: OYP (2024 e: Alessandro nt: e/o Nason	Blvd.					Name: I Imber:		oreno Valle	y Trade	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	Site Con	ditions (	Hard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	17,786 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	(xles	15		
Peak H	our Volume:	1,779 vehicle	S		He	avy Truc	ks (3+ A	Axles):	15		
Vei	hicle Speed:	50 mph		v	/ehicle l	Mix					
Near/Far Lar	ne Distance:	58 feet		F		icleType		Dav	Evenina	Night	Dailv
Site Data							utos:	72.0%	14.6%	13.5%	94.349
Par	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.37%
Barrier Type (0-W		0.0			- 1	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.299
Centerline Dis	. ,	55.0 feet		-					_		
Centerline Dist		55.0 feet		^	loise So	ource Ele			et)		
Barrier Distance	to Observer:	0.0 feet				Autos		000			
Observer Height (	Above Pad):	5.0 feet				m Trucks		297	0	4 4	
	ad Elevation:	0.0 feet			Heav	y Trucks	. 8.0	004	Grade Adj	ustment.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in t	eet)		
F	Road Grade:	0.0%				Autos	: 47.	000			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 46.	811			
	Right View:	90.0 degre	es		Heav	y Trucks	46.	830			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn	_	Barrier Atte		m Atten
Autos:	70.20	-0.05		0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00	-13.39		0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-18.67		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise											
,,	Leq Peak Hou			Leq Ev		Leq I			Ldn		NEL
Autos:	69		67.0		66.1		61.0		68.9		69.
Medium Trucks:	66 65		64.8		61.7		58.8 56.5		66.5 64.9		66.
Heavy Trucks: Vehicle Noise:	72		70.3		59.9 68.2		63.9		71.9		65. 72.
Centerline Distanc	e to Noise Co	ntour (in feet	)								
		,		70 d	BA	65 c	iBA	6	0 dBA	55	dBA
			Ldn:		70		158	•	340	•	733
			Lan:		73		158		340		100

Wednesday, November 4, 2020

		IIIGIIWA	Y NOISE P	KEDICI	ION MO	DEL			
Scenario: OYP (202 Road Name: Alessand Road Segment: e/o More	ro Blvd.				Name: I lumber:		loreno Valle	y Trade	
SITE SPECIFIC	NPUT DATA						L INPUT	S	
Highway Data			Site Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt):	8,192 vehicle	S				Autos			
Peak Hour Percentage:					ucks (2 A	/			
Peak Hour Volume:	819 vehicles	;	He	eavy Tru	cks (3+ A	Axles)	: 15		
Vehicle Speed:	50 mph		Vehicle	Mix					
Near/Far Lane Distance:	58 feet		Veh	icleType	,	Day	Evening	Night	Daily
Site Data				,	Autos:	72.09	6 14.6%	13.5%	94.61%
Barrier Height:	0.0 feet		М	edium T	rucks:	76.29	6 9.4%	14.4%	4.16%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy T	rucks:	81.89	6 7.7%	10.6%	1.23%
Centerline Dist. to Barrier:	55.0 feet		Noise S	ource F	levation	s (in i	eet)		
Centerline Dist. to Observer:	55.0 feet		110,000	Auto		000	000		
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck	0.	297			
Observer Height (Above Pad):				vy Truck		004	Grade Ad	iustmen	t: 0.0
Pad Elevation:	0.0 1001			•					
Road Elevation:			Lane Eq				feet)		
Road Grade:	0.070			Auto					
Left View:				m Truck	10.	811			
Right View:	90.0 degree	s	Hea	vy Truck	s: 46.	830			
HWA Noise Model Calculation									
VehicleType REMEL	Traffic Flow	Distanc		Road	Fresn		Barrier Atte		rm Atten
Autos: 70.2			0.30	-1.20		-4.67		000	0.000
Medium Trucks: 81.0			0.33	-1.20		-4.87		000	0.000
Heavy Trucks: 85.3			0.32	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise Levels (with VehicleType Leg Peak H			tenuation) Evening	Loc	Night		Ldn		NEL
		33.7	62.8		Nigrit 57.7	,	65.5		66.1
		31.2	58.1		55.2		63.0		63.3
		30.6	56.3		52.9		61.3		61.7
		66.8	64.7		60.5	_	68.4		68.9
Centerline Distance to Noise	Contour (in feet)	_							
			70 dBA	65	dBA		60 dBA	55	5 dBA
	-	Ldn:	43		93		200		431
	C/V	IFL:	46		100		215		463

	FH	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION MO	DDEL			
Road Nam	io: GPBO (20- ne: San Timote nt: n/o Alessa	eo Canyon Rd.					Name: lumber:		oreno Vall	ey Trad	е
SITE Highway Data	SPECIFIC II	IPUT DATA			Site Cor				L INPUT	s	
				-	Site Cor	luluolis	(паги -				
Average Daily	. ,	21,100 vehicle	es					Autos:			
	Percentage:	10.00%				edium Tr					
Peak H	lour Volume:	2,110 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	44 feet		-		icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.59	6 94.24%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.49	6 4.44%
Barrier Type (0-W		0.0				Heavy T	rucks:	81.8%	7.7%	10.69	6 1.32%
Centerline Di		36.0 feet			Noise S	ourco El	lovation	ne (in f	not)		
Centerline Dist.	to Observer:	36.0 feet		F.	V0/36 3	Auto.		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.000			
Observer Height (	Observer Height (Above Pad): 5.0					vy Truck		.004	Grade Ad	livetma	of: 0.0
P	ad Elevation:	0.0 feet			пеа	y muck	s. o	.004	Graue Au	justinei	и. О.О
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ice (in i	feet)		
	Road Grade:	0.0%				Auto	s: 28	.931			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 28	.624			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 28	.654			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier At	ten Be	erm Atten
Autos:	68.46	1.15		3.4	6	-1.20		-4.55	0.	000	0.000
Medium Trucks:	79.45	-12.12		3.5	3	-1.20		-4.86	0.	000	0.000
Heavy Trucks:	84.25	-17.40		3.5	2	-1.20		-5.63	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn	(	CNEL
Autos:	71	.9	69.6		68.7		63.	6	71.	5	72.1
Medium Trucks:	69	0.7	67.7		64.6		61.	.7	69.	5	69.8
Heavy Trucks:	69	0.2	67.5		63.2		59.	.9	68.	3	68.6
Vehicle Noise:	75	5.2	73.2		71.0		66.	.8	74.	7	75.2
Centerline Distant	ce to Noise C	ontour (in feet									
				70 (	dΒA	65	dBA	(	60 dBA	5	5 dBA
			Ldn:		74		160	)	345	5	744
		C	VEL:		80		173	2	371		800

	FH\	WA-RD-77-10	HIGH	N YAWI	OISE P	REDICT	TION M	ODEL			
		eo Canyon Rd.						: Alt1 M : 12975	oreno Valle	ey Trade	
SITE S Highway Data	PECIFIC IN	IPUT DATA			ita Car				L INPUT	S	
Average Daily Ti Peak Hour P Peak Ho Vehi	Percentage: ur Volume: icle Speed:	24,137 vehic 10.00% 2,414 vehicle 55 mph			Ме	edium Ti eavy Tru	rucks (2	Autos: 2 Axles): - Axles):	15 15		
Near/Far Lane	e Distance:	36 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data  Barrier Type (0-Wa	ier Height: II, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%
Centerline Dist	. to Barrier:	55.0 feet		,	loise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. to Barrier Distance to Observer Height (A Pac Roac Ri	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		L	Hea ane Eq Mediu	Auto m Truck yy Truck uivalen Auto m Truck yy Truck	(s: 1 (s: 1 <b>t Dista</b> (s: 5	0.000 2.297 8.004 nce (in 2.211 2.041 2.058	Grade Adj	justment	: 0.0	
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Bei	m Atten
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40			-0.39 -0.36 -0.37	3	-1.20 -1.20 -1.20		-4.67 -4.87 -5.38	0.0	000 000 000	0.00 0.00 0.00
Unmitigated Noise	Levels (with	out Topo and	l barri	er atten	uation)						
	eq Peak Hou			Leg Ev		Leq	Night		Ldn	C	NEL
Autos:	71	1.1	68.8		67.9		62	2.8	70.7	7	71.
Medium Trucks:	68	3.4	66.5		63.4		60	).5	68.2	2	68.
Heavy Trucks:	67		65.5		61.2			7.8	66.2		66.
Vehicle Noise:	74	1.0	71.9		69.9		65	5.6	73.5	5	74.
Centerline Distance	to Noise Co	ontour (in fee	t)								
			L	70 a		65	dBA		60 dBA		dBA
			Ldn:		95		20		440		948
		C	NEL:		102		22	20	473		1,020

	FHV	VA-RD-77-108 F	iiGHW/	AT N	UISE PI	KEDICTIC	N MO	DEL			
	io: GPBO (204 ne: Redlands B	- /				Project N			oreno Valle	ey Trade	
		noteo Canvon Ro	4			JOD NUI	mber:	12975			
	SPECIFIC IN			Т		NC	ISE N	/ODE	L INPUT	s	
Highway Data				S	ite Con	ditions (F					
Average Daily	Traffic (Adt):	25,853 vehicles	;					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 A	(xles	15		
Peak F	lour Volume:	2,585 vehicles			He	avy Truck	s (3+ A	(xles	15		
Ve	hicle Speed:	55 mph		v	ehicle I	Miv					
Near/Far La	ne Distance:	36 feet		ľ		icleType		Dav	Evening	Niaht	Daily
Site Data							itos:	72.0%		13.5%	94.24
Ra	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	76.2%	9.4%	14.4%	4.44
Barrier Type (0-W		0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.32
Centerline Di	st. to Barrier:	55.0 feet			loise So	urce Ele	/ation	e (in fo	not)		
Centerline Dist.	to Observer:	55.0 feet			10136 00	Autos:		000	.01)		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustmen	0.0
P	ad Elevation:	0.0 feet				,				,	
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent L			eet)		
	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degrees				n Trucks:					
	Right View:	90.0 degrees			Heav	y Trucks:	52.	058			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	iel .	Barrier Att	en Be	rm Atter
Autos:		1.16		-0.39		-1.20		-4.67		000	0.00
Medium Trucks:		-12.11		-0.36		-1.20		-4.87		000	0.00
Heavy Trucks:	86.40	-17.39		-0.37	'	-1.20		-5.38	0.0	000	0.00
Unmitigated Nois										1	
VehicleType	Leq Peak Hou			eq Ev	ening	Leq N	-		Ldn		NEL
Autos:			9.1		68.2		63.1		71.0	-	71
Medium Trucks:			8.8		63.7		60.8		68.	-	68
Heavy Trucks:			5.8		61.5		58.1		66.	-	66
Vehicle Noise:			2.2		70.2		65.9	,	73.8	5	74
Centerline Distan	ce to Noise Co	ontour (in feet)	-1	70 d	DA I	65 dl	21		i0 dBA	5.6	dBA
		1.	dn:	, o a	99 99	05 01	214		461		99 99
		CNI									1.06
		CNI	EL:		107		230		495	•	1,0

Wednesday, November 4, 2020

	FHV	VA-RD-77-108 H	HIGHWA	Y NOISE P	REDICT	ION MODE	-	
	o: GPBO (204 e: Redlands B t: n/o Ironwoo	lvd.				Name: Alt1 lumber: 129	Moreno Valle	y Trade
	SPECIFIC IN	PUT DATA			N	IOISE MOI	DEL INPUTS	3
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage: our Volume:	23,883 vehicles 10.00% 2,388 vehicles	•			Auto ucks (2 Axle cks (3+ Axle	s): 15	
	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lar	ne Distance:	58 feet		Veh	icleType	Day	/ Evening	Night Daily
Site Data						Autos: 72.		13.5% 94.24%
Rar	rier Height:	0.0 feet		М	edium Ti	rucks: 76.	2% 9.4%	14.4% 4.44%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 81.	8% 7.7%	10.6% 1.32%
Centerline Dis	t. to Barrier:	55.0 feet		Noise S	ource El	evations (ii	n feet)	
Centerline Dist. t	o Observer:	55.0 feet			Auto		,	
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Truck			
Observer Height (/			vy Truck		Grade Adio	ustment: 0.0		
	d Elevation:	0.0 feet						
Roa	d Elevation:	0.0 feet		Lane Eq		Distance (	in feet)	
F	Road Grade:	0.0%			Auto			
	Left View:	-90.0 degrees	3		m Truck	10.011		
	Right View:	90.0 degrees	3	Hea	vy Truck	s: 46.830		
FHWA Noise Mode	I Calculations	i						
VehicleType	REMEL	Traffic Flow	Distant	ce Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	70.20	1.23		0.30	-1.20	-4.0	67 0.0	0.000
Medium Trucks:	81.00	-12.04		0.33	-1.20	-4.8	37 0.0	0.000
Heavy Trucks:	85.38	-17.32		0.32	-1.20	-5.3	38 0.0	0.000
Unmitigated Noise	Levels (without	out Topo and b	arrier at	ttenuation)				
VehicleType	Leq Peak Hou	r Leq Day	Le	q Evening	Leq	Night	Ldn	CNEL
Autos:	70.	5 6	8.3	67.4	. —	62.3	70.2	70.8
Medium Trucks:	68.	.1 6	6.1	63.0		60.1	67.9	68.3
Heavy Trucks:	67.	2 6	5.5	61.2	!	57.9	66.3	66.6
Vehicle Noise:	73.	6 7	1.6	69.5		65.2	73.2	73.7
Centerline Distanc	e to Noise Co	ntour (in feet)		70 /04			00 /04	55 (04
				70 dBA	65	dBA	60 dBA	55 dBA
		_	dn:		90 193 416			897
		CN	EL:	96		208	447	964

	FHV	VA-RD-77-108	HIGH	A YAWH	IOISE P	REDICT	TION MO	DDEL			
	o: GPBO (204 e: Redlands B t: s/o Ironwoo	llvd.					t Name: Number:		loreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA			a:. a				L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,667 vehicle	es					Autos.			
Peak Hour I	Percentage:	10.00%				edium Ti					
Peak Ho	our Volume:	2,267 vehicles	S		He	eavy Tru	icks (3+	Axles)	: 15		
Veh	nicle Speed:	50 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	58 feet		F	Ver	nicleType	е	Day	Evening	Night	Daily
Site Data							Autos:	72.09	6 14.6%	13.5%	94.24%
Ran	rier Heiaht:	0.0 feet			M	1edium 7	rucks:	76.29	6 9.4%	14.4%	4.44%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy 7	rucks:	81.89	6 7.7%	10.6%	1.32%
Centerline Dis		55.0 feet		1	Noise S	ource E	levation	ıs (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	os: 0	.000	,		
	Barrier Distance to Observer: 0.0 feet				Mediu	ım Truck	ks: 2	.297			
Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet					Hea	vy Truck	ks: 8	.004	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet		-	l ane Fo	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%		i i		Auto		.000	1001)		
,	Left View:	-90.0 degree	20		Mediu	ım Truck		811			
	Right View:	90.0 degree				vy Truck		.830			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	1.00		0.3	0	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-12.27		0.3	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-17.55		0.3		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise			_								
	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:	70		68.1		67.2	-	62.		70.0		70.5
Medium Trucks:	67		65.9		62.8		59.	-	67.		68.0
Heavy Trucks:	67		65.3		61.0		57.	-	66.		66.4
Vehicle Noise:	73		71.4		69.2	2	65.	.0	73.0	)	73.4
Centerline Distanc	e to Noise Co	ontour (in feet,	)	70 (	dRA.	65	dBA		60 dBA	55	i dBA
			Ldn:	,,,	87		18		402		866
	Lan: CNFL:				93 201 432			931			
	CNEL.				95 201 432				331		

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE P	REDICI	ION M	JDEL			
Scenario: Road Name: Road Segment:		lvd.	mps					Alt1 M 12975	oreno Valle	ey Trade	
	ECIFIC IN	PUT DATA							L INPUT	S	
Highway Data  Average Daily Tra  Peak Hour Pei  Peak Hour  Vehicl	centage:	25,690 vehicle 10.00% 2,569 vehicle			Ме Не	dium Ti avy Tru	ucks (2	Autos: Axles):	15		
Near/Far Lane I	Distance:	58 feet		V	ehicle /	icleType		Dav	Evening	Night	Dailv
Site Data					Ven		Autos:	72.0%	-	13.5%	- /
Barrier Barrier Type (0-Wall,	r <b>Height:</b> 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1		76.2% 81.8%		14.4% 10.6%	4.44% 1.32%
Centerline Dist. t		55.0 feet		٨	loise S	ource E	levatio	ns (in fe	eet)		
Road E Roa L	Observer:	55.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	Hea ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2 (s: 8 <b>t Dista</b> (s: 4)	0.000 2.297 3.004 nce (in 1 7.000 5.811	Grade Adj	iustment	: 0.0
FHWA Noise Model C						,		J.000			
	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en Rei	m Atten
Autos:	70.20	1.55		0.30		-1.20	7,700	-4.67		000	0.00
Medium Trucks: Heavy Trucks:	81.00 85.38	-11.72 -17.00		0.33 0.32		-1.20 -1.20		-4.87 -5.38		000	0.00
Unmitigated Noise Le	vels (with	out Topo and	barrie	er attenu	uation)						
VehicleType Lei	Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	C	VEL
Autos:	70		68.6		67.7		62		70.5		71.
Medium Trucks:	68		66.4		63.4		60		68.2	-	68.
Heavy Trucks: Vehicle Noise:	73		65.8 71.9		61.6		58 65		66.6 73.5		66.9 74.1
					69.8		60	.5	/3.0	•	74.1
Centerline Distance t	o Noise Co	ntour (in feet	7	70 d	DΛ	e e	dBA	-	60 dBA	FE	dBA
			Ldn:	70 a		00			ои ава 437		ава 941
					94		20				

							DICTI					
Scenario: GPBO (2	,					F				oreno Valle	ey Trade	
Road Name: Redland							Job N	umber	: 12975			
Road Segment: n/o Euca	lyptus	AV.										
SITE SPECIFIC Highway Data	INPL	JT DATA			Sito	Cond			= 10, Sc	L INPUT	S	
• ,					Site	COIIU	uons	(IIai u				
Average Daily Traffic (Adt)		,068 vehicles	S				-		Autos:	15		
Peak Hour Percentage		.00%							2 Axles):			
Peak Hour Volume	,	607 vehicles				Hea	vy Truc	cks (3+	+ Axles):	15		
Vehicle Speed		50 mph			Vehi	cle Mi	x					
Near/Far Lane Distance		58 feet				Vehic	leТуре		Day	Evening	Night	Daily
Site Data							- /	lutos:	72.0%	14.6%	13.5%	94.249
Barrier Height	:	0.0 feet				Med	lium Tr	ucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wall, 1-Berm)		0.0				He	eavy Tr	ucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barrier		55.0 feet		-	Maia		roo El	overtie	ns (in fe	n a #1		
Centerline Dist. to Observer	:	55.0 feet		ľ	NOIS	e 30u				ei)		
Barrier Distance to Observer		0.0 feet					Autos		0.000 2.297			
Observer Height (Above Pad)	:	5.0 feet								0	·	
Pad Elevation	:	0.0 feet			r	ieavy	Trucks	S.' i	8.004	Grade Ad	justmen	. 0.0
Road Elevation	:	0.0 feet			Lane	Equi	valent	Dista	nce (in i	feet)		
Road Grade	: 0	0.0%					Autos	s: 4	7.000			
Left View	: -	90.0 degrees	S		Ме	edium	Trucks	s: 4	6.811			
Right View	:	90.0 degrees	S		F	leavy	Trucks	s: 4	6.830			
FHWA Noise Model Calculati	ons											
VehicleType REMEL	Tı	raffic Flow	Dis	stance	Fi	nite R	oad	Fre	snel	Barrier Att	en Be	rm Atten
Autos: 70.	20	1.61		0.3	30		-1.20		-4.67	0.0	000	0.00
Medium Trucks: 81.	00	-11.66		0.3	33		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 85.	38	-16.94		0.3	32		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise Levels (w	thout	Topo and b	arri	er atter	nuatio	on)						
VehicleType Leq Peak F		Leq Day		Leq E		_	Leq	Night		Ldn		NEL
Autos:	70.9	-	8.7			37.8			2.7	70.0	-	71.
	68.5	-	6.5			3.4			).5	68.3	-	68.
	67.6		5.9		_	31.6			3.3	66.		67.0
Vehicle Noise:	74.0	7	2.0		6	9.8		65	5.6	73.0	6	74.
Centerline Distance to Noise	Cont	our (in feet)						<b>'D</b> 4			1	
			, L	70	dBA	L	65 (	dBA		0 dBA		dBA
		_	dn:			95 102		20		441		950
									20	474		1.022

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGH	-WAY	NOISE PI	REDICTI	ON M	DDEL			
Road Na	nrio: GPBO (204 me: Redlands E ent: s/o Eucalyp	Blvd.						Alt1 M	oreno Vall	ey Trade	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
Average Daily Peak Hou Peak V	/ Traffic (Adt): r Percentage: Hour Volume: ehicle Speed:	25,275 vehicle 10.00% 2,528 vehicle 50 mph			Ме	dium Tru avy Truc	icks (2	Autos. Axles).	15 15		
Near/Far L	ane Distance:	58 feet		ı	Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-1	arrier Height: Wall, 1-Berm):	0.0 feet 0.0				A edium Tr Heavy Tr		72.0% 76.2% 81.8%	9.4%		4.44%
Centerline D	ist. to Barrier:	55.0 feet			Noise So	ource Ele	evatio	ns (in f	eet)		
Barrier Distance Observer Height	Centerline Dist. to Observer: 55.  Barrier Distance to Observer: 0.  Observer Height (Above Pad): 5.  Pad Elevation: 0.  Road Elevation: 0.				Mediu	Autos m Trucks ry Trucks	:: 0 :: 2	0.000 2.297 3.004	Grade Ad	ljustmen	t: 0.0
Re	oad Elevation:	0.0 feet		ĺ	Lane Eq	uivalent	Distai	nce (in	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Autos m Trucks ry Trucks	: 46	7.000 6.811 6.830			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	ten Be	rm Atten
Autos	70.20	1.47		0.3	30	-1.20		-4.67	0.	000	0.000
Medium Trucks	: 81.00	-11.79		0.3	33	-1.20		-4.87	0.	000	0.000
Heavy Trucks	85.38	-17.08		0.3	32	-1.20		-5.38	0.	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou		_	Leq E	vening	Leq I			Ldn		NEL
Autos			68.6		67.6 63.3		62		70.		71.0
	Medium Trucks: 68.3 66.4						60		68.		68.5
Heavy Trucks Vehicle Noise			65.8 71.8		61.5 69.7		58 65		66. 73.	-	66.9 73.9
Centerline Distar	nce to Noise Co	ontour (in feet	)								
				70	dBA	65 0	iBA		60 dBA	55	dBA
			Ldn:		93		20	1	432	2	931
		CNEL:			100 216 465			5	1,001		

ay, November 4, 2020 Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MC	DEL			
Road Nar	rio: GPBO (204 me: Redlands B ent: s/o Dwy. 7	- /					Name: umber:		oreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions					
Average Daily	Traffic (Adt):	25,275 vehicle	es					Autos:			
Peak Hou	r Percentage:	10.00%				edium Tri		,			
Peak i	Hour Volume:	2,528 vehicles	S		He	eavy Truc	cks (3+ .	Axles):	15		
V	ehicle Speed:	50 mph		ŀ	Vehicle	Mix					
Near/Far L	ane Distance:	58 feet		f		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%		13.5%	
	arrier Height:	0.0 feet			М	edium Ti	rucks:	76.2%		14.4%	
Barrier Type (0-V		0.0 leet				Heavy Ti	rucks:	81.8%		10.6%	
	ist to Barrier:	55.0 feet									
Centerline Dist		55.0 feet			Noise S				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height		5.0 feet				m Truck		.297			
	Pad Flevation:	0.0 feet			Hea	vy Truck	s: 8.	.004	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		-	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		.000	,		
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degree			Hea	vy Truck	s: 46	.830			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos	70.20	1.47		0.3	30	-1.20		-4.67	0.0	000	0.000
Medium Trucks	81.00	-11.79		0.3	33	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	85.38	-17.08		0.3	32	-1.20		-5.38	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn		NEL
Autos			68.6		67.6		62.	5	70.4	4	71.0
Medium Trucks	: 68	.3	66.4		63.3		60.	4	68.1	1	68.5
Heavy Trucks			65.8		61.5		58.		66.5	5	66.9
Vehicle Noise	: 73	.9	71.8		69.7		65.	5	73.4	4	73.9
Centerline Distar	ce to Noise Co	ontour (in feet,	)	70	dBA	67	dBA		SO dBA		i dBA
			Ldn:	70		05					
					93 201 432 100 216 465		931				
	CNEL:				100 216 465				1,001		

	FH\	WA-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION MOI	DEL			
	o: GPBO (204 e: Redlands E nt: s/o Dwy. 7						t Name: A Number: 1		oreno Valle	y Trade	•
SITE S	SPECIFIC IN	IPUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	ft = 15)		
Peak He	Percentage: our Volume:	25,275 vehicl 10.00% 2,528 vehicle					rucks (2 A rucks (3+ A				
	hicle Speed:	50 mph		V	ehicle.	Mix					
Near/Far Lar	ne Distance:	58 feet			Veh	icleTyp	e l	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%
Bar	rier Heiaht:	0.0 feet			М	edium 1	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0				Heavy 1	rucks:	31.8%	7.7%	10.6%	1.32%
Centerline Dis	t. to Barrier:	55.0 feet			laica S	ourco E	levations	(in fe	not)		
Centerline Dist. t	to Observer:	55.0 feet		74	0136 31	Auto		•	eu)		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck					
Observer Height (	Above Pad):	5.0 feet				v Truci			Grade Adju	ıstmen	t· 0.0
Pa	d Elevation:	0.0 feet				,				300,77077	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Auto		000			
	Left View:	-90.0 degre	es			m Truck					
	Right View:	90.0 degre	es		Hea	y Truci	ks: 46.8	30			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Atte	n Be	rm Atten
Autos:	70.20	1.47		0.30		-1.20		4.67	0.0		0.000
Medium Trucks:	81.00			0.33		-1.20		4.87	0.0		0.000
Heavy Trucks:	85.38	-17.08		0.32		-1.20		-5.38	0.0	00	0.000
Unmitigated Noise			barrie	r attenu	ıation)						
	Leq Peak Hou			Leq Eve			Night		Ldn	•	NEL
Autos:	70		68.6		67.6		62.5		70.4		71.0
Medium Trucks:	68		66.4		63.3		60.4		68.1		68.5
Heavy Trucks:	67		65.8		61.5		58.1		66.5		66.9
Vehicle Noise:	73	3.9	71.8		69.7		65.5		73.4		73.9
Centerline Distanc	e to Noise Co	ontour (in feet	)	70 di	D.A	65	dBA	-	i0 dBA		i dBA
			l dn:	7 U al	93	00	201		432	55	931
		Ldn: CNEL:			93 201 100 216				465 1,001		
		C	IVEL.		100		210		400		1,001

	FH\	WA-RD-77-108	HIGH	WAY N	OISE PI	REDICTI	ON MC	DEL			
Road Nam	no: GPBO (204 ne: Redlands E nt: s/o Encelia	Blvd.					Name: umber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA			·- 0				L INPUT	S	
Highway Data				3	ne Con	ditions					
Average Daily	Traffic (Adt):	16,675 vehicle	es					Autos:	15		
	Percentage:	10.00%				dium Tru		,			
	lour Volume:	1,668 vehicles	S		He	avy Truc	cks (3+	Axles):	15		
	hicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	Autos:	72.0%	14.6%	13.5%	94.249
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W	-	0.0			-	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.329
Centerline Di	st. to Barrier:	55.0 feet		N	loise S	ource Ele	evation	s (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		F		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height	(Above Pad):	5.0 feet			Heav	vy Trucks	s: 8	004	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
	Road Grade:	0.0%				Autos		.000			
	Left View:	-90.0 degree				m Trucks		.811			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 46	.830			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dist	tance		Road	Fresi		Barrier Att		m Atten
Autos:		-0.33		0.30		-1.20		-4.67		000	0.00
Medium Trucks:				0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-18.88		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Nois	-										
VehicleType Autos:	Leq Peak Hou		66.8	Leq Ev	ening 65.8		Night 60.	7	Ldn 68.6	_	NEL 69
Autos: Medium Trucks:			64.6		61.5		58.		66.3	-	66.
Heavy Trucks:			64.0		59.7		56.	-	64.7	-	65.
Vehicle Noise:			70.0		67.9		63.		71.6		72.
Centerline Distant	ce to Noise Co	ontour (in feet	)								
		, , ,		70 di	BA	65 (	dBA	6	0 dBA	55	dBA
			Ldn:		71		152	2	328		706
	CNEL:				76 163 352				759		

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGHW	AY NOISE P	REDICTI	ON MODEL	-	
	o: GPBO (204 e: Redlands B nt: n/o Alessan	lvd.				Name: Alt1 umber: 129	Moreno Valley 75	Trade
	SPECIFIC IN	PUT DATA					DEL INPUTS	
Highway Data				Site Con	ditions	(Hard = 10,	Soft = 15)	
	Traffic (Adt): Percentage: our Volume:	15,667 vehicle 10.00% 1.567 vehicles	S			Auto ucks (2 Axle uks (3+ Axle	s): 15	
Vel	nicle Speed:	50 mph						
Near/Far Lar	ne Distance:	58 feet		Vehicle I	icleType	Day	/ Evening	Night Daily
Site Data						Autos: 72.		13.5% 94.24%
Ban	rier Height:	0.0 feet		М	edium Ti	ucks: 76.	2% 9.4%	14.4% 4.44%
Barrier Type (0-Wa		0.0		- 1	Heavy Ti	ucks: 81.	8% 7.7%	10.6% 1.32%
Centerline Dis	t. to Barrier:	55.0 feet		Noise So	ource El	evations (ir	n feet)	
Centerline Dist. t		55.0 feet			Autos			
Barrier Distance t		0.0 feet		Mediu	m Trucks			
Observer Height (/	,	5.0 feet			vy Trucks		Grade Adju	stment: 0.0
	d Elevation:	0.0 feet		/ F		Di-4 (	·- £4)	
	d Elevation:	0.0 feet		Lane Eq		Distance (	in reet)	
F	Road Grade:	0.0%			Auto			
	Left View: Right View:	-90.0 degree 90.0 degree			m Truck: /y Truck:			
FHWA Noise Mode	l Calculations	3						
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	70.20	-0.60		0.30	-1.20	-4.6	67 0.00	0.000
Medium Trucks:	81.00	-13.87		0.33	-1.20	-4.8		
Heavy Trucks:	85.38	-19.15		0.32	-1.20	-5.3	38 0.00	0.000
Unmitigated Noise								
	Leq Peak Hou			eq Evening	,	Night	Ldn	CNEL
Autos:	68		6.5	65.6		60.5	68.3	68.9
Medium Trucks:	66		4.3	61.2		58.3	66.1	66.4
Heavy Trucks:	65	-	3.7	59.4		56.0	64.4	64.8
Vehicle Noise:	71		9.8	67.6		63.4	71.4	71.8
Centerline Distanc	e to Noise Co	ntour (in feet)	-	70 -104		-(D.4	CO -(D.4	55 dD4
		,	dn:	70 dBA	65	dBA	60 dBA	55 dBA 677
		_	an: EL:	73	68 146 314 73 157 338			728
		CN		13		137	550	120

	FHW	A-RD-77-108	HIGH	A YAW	IOISE P	REDICT	ION MO	DDEL					
Scenario: GF Road Name: Re Road Segment: s/o	dlands Blv	d.					t Name: lumber:		loreno Val	ley Tra	ie		
SITE SPEC	IFIC INP	UT DATA			04- 0				EL INPUT oft = 15)	rs			
Average Daily Traffic Peak Hour Perce Peak Hour V	ntage: 1 olume: 1	0,706 vehicle 0.00% ,071 vehicle			Ме	edium Tr	ucks (2	Autos Axles)	: 15 : 15				
Vehicle S Near/Far Lane Dis	.,	50 mph 58 feet		1	Vehicle .	Mix							
	stance:	58 feet			Veh	icleType		Day	Evening		_		
Site Data  Barrier F  Barrier Type (0-Wall, 1-	-	0.0 feet 0.0				edium T Heavy T		72.09 76.29 81.89	6 9.4%	14.4	% 4.44%		
Centerline Dist. to E	Barrier:	55.0 feet		-	Voise S	ource F	levatio	ns (in f	ipet)				
Barrier Distance to Ob-	Centerline Dist. to Observer: 55.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet					Noise Source Elevations (in feet)  Autos: 0.000  Medium Trucks: 2.297  Heavy Trucks: 8.004 Grade Adjustment: 0.0							
Pad Ele	,	0.0 feet			Hea	vy Truck	:s: 8	.004	Grade A	ajustme	nt: 0.0		
Road Ele Road	vation: Grade:	0.0 feet 0.0%		1	Lane Eq	<b>uivalen</b> Auto		.000	feet)				
	t View: t View:	-90.0 degree			Medium Trucks: 46.811 Heavy Trucks: 46.830								
FHWA Noise Model Cal	culations												
		Traffic Flow	Dis	stance		Road	Fres	_	Barrier A		erm Atten		
Autos:	70.20	-2.26		0.3	-	-1.20		-4.67	-	.000	0.00		
Medium Trucks: Heavy Trucks:	81.00 85.38	-15.52 -20.81		0.3	-	-1.20 -1.20		-4.87 -5.38	-	.000	0.00		
Unmitigated Noise Leve	els (withou	ıt Topo and	barri	er atten	uation)								
VehicleType Leq F	Peak Hour	Leq Day	′	Leq E	/ening	Leq	Night		Ldn		CNEL		
Autos:	67.0		64.8		63.9		58	8	66	.7	67.3		
Medium Trucks:	64.6		62.6		59.6		56	-	64		64.8		
Heavy Trucks:	63.7		62.0		57.8		54		62		63.		
Vehicle Noise:	70.1		68.1		66.0		61	.7	69	.7	70.:		
Centerline Distance to I	Noise Con	tour (in feet,	)	70 (	4D A	e e	dBA	T	60 dBA		55 dBA		
			Ldn:	700	1BA 53	00	0BA 11				525 525		
	Ldn: CNEL:						53 113 244 56 122 262				565		

		WA-RD-77-108									
	c: GPBO (204								oreno Valle	ey Trade	
	e: John F Ker					Job N	lumber:	12975			
Road Segmen	t: s/o Cactus	AV.									
	SPECIFIC IN	IPUT DATA			i4- O				L INPUT	S	
Highway Data				5	ite Cor	aitions	(Hara		oft = 15)		
Average Daily		12,915 vehicl	les					Autos:	15		
Peak Hour I		10.00%				dium Tr					
	our Volume:	1,292 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
	nicle Speed:	45 mph		ν	ehicle	Mix					
Near/Far Lar	e Distance:	36 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Ban	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wa		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	t. to Barrier:	44.0 feet			laica S	ource E	lovatio	ne (in f	not)		
Centerline Dist. t	o Observer:	44.0 feet		N	ioise si	Auto		- '	eu		
Barrier Distance t	o Observer:	0.0 feet				m Truck		0.000 2.297			
Observer Height (/	Above Pad):	5.0 feet						3.004	Grade Ad	iuctmont	. 0.0
Pa	d Elevation:	0.0 feet			пеа	y Truck	S. C	5.004	Orauc Au	Justinoni	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 40	0.460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40	0.241			
	Right View:	90.0 degre	es		Hea	y Truck	s: 40	0.262			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	-0.98	3	1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-14.25	5	1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-19.53	3	1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			l barri								
	Leq Peak Hοι		,	Leq Ev		Leq	Night		Ldn		NEL
Autos:	67		65.3		64.4		59		67.2	_	67.
Medium Trucks:	65		63.3		60.3		57		65.		65.
Heavy Trucks:	64		63.2		58.9		55		63.9		64.
Vehicle Noise:	70	1.8	68.8		66.6		62	.4	70.4	4	70.
Centerline Distanc	e to Noise Co	ontour (in fee	t)	70 d	D.A	C.	dBA		i0 dBA		dBA
CONCORMIC BIOLANC											
ouncimie Dictaine			Ldn:	70 U	<i>Б</i> А 47	03	10		217		468

Scenario	o: GPBO (2040	0)				Proiec	t Name	: Alt1 M	oreno Valle	ev Trade	
	e: Moreno Bea	,						: 12975	010110 14111	,aao	
Road Segmen	t: n/o SR-60 V	estbound Ran	nps								
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	24,982 vehicles	S					Autos:	15		
Peak Hour I	Percentage:	10.00%			Me	dium Ti	rucks (	2 Axles):	15		
Peak Ho	our Volume:	2,498 vehicles			He	avy Tru	icks (3	+ Axles):	15		
Vel	nicle Speed:	40 mph		-	Vehicle I	/liv					
Near/Far Lar	ne Distance:	48 feet		F.		cleTyp	9	Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%		13.5%	94.24
Ran	rier Height:	0.0 feet			Me	edium 1	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wa		0.0			F	leavy 7	rucks:	81.8%	7.7%	10.6%	1.32
Centerline Dis	. ,	50.0 feet		١.	O-			6 6.			
Centerline Dist. t	o Observer:	50.0 feet		1	Noise So				eetj		
Barrier Distance t	o Observer:	0.0 feet			Mediur	Auto		0.000 2.297			
Observer Height (/	Above Pad):	5.0 feet						2.297 8.004	Grade Ad	ii ratma nt	
Pa	d Elevation:	0.0 feet			Heav	y Truck	(S.	8.004	Grade Ad	justrient	. 0.0
Roa	d Elevation:	0.0 feet		I	Lane Equ	uivalen	t Dista	nce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 4	4.147			
	Left View:	-90.0 degrees	s		Mediur	n Truck	(s: 4	3.947			
	Right View:	90.0 degrees	S		Heav	y Truck	(s: 4	3.966			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atter
Autos:	66.51	2.39		0.7	1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-10.88		0.74	4	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-16.16		0.73	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrie	r atten	uation)						
	Leq Peak Houi			Leg Ev		Leq	Night		Ldn		NEL
Autos:	68.		6.2		65.3		-	0.2	68.		68
Medium Trucks:	66.		4.4		61.3		-	3.4	66.2	_	66
Heavy Trucks:	66.		4.7		60.4		-	7.1	65.	-	65
Vehicle Noise:	71.	9 6	9.9		67.7		6	3.5	71.	5	71
Centerline Distanc	e to Noise Co	ntour (in feet)			,						
			. L	70 c		65	dBA	_	60 dBA		dBA
		_	.dn:		63			35	291		62
	CNEL:					67 145 313				674	

Wednesday, November 4, 2020

FH	WA-RD-77-108 I	HIGHWAY	NOISE P	REDICT	ION MODE	-	
Scenario: GPBO (20 Road Name: Moreno Be Road Segment: s/o SR-60	each Dr.	ps			Name: Alt1 lumber: 129	Moreno Valley 75	/ Trade
SITE SPECIFIC I	NPUT DATA			N	IOISE MO	DEL INPUTS	i
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	44,511 vehicles 10.00% 4,451 vehicles 50 mph	S	He	avy Tru	Aut ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance:	82 feet		Vehicle				
Site Data	02 1001		Veh	icleType	Da.		Night Daily 13.5% 94.24%
Barrier Height:	0.0 feet		М	edium T	rucks: 76.		14.4% 4.44%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy T	rucks: 81.	8% 7.7%	10.6% 1.32%
Centerline Dist. to Barrier:	67.0 feet		Noise So	ource El	levations (i	n feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade:		Hear	Auto m Truck yy Truck <b>uivalen</b> Auto	s: 2.297 s: 8.004 t Distance (		ustment: 0.0	
Left View: Right View:	0.0% -90.0 degree: 90.0 degree:			m Truck ry Truck	s: 53.059		
FHWA Noise Model Calculation		B: /	F: 1			15	
VehicleType REMEL Autos: 70.20	Traffic Flow 3.93	Distance	.51	-1.20	Fresnel -4.	Barrier Atte	
Medium Trucks: 81.00			.51	-1.20	-4.		
Heavy Trucks: 85.38		-	.49	-1.20	-5.		
Unmitigated Noise Levels (with	out Topo and b	arrier att	enuation)				
VehicleType Leq Peak Ho			Evening	Leq	Night	Ldn	CNEL
Autos: 7		0.2	69.3	· ·	64.2	72.1	72.6
Medium Trucks: 7						69.8	70.1
Heavy Trucks: 6	7.4	63.1		59.8	68.2	68.5	
Vehicle Noise: 7	5.5 7	3.5	71.4		67.1	75.1	75.5
Centerline Distance to Noise C	ontour (in feet)	-	0 dBA	C.F.	dBA	60 dBA	55 dBA
	,	dn:		05			55 dBA 1.460
	.an: EL:	146 315 678 1, 157 338 729 1,					

Wednesday, Novemb

	FHV	VA-RD-77-108	HIGI	I YAWH	NOISE P	REDICT	ION MO	DDEL			
	o: GPBO (204 e: Moreno Be et: s/o Alessan	ach Dr.					t Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA			04- 0				L INPUT	S	
Highway Data		111			Site Cor	iaitions	(Hara				
Average Daily		32,569 vehicle	es			-#: T		Autos:			
	Percentage:	10.00%	_			edium Ti eavy Tru					
	our Volume: nicle Speed:	3,257 vehicle 50 mph	S		П	avy IIu	CKS (ST	Axies).	15		
Near/Far Lar		82 feet			Vehicle						
	ie Distance.	02 leet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%		13.5%	
Bar	rier Height:	0.0 feet				edium 7		76.2%		14.4%	
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis	t. to Barrier:	67.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		67.0 feet				Auto		.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (	,	5.0 feet			Hear	vy Truck	(s: 8	.004	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		-	Lane Eq	uivaien Auto		1 <b>ce</b> (III	reet)		
F	Road Grade: Left View:	0.0%			Modiu	Auto m Truck		3.059			
		-90.0 degree				nn Truck vy Truck		3.076			
	Right View:	90.0 degree	28		i ica	y mucr	13. 30	1.070			
FHWA Noise Mode					1						
VehicleType	REMEL	Traffic Flow	Di	stance	_	Road	Fres		Barrier Att		m Atten
Autos:	70.20	2.58		-0.5		-1.20		-4.71		000	0.000
Medium Trucks:	81.00	-10.69		-0.4	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-15.97		-0.4		-1.20		-5.29	0.0	000	0.000
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou				vening	100	Night	1	Ldn		NEL
Autos:	71		68.8	Ley L	67.9		fvigrit 62	R	70.		71.3
Medium Trucks:	68		66.6		63.6		60	-	68.		68.8
Heavy Trucks:	67		66.0		61.8		58		66.		67.2
Vehicle Noise:	74	.1	72.1		70.0		65	.8	73.	7	74.2
Centerline Distance	e to Noise Co	ontour (in feet	)								
				70	dBA	65	dBA		60 dBA	55	dBA
			Ldn:		119		25	-	550		1,186
	CNEL:					127 275 592				1.275	

Scenario	: GPBO (204	10)				Project	t Nama	AH1 M	oreno Valle	v Trado	
Road Name							lumber:		oreno vane	y made	
Road Segment	= -					3001	iuiiibei.	12513			
		IPUT DATA					IOISE	MODE	L INPUT		
Highway Data	PECIFIC III	IFUI DAIA		S	ite Con					,	
Average Daily Tr	raffic (Adt):	25,486 vehicl	es					Autos:	15		
Peak Hour P	ercentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak Ho	ur Volume:	2,549 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
Vehi	cle Speed:	50 mph			ehicle l	Mix					
Near/Far Lane	e Distance:	82 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Barri	ier Height:	0.0 feet			M	edium T	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wai	-	0.0			F	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist.	to Barrier:	67.0 feet		^	loise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		67.0 feet				Auto	s: C	0.000	,		
Barrier Distance to		0.0 feet			Mediu	m Truck		.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	:s: 8	3.004	Grade Adj	ustment	: 0.0
	l Elevation:	0.0 feet		-							
	Elevation:	0.0 feet		L	ane Eq				reet)		
Ro	oad Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degre				m Truck		3.059			
,	Right View:	90.0 degre	es		neav	y Truck	S: 53	3.076			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Atte		m Atten
Autos:	70.20	1.51		-0.51		-1.20		-4.71		00	0.00
Medium Trucks:	81.00	-11.76		-0.49		-1.20		-4.88		00	0.00
Heavy Trucks:	85.38			-0.49		-1.20		-5.29	0.0	00	0.00
Unmitigated Noise I											
, , ,	eq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos: Medium Trucks:	70 67		67.8 65.6		66.9 62.5		61 59		69.6 67.4		70. 67.
	66		65.0		60.7		59 57		65.7		66.
Heavy Trucks: Vehicle Noise:	73		71.1		68.9		64		72.7		73.
VEHICLE INDISE.					00.5		04	.1	12.1		75.
		ontour (in fee	"					_			
Centerline Distance	to worse Co	(		70 d	RA I	65	dRA		SO dRA	55	dRA
Centerline Distance	to Noise Co	(	Ldn:	70 d	BA 101	65	dBA 21		60 dBA 467	55	dBA 1.007

	0000 (004	2)			_	n :					_
	o: GPBO (204)							: Alt1 M :: 12975	oreno Valle	ey Trade	
	e: Moreno Bea nt: s/o John F h					JOD I	vumbei	: 12975			
				-							
SITE : Highway Data	SPECIFIC IN	PUT DATA		5	Site Con				L INPUT oft = 15)	S	
Average Daily	Traffic (Adt):	33.716 vehicle:						Autos:	15		
	. ,	10.00%	,		Me	dium T	nicke (	Axles):			
		3.372 vehicles						Axles):			
	hicle Speed:	50 mph					0,10,10	7 101100).			
Near/Far Lai		82 feet		١	/ehicle l						
	ic Distance.	02 1001			Vehi	cleTyp		Day	Evening	Night	Daily
Site Data							Autos:	72.0%		13.5%	
Bar	rier Height:	0.0 feet					rucks:			14.4%	
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy 1	rucks:	81.8%	7.7%	10.6%	1.32
Centerline Dis	st. to Barrier:	67.0 feet			Voise So	urce F	levatio	ns (in f	net)		
Centerline Dist.	to Observer:	67.0 feet		- F	.0.00 00	Auto		0.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Mediur			2.297			
Observer Height (	Above Pad):	5.0 feet				y Truci		B.004	Grade Ad	iustment	. 0 0
Pa	ad Elevation:	0.0 feet			11001	y maci	10.	0.004	0,000,10	Juotimom	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	os: 5	3.226			
	Left View:	-90.0 degrees	S		Mediur	n Truci	ks: 5	3.059			
	Right View:	90.0 degrees	S		Heav	y Truci	ks: 5	3.076			
FHWA Noise Mode	el Calculations	1									
Vehicle Type	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atter
Autos:	70.20	2.73		-0.51	I	-1.20		-4.71	0.0	000	0.00
Medium Trucks:	81.00	-10.54		-0.49	9	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-15.82		-0.49	9	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise										,	
	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:	71.		9.0		68.1			3.0	70.9	-	71
Medium Trucks:	68.		6.8		63.7			0.8	68.6	-	68
Heavy Trucks:	67.		6.2		61.9			3.6	67.0	-	67
Vehicle Noise:	74.	3 7	2.3		70.1		65	5.9	73.9	9	74
Centerline Distanc	e to Noise Co	ntour (in feet)	T	70	(D.4	-	-(D.4	1 .	- ID 4		-/0.4
				70 d		65	dBA		0 dBA		dBA
	Ldn:					121 261 563				1,21	
	CNEL:					130 281 605				1.304	

Wednesday, November 4, 2020

FH	WA-RD-77-108 H	IIGHWAY	NOISE P	REDICT	ION MODE	L	
Scenario: GPBO (204 Road Name: Iris Av. Road Segment: e/o Nason	-,				Name: Alt1 lumber: 129	Moreno Valley 75	/ Trade
SITE SPECIFIC IN	IPUT DATA			N	IOISE MO	DEL INPUTS	1
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	45,638 vehicles 10.00% 4,564 vehicles 50 mph	•	He	avy Tru	Aut ucks (2 Axle cks (3+ Axle	es): 15	
Near/Far Lane Distance:	82 feet		Vehicle		1		
Site Data	02 1001		Veh	icleType		y Evening 0% 14.6%	Night Daily 13.5% 94.24%
Barrier Height:	0.0 feet		М	edium T	rucks: 76.	2% 9.4%	14.4% 4.44%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 81.	8% 7.7%	10.6% 1.32%
Centerline Dist. to Barrier:	67.0 feet		Noise S	ource El	levations (i	n feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade:		Hear	Auto m Truck yy Truck <b>uivalen</b> Auto	s: 2.297 s: 8.004 t Distance (	Grade Adju	ustment: 0.0	
Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			m Truck /y Truck			
FHWA Noise Model Calculation			1				T
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atte	
Autos: 70.20 Medium Trucks: 81.00			.51 .49	-1.20 -1.20	-4.1 -4.1		
Heavy Trucks: 85.38		-	.49	-1.20	-5.		
Unmitigated Noise Levels (with	out Topo and b	arrier att	enuation)				
VehicleType Leq Peak Hot	ur Leq Day	Leq	Evening	Leq	Night	Ldn	CNEL
Autos: 72	2.5 70	0.3	69.4		64.3	72.2	72.8
Medium Trucks: 70	).1 68	B.1	65.0		62.1	69.9	70.3
Heavy Trucks: 69	7.5	63.2 59.9 68.3			68.6		
Vehicle Noise: 75	3.6	71.5		67.2	75.2	75.7	
Centerline Distance to Noise Co	7	70 dBA 65 dBA			60 dBA	55 dBA	
	1.	dn:	148	00	320	689	33 dBA 1.485
	on: EL:	148 320 689 1, 160 344 741 1,					

ay, November 4, 2020 Wednesday, November 4, 2020

		FHW	A-RD-77-108	HIG	HWAY	NOISE I	PREDICT	TION M	DDEL						
Road Na	ario: GPBO me: Iris Av. ent: e/o Las	•	,					t Name: Number:		oreno Valle	y Trade				
	SPECIFIC	CINE	UT DATA							L INPUT	s				
Highway Data						Site Co	nditions	(Hard							
Average Dail	y Traffic (Ad	t): 6	1,514 vehicle	es					Autos:	15					
Peak Ho	ır Percentag	e: 1	0.00%				edium Ti								
Peak	Hour Volum	e: 6	3,151 vehicles	s		Н	eavy Tru	icks (3+	Axles):	15					
1	ehicle Spee	d:	50 mph			Vehicle	Mix								
Near/Far L	ane Distanc	e:	82 feet			Ve	hicleTyp	e	Dav	Evenina	Night	Dailv			
Site Data								Autos:	72.0%		13.5%				
	arrier Heigl		0.0 feet			/	∕ledium 1	rucks:	76.2%	9.4%	14.4%	4.44%			
Barrier Type (0-			0.0 leet				Heavy 7	rucks:	81.8%	7.7%	10.6%				
	vvali, 1-berri Dist. to Barrie	,	67.0 feet												
Centerline Dis			67.0 feet			Noise Source Elevations (in feet)									
	Barrier Distance to Observer: 0.0 feet						Auto		0.000						
Observer Height (Above Pad): 5.0 feet							um Truci		2.297						
-	נ (אטטעפ ראנ Pad Flevatio	,	0.0 feet			Hea	vy Truci	ks: 8	3.004	Grade Adj	iustment	: 0.0			
	oad Elevatio		0.0 feet			I ane F	quivalen	t Distai	nce (in	feet)					
,,	Road Grad		0.0%				Auto		3.226						
	Left Vie		-90.0 degree	20		Medi	um Truck		3.059						
	Right Vie		90.0 degree			Heavy Trucks: 53.076									
FHWA Noise Mo	dal Calaula	tiono													
VehicleType	REMEL		Traffic Flow	n	istance	Finit	e Road	Fres	nel	Barrier Att	en Rei	m Atten			
Auto:		0.20	5.34		-0.		-1.20	7700	-4.71		000	0.000			
Medium Truck	s: 81	1.00	-7.93		-0	49	-1.20		-4.88		000	0.000			
Heavy Truck	s: 85	5.38	-13.21		-0.	49	-1.20		-5.29	0.0	000	0.000			
Unmitigated Noi	se Levels (\	vitho	ut Topo and	barr	ier atte	nuation	1								
VehicleType	Leq Peak	Hour	Leq Day	/	Leq I	Evening	Leg	Night		Ldn	C	NEL			
Auto	S.:	73.8	}	71.6	i	70.	7	65	.6	73.5	5	74.1			
Medium Trucks	Medium Trucks: 71.4 69.4					66.	3	63	.4	71.2	2	71.6			
Heavy Trucks	Heavy Trucks: 70.5 68.8					64.5 61.2 69.6					3	69.9			
Vehicle Noise	Vehicle Noise: 76.9 74.9					72.	8	68	.5	76.5	5	77.0			
Centerline Dista	enterline Distance to Noise Contour (in feet)														
						70 dBA 65 dBA			60 dBA		dBA				
				Ldn:		181 390 841				1,811					
	CNEL:					195 420 904					1,947				

	FHW	A-RD-77-108	HIGHW	AY NO	ISE PI	REDICT	ION MO	DDEL			
Road Name	o: GPBO (2040 e: Iris Av. t: e/o Kitching	,					t Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC IN	PUT DATA		0.0					L INPUT	S	
	Percentage: our Volume: nicle Speed:	50,410 vehicle 10.00% 5,041 vehicle 50 mph 82 feet			Me He	dium Tr avy Tru <b>Mix</b>	ucks (2 cks (3+	Autos: Axles): Axles):	15 15		
Site Data					ven	icleType	Autos:	72.0%	Evening 14.6%	Night 13.5%	Daily 94.24%
Barrier Type (0-Wa		0.0 feet 0.0 67.0 feet				edium T Heavy T	rucks:	76.2% 81.8%	9.4%	14.4%	4.44%
	o Observer: o Observer:	67.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet			Mediu Heav	Auto m Truck ry Truck	s: 2	.000 .297 .004	Grade Ad	ljustmen	t: 0.0
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Auto m Truck ry Truck	s: 53	.226 .059 .076			
FHWA Noise Mode	I Calculations REMEL	Traffic Flow	Dista		Einite	Road	Fres	no!	Barrier Att	on Do	rm Atten
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	4.47 -8.80 -14.08	Dista	-0.51 -0.49 -0.49	riille	-1.20 -1.20 -1.20	ries	-4.71 -4.88 -5.29	0.0	000 000 000	0.000 0.000 0.000
Unmitigated Noise	Levels (witho	ut Topo and	barrier a	attenua	ation)						
VehicleType	Leq Peak Hour	Leq Day	· L	eq Eve	ning	Leq	Night		Ldn	С	NEL
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	73. 70. 69. 76.	5 6	70.7 68.5 67.9 74.0		69.8 65.5 63.7 71.9		64. 62. 60.	6	72. 70. 68. 75.	3 7	73.2 70.7 69.1 76.1
Centerline Distanc	o to Noiso Co	ntour (in foot									
Centerline Distanc	e to Noise Col	, ,	Ldn:	70 dB	159 171	65	dBA 342	2	50 dBA 736 792	3	1,586 1,705
		Ci	VEL.		171		30	,	792		1,705

F	HWA	-RD-77-108 I	IIGH	WAY I	NOISE	E PR	EDICTI	ON MC	DDEL			
Scenario: GPBO (2 Road Name: Eucalypt Road Segment: e/o Naso	us Av	<i>i</i> .							Alt1 M 12975	oreno Vall	ey Trad	е
SITE SPECIFIC	INP	UT DATA			0:4- (	<b>^</b>				L INPUT	s	
Highway Data					Site	conc	iitions (	Hara =	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt)	: 26	3,165 vehicles	3						Autos:			
Peak Hour Percentage	: 10	0.00%					lium Tru		,			
Peak Hour Volume	: 2,	617 vehicles				Hea	avy Truc	ks (3+	Axles):	15		
Vehicle Speed		40 mph		H	Vehic	le N	lix					
Near/Far Lane Distance	:	48 feet		ħ	1	Vehic	cleType		Day	Evening	Night	Daily
Site Data							A	utos:	72.0%	14.6%	13.59	6 94.249
Barrier Height		0.0 feet				Ме	dium Tr	ucks:	76.2%	9.4%	14.49	6 4.449
Barrier Type (0-Wall, 1-Berm)		0.0				Н	eavy Tr	ucks:	81.8%	7.7%	10.69	6 1.329
Centerline Dist. to Barrier		50.0 feet		ı	Noise	e So	urce Ele	evation	ıs (in fe	eet)		
Centerline Dist. to Observer	:	50.0 feet		ı			Autos		.000	,		
Barrier Distance to Observer	:	0.0 feet			Me	diun	1 Trucks	. 2	297			
Observer Height (Above Pad)	:	5.0 feet			Н	leav	/ Trucks	. 8	.004	Grade Ad	liustmer	t: 0.0
Pad Elevation	:	0.0 feet									,	
Road Elevation	:	0.0 feet			Lane	Equ	iivalent	Distar	ce (in	feet)		
Road Grade	: (	0.0%					Autos	: 44	.147			
Left View		-90.0 degrees	6		Me	diun	1 Trucks	: 43	.947			
Right View	:	90.0 degrees	3		Н	leav	/ Trucks	: 43	.966			
FHWA Noise Model Calculation	ons			-								
VehicleType REMEL	T	raffic Flow	Dis	tance	Fir	nite I	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos: 66.	51	2.59		0.7	1		-1.20		-4.65	0.	000	0.00
Medium Trucks: 77.	72	-10.67		0.7	4		-1.20		-4.87	0.	000	0.00
Heavy Trucks: 82.9		-15.96		0.7			-1.20		-5.43	0.	000	0.00
Unmitigated Noise Levels (wi			arrie									21.5
VehicleType Leq Peak F		Leq Day		Leq E		_	Leq I	_	4	Ldn		ONEL
	68.6		6.4			5.5		60.		68.		68
	66.6	-	4.6		-	1.5		58.	-	66.		66
	72.1		4.9 0.1		-	7.9		57. 63.		65. 71.		66 72
Centerline Distance to Noise	Cont	our (in feet)										
		,	T	70	dBA		65 (	iBA	6	0 dBA	5	5 dBA
		L	dn:			65		13	9	301		64
		CN							)			69

Wednesday, November 4, 2020

	FH\	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MO	DEL				
	io: GPBO (204 e: Eucalyptus nt: e/o Fir Av.						Name: . lumber:		loreno Valle	y Trade	1	
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	иорі	L INPUTS	3		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	28,783 vehicle	s					Autos	: 15			
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 /	Axles)	: 15			
Peak H	our Volume:	2,878 vehicles			He	avy Tru	cks (3+ /	Axles)	: 15			
Ve	hicle Speed:	40 mph		ν	ehicle l	Wix						
Near/Far La	ne Distance:	48 feet		F		icleType		Dav	Evening	Night	Dailv	
Site Data				+			Autos:	72.09		13.5%	. ,	
Par	rier Height:	0.0 feet			М	edium T	rucks:	76.29	6 9.4%	14.4%	4.44%	
Barrier Type (0-W	-	0.0			I	Heavy T	rucks:	81.89	6 7.7%	10.6%	1.32%	
Centerline Dis	st. to Barrier:	50.0 feet		٨	loise So	ource E	levation	s (in t	eet)			
Centerline Dist.	to Observer:	50.0 feet		F.	.0.00 00	Auto		000	000			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297						
Observer Height (	Observer Height (Above Pad): 5.0 feet					y Truck		004	Grade Adj	ustmen	t: 0.0	
Pa	ad Elevation:	0.0 feet										
Ros	ad Elevation:	0.0 feet		L	ane Eq		t Distan	_	feet)			
I	Road Grade:	0.0%				Auto		147				
	Left View:	-90.0 degree	s			m Truck	10.	947				
	Right View:	90.0 degree	s		Heav	ry Truck	s: 43.	966				
FHWA Noise Mode												
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresr		Barrier Atte		rm Atten	
Autos:	66.51	3.01		0.71		-1.20		-4.65	0.0		0.000	
Medium Trucks:	77.72	-10.26		0.74		-1.20		-4.87			0.000	
Heavy Trucks:	82.99	-15.54		0.73		-1.20		-5.43	0.0	00	0.000	
VehicleType	Leg Peak Hou			<b>atten</b> u eq Ev		Lea	Night		Ldn		NEL	
Autos:	69		66.8	. ,	65.9	9	60.8	3	68.7		69.3	
Medium Trucks:	67		35.0		61.9		59.0		66.8		67.2	
Heavy Trucks:						57.7		7	66.1		66.4	
Vehicle Noise:	· -				68.3		64.1	ı	72.1		72.6	
Centerline Distanc	enterline Distance to Noise Contour (in feet)									_		
			L	70 d		65	dBA		60 dBA	55	dBA	
		-	Ldn:	69 149 320				690				
	CNEL:					74 160 344					741	

Vednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGH	HWAY I	NOISE P	REDICT	ION MC	DDEL						
Road Nar	rio: GPBO (204 me: Eucalyptus ent: w/o Moreno	Áv.					Name: lumber:		oreno Valle	ey Trade				
	SPECIFIC IN	PUT DATA			0:: 0				L INPUT	S				
Highway Data					Site Cor	aitions	(Hara =							
Average Daily	. ,	12,586 vehicle	es					Autos:						
	r Percentage:	10.00%				edium Tr								
Peak I	Hour Volume:	1,259 vehicles	S		He	eavy Tru	cks (3+	Axles):	15					
	ehicle Speed:	40 mph		ľ	Vehicle	Mix								
Near/Far La	ane Distance:	48 feet		F	Veh	icleType		Day	Evening	Night	Daily			
Site Data							Autos:	72.0%	14.6%	13.5%	94.24%			
Ra	arrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%			
Barrier Type (0-V	-	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%			
Centerline D	ist. to Barrier:	50.0 feet		-	Noise S	ource El	levation	ns (in fe	eet)					
Centerline Dist.	to Observer:	50.0 feet		-	Autos: 0.000									
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297								
Observer Height	(Above Pad):	5.0 feet			Hear	vy Truck	s 8	.004	Grade Ad	liustmen	: 0.0			
F	Pad Elevation:	0.0 feet								,				
Ro	ad Elevation:	0.0 feet			Lane Eq			ice (in i	feet)					
	Road Grade:	0.0%				Auto		.147						
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	3.947						
	Right View:	90.0 degree	es		Hea	vy Truck	s: 43	1.966						
FHWA Noise Mod	lel Calculations	5												
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten			
Autos:	66.51	-0.58		0.7	71	-1.20		-4.65	0.0	000	0.000			
Medium Trucks:	77.72	-13.85		0.7	74	-1.20		-4.87	0.0	000	0.000			
Heavy Trucks:	82.99	-19.13		0.7	73	-1.20		-5.43	0.0	000	0.000			
Unmitigated Nois										1				
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL			
Autos:			63.2		62.3		57.	_	65.		65.7			
Medium Trucks:			61.4		58.4		55.		63.	_	63.6			
Heavy Trucks: Vehicle Noise:			61.7 67.0		57.5 64.7		54. 60.		62. 68.		62.8 69.0			
Centerline Distan	ce to Noise Co	ntour (in feet	)											
Centernile Distan	CC TO NOISE CO	mour (mreet)		70	dBA	65	dBA	6	60 dBA	55	dBA			
			Ldn:		40 86 184		397							
	CNEL:				43 92 198 4				427					

	FHW	A-RD-77-108	HIGH	A YAWI	IOISE PI	REDICT	ION MC	DDEL				
Road Nam	io: GPBO (2040 ne: Eucalyptus / nt: e/o Auto Ma	Av.					t Name: lumber:		oreno Valle	y Trade		
SITE :	SPECIFIC IN	PUT DATA			Site Con				L INPUT	S		
Average Daily Peak Hour Peak H	Percentage: lour Volume: hicle Speed:	8,251 vehicle 10.00% 825 vehicle 40 mph 48 feet			Me He Vehicle	dium Tr avy Tru <b>Mix</b>	ucks (2 . cks (3+ .	Autos: Axles): Axles):	15 15 15			
		10			Veh	icleType		Day 72.0%	Evening 14.6%	Night 13.5%	Daily 94.24%	
Site Data Barrier Type (0-W	rrier Height: 'all, 1-Berm):	0.0 feet 0.0				edium T Heavy T		76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%	
Centerline Dist. Barrier Distance Observer Height (	Centerline Dist. to Barrier:   50.0 feet					Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0						
	ad Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree		1		Auto Marto Truck yy Truck	s: 44	.147 .947 .966	feet)			
FHWA Noise Mode	el Calculations											
VehicleType Autos: Medium Trucks:	REMEL 66.51 77.72	7raffic Flow -2.42 -15.69		0.7	1	-1.20 -1.20	Fresi	nel -4.65 -4.87		en Bei 000	0.000	
Heavy Trucks:	82.99	-20.97		0.7	3	-1.20		-5.43		000	0.00	
Unmitigated Noise						100	Minht	1	Ldn		NEL	
VehicleType Autos:	Leq Peak Hour 63.		61.4	Leq E	ening 60.5		Night 55.	4	63.2		VEL 63.8	
Medium Trucks:	61.	-	59.6		56.5		53.		61.4	-	61.	
Heavy Trucks: Vehicle Noise:	61. 67.	-	59.9 65.1		55.6 62.8		52. 58.	-	60.7		61.6 67.	
Centerline Distance	e to Noise Co	ntour (in feet	)									
				70 c	30	65	dBA		60 dBA 139		dBA 300	
	Ldn: CNEL:									322		

	FH	WA-RD-77-108	HIG	HWAY	NOISE	PREDICT	TON MO	ODEL			
	o: GPBO (204 e: Eucalyptus t: e/o Dwy. 1	- /				.,		Alt1 M 12975	oreno Valle	ey Trade	
	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site C	onditions	(Hard	= 10, Sc	oft = 15)		
Average Daily 1	raffic (Adt):	7,912 vehicl	es					Autos:	15		
Peak Hour F	Percentage:	10.00%				∕ledium Tr		,			
Peak Ho	our Volume:	791 vehicle	S		1	Heavy Tru	cks (3+	Axles):	15		
Veh	icle Speed:	40 mph			Vehicl	e Mix					
Near/Far Lan	e Distance:	48 feet				ehicleType	,	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Ban	rier Height:	0.0 feet			ĺ	Medium T	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-Wa	-	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dis	t. to Barrier:	50.0 feet			Noise	Source E	levatio	ns (in fe	eet)		
Centerline Dist. t	o Observer:	50.0 feet				Auto		0.000			
Barrier Distance t	o Observer:	0.0 feet			Med	ium Truck		297			
Observer Height (A	Above Pad):	5.0 feet				avy Truck		3.004	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet			Lane E	quivalen			feet)		
F	Road Grade:	0.0%				Auto		1.147			
	Left View:	-90.0 degre				ium Truck		3.947			
	Right View:	90.0 degre	es		He	avy Truck	s: 43	3.966			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	D.	istance	Fini	te Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	66.51				71	-1.20		-4.65		000	0.00
Medium Trucks:	77.72				74	-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-21.15		0.	73	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise			_	-				_		1	
,,,	Leq Peak Hou				Evening		Night		Ldn		NEL
Autos:		3.4	61.2		60		55		63.		63.
Medium Trucks:	-	1.4	59.4		56		53		61.2	_	61.
	Heavy Trucks: 61.4 59.7				55		52		60.		60.
Vehicle Noise: 66.9 65.0					62	.7	58	.5	66.	5	67.
Centerline Distanc	e to Noise C	ontour (in feet	)				10.4				10.4
				70	dBA		dBA		0 dBA		dBA
			Ldn:		29 63 135			292			
	CNEL:				L: 31 67 145			313			

Wednesday, November 4, 2020

	FH	WA-RD-77-108	HIGH	HWAY	NOISE PI	REDICTI	ON M	DDEL				
Road Na	ario: GPBO (20 ime: Eucalyptus ient: w/o Dwy. 5	Av.						Alt1 M 12975	loreno Vall	ey Trade	•	
SITI Highway Data	SPECIFIC II	NPUT DATA			Site Con				L INPUT	s		
Average Dail Peak Hou Peak	y Traffic (Adt): ur Percentage: Hour Volume: /ehicle Speed:	9,978 vehicle 10.00% 998 vehicle 40 mph			Ме	edium Tru eavy Truc	icks (2	Autos. Axles).	15			
Near/Far L	.ane Distance:	48 feet		1		icleType	T	Day	Evening	Night	Dailv	
Site Data  B Barrier Type (0-	arrier Height: Wall, 1-Berm):	0.0 feet 0.0			М			72.0% 76.2% 81.8%	6 14.6% 6 9.4%	13.5%	4.44%	
Centerline L	Dist. to Barrier:	50.0 feet		-	Noise So	ource Ele	vatio	ne (in f	innt)			
Barrier Distanc Observer Heigh	Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0							
R	oad Elevation:	0.0 feet		ĺ	Lane Eq	uivalent	Distai	nce (in	feet)			
	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Autos m Trucks vy Trucks	: 43	1.147 3.947 3.966				
FHWA Noise Mo	del Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten	
Autos	s: 66.51	-1.59	)	0.7	71	-1.20		-4.65	0.	000	0.000	
Medium Trucks	s: 77.72	-14.86	i	0.7	74	-1.20		-4.87	0.	000	0.000	
Heavy Trucks	s: 82.99	-20.14		0.7	73	-1.20		-5.43	0.	000	0.000	
Unmitigated Noi												
VehicleType	Leq Peak Ho		_	Leq E	vening	Leq I		_	Ldn		NEL	
Autos		4.4	62.2		61.3		56	_	64.		64.6	
Medium Trucks		2.4	60.4 60.7		57.3 56.5		54		62. 61.	-	62.6 61.8	
Heavy Trucks:         62.4         60.7           Vehicle Noise:         67.9         66.0					56.5 53.1 61.5 63.7 59.5 67.5				68.0			
Centerline Dista	Centerline Distance to Noise Contour (in feet)											
				70	dBA	65 0	iBA		60 dBA	55	5 dBA	
			Ldn:		34 73 158		3	340				
	Lan: CNEL:				37 79 170				365			

lay, November 4, 2020 - Wednesday, November 4, 2020

FHV	VA-RD-77-108	HIGH	1 YAWH	NOISE P	REDICT	ION MO	DDEL			
Scenario: GPBO (204 Road Name: Eucalyptus Road Segment: w/o Redlan	Áv.					Name: lumber:		oreno Valle	ey Trade	
SITE SPECIFIC IN	IPUT DATA			0:4- 0				L INPUT	S	
Highway Data  Average Daily Traffic (Adt):	9.978 vehicle	00		Site Cor	aitions	(Hara =	= 10, Si Autos:			
Peak Hour Percentage:	10.00%	03		Ме	edium Tr	ucks (2				
Peak Hour Volume:	998 vehicle	s			avy Tru					
Vehicle Speed:	40 mph		F	Vehicle	Mix					
Near/Far Lane Distance:	48 feet		F		icleType	•	Day	Evening	Night	Daily
Site Data						Autos:	72.0%	14.6%	13.5%	94.24%
Barrier Height:	0.0 feet				edium T		76.2%		14.4%	
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dist. to Barrier:	50.0 feet		į.	Noise S	ource E	levation	ns (in f	eet)		
Centerline Dist. to Observer:	50.0 feet				Auto	s: 0	.000			
Barrier Distance to Observer: Observer Height (Above Pad):	0.0 feet 5.0 feet			Mediu	m Truck	s: 2	.297			
Pad Elevation:	0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	ljustmen	: 0.0
Road Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ce (in	feet)		
Road Grade:	0.0%				Auto	s: 44	.147			
Left View:	-90.0 degree	es			m Truck		.947			
Right View:	90.0 degree	es		Hea	vy Truck	s: 43	.966			
FHWA Noise Model Calculation										
VehicleType REMEL	Traffic Flow		stance	_	Road	Fres		Barrier Att		m Atten
Autos: 66.51 Medium Trucks: 77.72	-1.59 -14.86		0.7		-1.20 -1.20		-4.65 -4.87		000	0.000
Heavy Trucks: 82.99	-20.14		0.7		-1.20		-5.43		000	0.000
Unmitigated Noise Levels (with			•		1.20		0.70			0.000
VehicleType Leq Peak Hou				vening	Leq	Night		Ldn	С	NEL
Autos: 64	.4	62.2		61.3		56.	2	64.	1	64.6
Medium Trucks: 62	.4	60.4		57.3		54.	4	62.	2	62.6
Heavy Trucks: 62	• •	60.7		56.5		53.		61.	-	61.8
Vehicle Noise: 67		66.0		63.7		59.	.5	67.	5	68.0
Centerline Distance to Noise Co	ontour (in feet	)	70	dBA	65	dBA	_	60 dBA	56	dBA
		Ldn:	701	34	00	73		158		340
	Lan: CNEL:					37 79 170			365	

	- FHV	WA-RD-77-108	HIGH	TWAY N	JISE P	REDICI	ION MO	JUEL			
	o: GPBO (204 e: Eucalyptus nt: e/o Redland	Áv.						Alt1 M 12975	oreno Valle	y Trade	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,426 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	1,943 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	40 mph		ν	ehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		-		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Rar	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		50.0 feet		Ν	oise S	ource E	evatio	ns (in fe	eet)		
Centerline Dist. t		50.0 feet				Auto	s: (	0.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (	,	5.0 feet			Hear	vy Truck	s: 8	3.004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet				•					
	d Elevation:	0.0 feet		L	ane Eq	uivalen		_ •	feet)		
F	Road Grade:	0.0%				Auto		1.147			
	Left View:	-90.0 degre				m Truck		3.947			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 43	3.966			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	66.51	1.30		0.71		-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-11.97		0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-17.25		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise								_			
VehicleType Autos:	Leq Peak Hou		65.1	Leq Ev	ening 64.2	,	Night 59	4	Ldn 67.0		NEL 67.5
Medium Trucks:	65		63.3		60.2		59 57		65.1		65.
	65		63.6		59.3		56		64.4		
Heavy Trucks: Vehicle Noise:	70		68.9		66.6		62		70.4		64. 70.
Centerline Distanc	e to Noise Co	ontour (in fee	t)								
			,	70 d	BA	65	dBA	6	0 dBA	55	dBA
			Ldn:		53 114 246		531				
	CNEL:					57 123 264			570		

	FHV	VA-RD-77-108 H	IIGHWA	ıΥN	IOISE PF	REDIC	TION M	ODEL			
Road Nan	rio: GPBO (204 ne: Encilia Av. ent: e/o Essen L	•						: Alt1 M : 12975	oreno Valle	ey Trade	
SITE Highway Data	SPECIFIC IN	PUT DATA		Ι,	Site Con				L INPUT	s	
	T#- (A-W)	0.000		۳,	Site Con	uiuoiis	(riaru	Autos:			
Average Daily	. ,	3,996 vehicles				-ti T					
	Percentage:	10.00%						Axles):			
	Hour Volume:	400 vehicles			He	avy in	ICKS (34	- Axles):	15		
	ehicle Speed:	45 mph		1	Vehicle I	Лiх					
Near/Far La	ane Distance:	36 feet			Vehi	cleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Ra	rrier Height:	0.0 feet		7	Me	edium 1	Trucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W	-	0.0			F	leavy 1	Trucks:	81.8%	7.7%	10.6%	1.329
Centerline Di	ist. to Barrier:	44.0 feet		- 17	Noise So	urce F	levatio	ns (in fi	eet)		
Centerline Dist.	to Observer:	44.0 feet		F	10,00	Auto		0.000	0019		
Barrier Distance	to Observer:	0.0 feet			Mediur			2.297			
Observer Height	(Above Pad):	5.0 feet				y Truci		3.004	Grade Ad	iustman	t· 0.0
P	ad Elevation:	0.0 feet			ricav	y IIuci	NO. 1	3.004	Orace Au	jastinen	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivaler	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	os: 4	0.460			
	Left View:	-90.0 degrees			Mediur	n Truc	ks: 4	0.241			
	Right View:	90.0 degrees			Heav	y Truci	ks: 4	0.262			
HWA Noise Mod	lel Calculations	;									
VehicleType	REMEL	Traffic Flow	Distant	се	Finite	Road	Fre	snel	Barrier Att	en Be	rm Atten
Autos:	68.46	-6.08		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.35		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-24.63		1.3	1	-1.20		-5.50	0.0	000	0.00
Inmitigated Nois	e Levels (witho	out Topo and b	arrier at	ten	uation)						
VehicleType	Leq Peak Hou		_	q Eı	vening	Lec	Night		Ldn		NEL
Autos:		-	0.2		59.3		-	.2	62.		62
Medium Trucks:			3.2		55.2			2.3	60.0	-	60.
Heavy Trucks:			3.1		53.8			).4	58.8		59.
Vehicle Noise:	65.	7 6	3.7		61.5		57	.3	65.3	3	65.
Centerline Distan	ce to Noise Co	ntour (in feet)		7.0							
				/00	dBA	65	dBA		60 dBA		dBA
			dn:		21			6	99		214
		CNI	=L:		23		5	60	107		230

Wednesday, November 4, 2020

FH	WA-RD-77-108 H	IGHWAY	NOISE PI	REDICTI	ON MODEL		
Scenario: GPBO (20 Road Name: Encilia Av. Road Segment: e/o Mozart	-,				Name: Alt1 umber: 129	Moreno Valley 75	Trade
SITE SPECIFIC II	NPUT DATA			N	IOISE MOI	DEL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	3,996 vehicles 10.00% 400 vehicles 45 mph			avy Truc	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance:	36 feet			icleType	Day	Evening	Night Daily
Site Data  Barrier Height:	0.0 feet				Autos: 72.0	0% 14.6%	13.5% 94.24% 14.4% 4.44%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Ti	ucks: 81.8	3% 7.7%	10.6% 1.32%
Centerline Dist. to Barrier:	44.0 feet		Noice Se	urco El	evations (in	foot)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade:		Mediu Heav	Autos m Trucks vy Trucks	s: 0.000 s: 2.297 s: 8.004 Distance (i	Grade Adju	stment: 0.0	
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck: y Truck:			
FHWA Noise Model Calculation			1			T	T =
VehicleType REMEL Autos: 68.46		Distance	28	-1.20	Fresnel -4.6	Barrier Atte	
Medium Trucks: 79.45 Heavy Trucks: 84.25	-19.35	1.3	31 31	-1.20 -1.20	-4.8 -5.5	37 0.00	0.000
Unmitigated Noise Levels (with	out Topo and ba	rrier atte	nuation)				
VehicleType Leq Peak Ho	ur Leq Day	Leq I	Evening	Leq	Night	Ldn	CNEL
Autos: 6	2.5 60	.2	59.3		54.2	62.1	62.7
Medium Trucks: 60	0.2 58	.2	55.2		52.3	60.0	60.4
Heavy Trucks: 59	9.7 58	.1	53.8		50.4	58.8	59.2
Vehicle Noise: 68	5.7 63	.7	61.5		57.3	65.3	65.8
Centerline Distance to Noise C	Centerline Distance to Noise Contour (in feet)					1	55 dBA
					70 dBA 65 dBA 60 dBA		
	Ld		21 46 99			214 230	
	CNE	L:	23 50 107				

	FH	WA-RD-77-108	HIGI	HWAY	NOISE PI	REDICT	ION MO	DEL			
Road Nan	io: GPBO (20- ne: Encilia Av. nt: w/o Redlar	•					Name: . lumber:		oreno Valle	ey Trade	•
	SPECIFIC II	NPUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	•				
Average Daily		4,312 vehicl	es					Autos:			
	Percentage:	10.00%					ucks (2 A	/			
	lour Volume:	431 vehicle	S		He	avy Tru	cks (3+ A	Axles):	15		
	hicle Speed:	45 mph		f	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data								72.0%	14.6%	13.5%	94.24%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-W		0.0			-	Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Di		44.0 feet		-	Noise So	roo E	lovetion	a (in f	n a #1		
Centerline Dist.	to Observer:	44.0 feet		-	Noise 30	Auto		000	eu)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				ry Truck		004	Grade Ad	iuctman	t- 0.0
P	ad Elevation:	0.0 feet			неа	y iruck	S. 8.	004	Grade Ad	justinen	1. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degre	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn	_	Barrier Att		rm Atten
Autos:	68.46			1.2		-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-24.30		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attei	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn	_	NEL
Autos:		2.8	60.6		59.6		54.5		62.4	-	63.0
Medium Trucks:		0.5	58.6		55.5		52.6		60.3	-	60.7
Heavy Trucks:		).1	58.4		54.1		50.8		59.2		59.5
Vehicle Noise:	66	3.1	64.1		61.9		57.7	7	65.6	3	66.1
Centerline Distan	ce to Noise C	ontour (in feet	)							,	
			Į	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		23 48 104			225			
		С	NEL:		24 52 112				242		

	: GPBO (204								oreno Valle	y Trade	
	: Alessandro					Job N	lumber:	12975			
Road Segment	: e/o Lasselle	e St.									
	PECIFIC IN	PUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	(Hard				
Average Daily T		36,212 vehicl	es					Autos:			
Peak Hour P	-	10.00%				dium Tr					
	ur Volume:	3,621 vehicle	es.		He	avy Tru	cks (3+	Axles).	15		
	icle Speed:	50 mph		1	Vehicle I	Mix					
Near/Far Lan	e Distance:	82 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.249
Barr	ier Heiaht:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Dist	. to Barrier:	67.0 feet		7	Noise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		67.0 feet				Auto		0.000	,		
Barrier Distance to		0.0 feet			Mediu	m Truck		.297			
Observer Height (A	,	5.0 feet				vy Truck		3.004	Grade Ad	ustment	: 0.0
	d Elevation:	0.0 feet				•					
	d Elevation:	0.0 feet		1	Lane Eq			_ •	feet)		
R	oad Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degre				m Truck	00	3.059			
	Right View:	90.0 degre	es		Heav	y Truck	s: 53	3.076			
FHWA Noise Model	Calculations	S									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	3.04		-0.5		-1.20		-4.71	0.0		0.00
Medium Trucks:	81.00	-10.23		-0.4	-	-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-15.51		-0.4	9	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise											
	.eq Peak Hou			Leq E			Night		Ldn		NEL
Autos:	71		69.3		68.4		63		71.2		71.
Medium Trucks:	69		67.1		64.0		61		68.9		69.
Heavy Trucks:	68		66.5		62.2		58		67.3		67.
Vehicle Noise:	74		72.6		70.5		66	.2	74.2	2	74.
Centerline Distance	to Noise Co	ntour (in fee	t)	70.	-/D.4		-10.4		20 -/D4		-104
			L	70 c		05	dBA		60 dBA	55	dBA
			Ldn:		127 137				591 635		1,272

		WA-RD-77-108	HIGH	WAY NO	JISE P						
Road Nam	io: GPBO (204 ne: Alessandro nt: e/o Nason	Blvd.						Alt1 M 12975	oreno Valle	ey Trade	
	SPECIFIC IN					N	INISE	MODE	L INPUT	9	
Highway Data				s	ite Cor	ditions					
Average Daily	Traffic (Adt):	26,984 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Ме	edium Tru	ucks (2	Axles):	15		
Peak H	lour Volume:	2,698 vehicle	s		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		V	ehicle	Miv					
Near/Far La	ne Distance:	58 feet				icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	72.0%		13.5%	. ,
Rai	rrier Height:	0.0 feet			М	edium Ti	rucks:	76.2%	9.4%	14.4%	4.449
Barrier Type (0-W	-	0.0				Heavy Ti	rucks:	81.8%	7.7%	10.6%	1.329
Centerline Di	. ,	55.0 feet			-: 0			<i>(i f.</i>			
Centerline Dist.	to Observer:	55.0 feet		N	oise S	ource El			eet)		
Barrier Distance	to Observer:	0.0 feet			14	Auto: m Truck:		.000			
Observer Height (	(Above Pad):	5.0 feet						.004	Grade Ad	ii ratma nt	
Pa	ad Elevation:	0.0 feet			неа	vy Truck	S: 8	.004	Grade Adj	justrient	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in i	feet)		
1	Road Grade:	0.0%				Autos	s: 47	.000			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 46	3.811			
	Right View:	90.0 degree	es		Hea	vy Truck:	s: 46	3.830			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.76		0.30		-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-16.79		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	ıation)						
VehicleType	Leq Peak Hot		_	Leg Eve			Night		Ldn		NEL
Autos:			68.8		67.9		62.		70.7		71.
Medium Trucks:			66.6		63.6		60.		68.4	•	68.
Heavy Trucks:		7.7	66.0		61.8		58.		66.8	-	67.
Vehicle Noise:	74	1.1	72.1		70.0	1	65.	.8	73.7	7	74.
Centerline Distant	ce to Noise C	ontour (in feet	)	70							
			L	70 di		65	dBA		60 dBA		dBA
			Ldn:		97		210		451		973
		C	NEL:		105		22	5	485		1,046

Wednesday, November 4, 2020

	FH'	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	ION MO	DEL			
	c: GPBO (20- e: Alessandro t: e/o Moreno	Blvd.					Name: I lumber:		reno Valle	y Trade	
	PECIFIC II	IPUT DATA							LINPUTS	S	
Highway Data				Si	ite Cor	nditions	(Hard =	10, So	ft = 15)		
Average Daily 1 Peak Hour F Peak Ho	. ,	27,143 vehicle 10.00% 2,714 vehicle					ucks (2 A cks (3+ A	/	15 15 15		
Veh	icle Speed:	50 mph		1/	ehicle	Miv					
Near/Far Lan	e Distance:	58 feet				icleType		Day	Evening	Night	Daily
Site Data					¥ C I			72.0%	14.6%	13.5%	
Pan	rier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.44%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.32%
Centerline Dis		55.0 feet		N	oise S	ource E	levation	s (in fe	et)		
Centerline Dist. to		55.0 feet				Auto	s: 0.0	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2.5	297			
Observer Height (A		5.0 feet			Hea	vy Truck	s: 8.0	004	Grade Adj	iustment	: 0.0
	d Elevation:	0.0 feet			ono Fo	uivalan	t Dioton	o (in f	n n et l		
	d Elevation:	0.0 feet		L	ane Eq	Auto	t Distand s: 47.		eet)		
R	load Grade:	0.0%			Modiu	Auto m Truck					
	Leπ view: Right View:	-90.0 degre 90.0 degre				vy Truck					
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el l	Barrier Atte	en Bei	m Atten
Autos:	70.20	1.78		0.30		-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-11.48		0.33		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-16.77		0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise		<u>.</u>	barrie								
	Leq Peak Ho			Leg Eve			Night		Ldn		NEL
Autos:		1.1	68.9		67.9		62.8		70.7		71.3
Medium Trucks:		3.6	66.7		63.6		60.7		68.4		68.8
Heavy Trucks:		7.7	66.1		61.8		58.4		66.8		67.2
Vehicle Noise:		1.2	72.1		70.0		65.8		73.7	7	74.2
Centerline Distance	e to Noise C	ontour (in feet	)	70 dF	2.4	65	dBA	^	0 dBA		dBA
			Ldn:	7 U a.		05	ава 210	6	и <i>ава</i> 453		ава 976
		_	Lan: NFL:	98			210		453 487		1,050
		C	IVLL.		105 226 487				1,030		

lay, November 4, 2020 Wednesday, Novem

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MC	DEL			
		o Ćanyon Rd.					t Name: lumber:		loreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA			24- 0				L INPUT	S	
Highway Data					site Cor	iaitions	(Hara =		oft = 15)		
Average Daily 1		21,330 vehicle	es					Autos:			
Peak Hour I		10.00%					ucks (2				
	our Volume:	2,133 vehicles	S		He	eavy Tru	cks (3+	Axles).	15		
	icle Speed:	45 mph		١	/ehicle	Mix					
Near/Far Lar	e Distance:	44 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.31%
Ran	rier Heiaht:	0.0 feet			M	edium 7	rucks:	76.2%	9.4%	14.49	4.39%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy 7	rucks:	81.8%	6 7.7%	10.6%	1.30%
Centerline Dis		36.0 feet		1	Voise S	ource E	levation	ıs (in f	eet)		
Centerline Dist. t		36.0 feet				Auto	s: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (A	Above Pad): d Elevation:	5.0 feet 0.0 feet			Hea	vy Truck	(s: 8	.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		ı	ane Eo	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		.931	,		
•	Left View:	-90.0 degree	es		Mediu	m Truck	s: 28	.624			
	Right View:	90.0 degree			Hea	vy Truck	rs: 28	.654			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	1.20		3.46	3	-1.20		-4.55	0.0	000	0.000
Medium Trucks:	79.45	-12.12		3.50	-	-1.20		-4.86		000	0.000
Heavy Trucks:	84.25	-17.40		3.52		-1.20		-5.63	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Hοι			Leg Ev			Night		Ldn	_	NEL
Autos:	71		69.7		68.8		63.		71.6		72.1
Medium Trucks:	69		67.7		64.6		61.		69.	-	69.8
Heavy Trucks:	69		67.5		63.2		59.	-	68.3		68.6
Vehicle Noise:	75		73.2		71.0		66.	8	74.8	3	75.2
Centerline Distanc	e to Noise Co	ontour (in feet,	)	70 c	IRΔ	65	dBA	_	60 dBA	5	5 dBA
			Ldn:	,,,,	75	. 55	16		347		747
			NEL:		80		173	-	373		803
		Ci			30		173	,	3/3		003

		WA-RD-77-1									
	: GPBOP (2								oreno Valle	ey Trade	
	e: San Timote					Job N	lumber.	12975			
Road Segmen	t: s/o Live Oa	ak Canyon R	a.								
	SPECIFIC IN	NPUT DAT	A						L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily 1	raffic (Adt):	24,540 veh	icles					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak Ho	our Volume:	2,454 vehi	cles		He	avy Tru	cks (3+	Axles).	15		
	icle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far Lan	e Distance:	36 feet		F	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	4.6%	13.5%	94.34%
Ran	rier Height:	0.0 fee	ŀ		Me	edium T	rucks:	76.2%	6 9.4%	14.4%	4.37%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	Heavy T	rucks:	81.8%	7.7%	10.6%	1.29%
Centerline Dis		55.0 feet			Noise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	s: (	0.000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	:s: 8	3.004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet					4 Di-4-	/:	£4)		
	d Elevation:	0.0 feet		H	Lane Eq	uivaien Auto		2.211	reet)		
H	Road Grade:	0.0%			A de elle						
	Left View:	-90.0 deg				m Truck vy Truck		2.041			
	Right View:	90.0 deg	rees		пеач	ry Truck	.5. 5.	2.058			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flor		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78		94	-0.3	-	-1.20		-4.67		000	0.000
Medium Trucks:	82.40			-0.3	-	-1.20		-4.87		000	0.000
Heavy Trucks:	86.40			-0.3		-1.20		-5.38	0.0	000	0.000
VehicleType	<b>Levels (with</b> Lea Peak Hou				vening		Night		Ldn		NEL
Autos:	- 1	ur Ley L 1.1	68.9	Ley E	68.0		Nigrit 62	0	70.		71.4
Medium Trucks:		3.4	66.5		63.4		60		68.		68.6
Heavy Trucks:		7.1	65.5		61.2		57		66.		66.6
Vehicle Noise:		4.0	72.0		69.9		65		73.		74.
Centerline Distance	e to Noise Co	ontour (in fe	eet)								
			,	70	dBA	65	dBA	-	60 dBA	55	dBA
			Ldn:		95		20	5	443	3	954

Average Daily Traffic (Adf): 25,853 vehicles   Peak Hour Percentage: 10,00%   Medium Trucks (2 Axles): 15   Heavy Trucks (3 + Axles): 15   Wehicle Speed: 55 mph Near/Far Lane Distance: 36 feet   Wehicle Type   Day   Evening   Night   D. Vehicle Mix   Vehicle Type   Day   Evening   Night   D. Vehicle Type   Day   Evening   Night   D. Vehicle Type   Day   Evening   Night   D. Vehicle Type   Day   Evening   Night   D. Vehicle Type   Day   Degrees   Day   Evening   Night   D. Vehicle Type   Day   Degrees   Day   Evening   Night   D. Vehicle Type   Day   Degrees		WA-RD-77-10	HIGH	TWAY N	OISEP							
Site Specific Input DATA   Site Specific Input DATA   Average Daily Traffic (Adt): 25,853 vehicles   Peak Hour Percentage: 10,00%   Peak Hour Volume: 2,585 vehicles   Vehicle Speed: 55 mph   Near/Far Lane Distance: 36 feet   Vehicle Type   Day   Evening   Night   Day   Evening   Night   Day   Vehicle Mix   Vehicle Type   Day   Evening   Night   Day		,							oreno Valle	ey Trade		
SITE SPECIFIC INPUT DATA							Job Nu	ımber:	12975			
	Road Segmen	nt: s/o San Tir	noteo Canyon	Rd.								
Average Daily Traffic (Adf): 25,853 vehicles   Peak Hour Potentage: 10,00%   Peak Hour Volume: 2,585 vehicles   Vehicle Speed: 55 mph   Near/Far Lane Distance: 36 feet   Vehicle Type   Day   Evening   Night   D.		SPECIFIC II	NPUT DATA			0					S	
Peak Hour Percentage: 10.00%	Highway Data				- 3	Site Cor	iaitions (	Hara =		oft = 15)		
Peak Hour Volume:	Average Daily	Traffic (Adt):	25,853 vehic	les								
Vehicle   Speed   S5 mph   Near/Far Lane   Distance   S6 feet   S6 feet   Vehicle   Mix   Vehicle   Type   Day   Evening   Night   Day	Peak Hour	Percentage:	10.00%						,			
Near/Far Lane Distance: 36 feet   Near   N	Peak H	our Volume:	2,585 vehicle	es		He	eavy Truc	ks (3+	Axles):	15		
Near/Far Lane Distance: 36 feet   VehicleType   Day   Evening   Night   Day   Site Data	Vel	hicle Speed:	55 mph		1	Vehicle	Mix					
Barrier Height:   0.0 feet   Medium Trucks:   72.0%   14.6%   13.5%   94	Near/Far Lar	ne Distance:	36 feet		F				Dav	Evenina	Niaht	Dailv
Barrier Type (0-Wall, 1-Berm):	Site Data						Α	utos:	72.0%	14.6%	13.5%	94.249
Barrier Type (0-Wall, 1-Berm):	Rar	rier Heiaht	0.0 feet			М	edium Tru	ucks:	76.2%	9.4%	14.4%	4.449
Noise Source Elevations (in feet)   Source Elevations (in feet)							Heavy Tri	ucks:	81.8%	7.7%	10.6%	1.329
Centerline Dist. to Observer:   5.0 feet   Barrier Distance to Observer:   0.0 feet   Autos:   0.000   Medium Trucks:   2.297   Heavy Trucks:   8.004   Grade Adjustment: 0.0 feet   Road Grade:   0.0 feet   0	** '		55.0 feet		- H.	o			- 0- 5			
Barrier Distance to Observer: 0.0 feet   Medium Trucks: 2.997   Heavy Trucks: 8.004   Grade Adjustment: 0.0 feet   Road Glevation: 0.0 feet   Lane Equivalent Distance (in feet)	Centerline Dist. t	to Observer:	55.0 feet		- 1	voise S				eetj		
Diserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0%   Lane Equivalent Distance (in feet)	Barrier Distance t	to Observer:	0.0 feet			A 4 = = E						
Pad Elevation:	Observer Height (	Above Pad):	5.0 feet							0	·	
Road Grade: 0.0%	Pa	d Elevation:	0.0 feet			неа	vy Trucks	: 8	.004	Grade Ad	justriient	0.0
Left View:	Roa	d Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in i	feet)		
Right View: 90.0 degrees   Heavy Trucks: 52.058	F	Road Grade:	0.0%				Autos	: 52	.211			
FHWA Noise Model Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm A		Left View:	-90.0 degre	es		Mediu	m Trucks	: 52	.041			
VehicleType		Right View:	90.0 degre	es		Hea	vy Trucks	: 52	.058			
Autos: 71.78	FHWA Noise Mode	el Calculation	ıs									
Medium Trucks: 82.40	VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Heavy Trucks: 86.40	Autos:	71.78	1.16	6	-0.39	9	-1.20		-4.67	0.0	000	0.00
Unmitigated Noise   Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL	Medium Trucks:	82.40	-12.11	l	-0.36	6	-1.20		-4.87	0.0	000	0.00
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.4         69.1         68.2         63.1         71.0         68.8         68.7         66.8         68.7         60.8         68.5         66.5         66.5         66.5         66.5         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8         66.5         73.8	Heavy Trucks:	86.40	-17.39	9	-0.37	7	-1.20		-5.38	0.0	000	0.00
Autos:         71.4         69.1         68.2         63.1         71.0           Medium Trucks:         68.7         66.8         63.7         60.8         68.5           Heavy Trucks:         67.4         65.8         61.5         58.1         66.5           Vehicle Noise:         74.3         72.2         70.2         65.9         73.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         99         214         461	Unmitigated Noise	Levels (with	out Topo and	l barrie	er atten	uation)						
Medium Trucks:         68.7         66.8         63.7         60.8         68.5           Heavy Trucks:         67.4         65.8         61.5         58.1         66.5           Vehicle Noise:         74.3         72.2         70.2         65.9         73.8           Centerline Distance to Noise Contour (in feet)	VehicleType	Leq Peak Ho	ur Leq Da	y	Leg Ev	vening	Leq N	Vight		Ldn	C	NEL
Heavy Trucks: 67.4 65.8 61.5 58.1 66.5	Autos:	71	1.4	69.1		68.2		63.	1	71.0	)	71.
Vehicle Noise:         74.3         72.2         70.2         65.9         73.8           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         99         214         461	Medium Trucks:	68	3.7	66.8		63.7		60.	8	68.	5	68.
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         99         214         461	Heavy Trucks:	67	7.4	65.8		61.5	i	58.	1	66.	5	66.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 99 214 461	Vehicle Noise:	74	1.3	72.2		70.2		65.	9	73.8	3	74.
Ldn: 99 214 461	Centerline Distanc	e to Noise C	ontour (in fee	t)	70			·D 4			T ==	
00 211 101				L	70 c		65 a					
CNEL: 107 230 495 1			_									992
			C	NEL:		107		230	)	495		1,067

Wednesday, November 4, 2020

	FH	WA-RD-77-108	HIGHWA	Y NOISE P	REDICTION	ON MODE	L		
Road Nam	no: GPBOP (2) ne: Redlands E nt: n/o Ironwo	Blvd.				Vame: Alt Imber: 129	1 Moreno Valle 975	ey Trade	
SITE	SPECIFIC IN	IPUT DATA					DEL INPUT	S	
Highway Data				Site Cor	nditions (	Hard = 10	, Soft = 15)		
	Traffic (Adt): Percentage: four Volume:	24,343 vehicle 10.00% 2.434 vehicle				Aut cks (2 Axle ks (3+ Axle			
	hicle Speed:	50 mph	3			10 (0 - 7 151.11			
	ne Distance:	58 feet		Vehicle					
	inc Distance.	30 1001		Veh	nicleType	Da	, ,	_	aily
Site Data							.0% 14.6%		.35%
Ba	rrier Height:	0.0 feet			ledium Tru		.2% 9.4%		.36%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Tri	ıcks: 81	.8% 7.7%	10.6% 1	.29%
Centerline Di	st. to Barrier:	55.0 feet		Noise S	ource Ele	vations (i	in feet)		
Centerline Dist.	to Observer:	55.0 feet		110,000	Autos				
Barrier Distance	to Observer:	0.0 feet		Medic	ım Trucks	0.000			
Observer Height	(Above Pad):	5.0 feet			vy Trucks			ljustment: 0.0	)
P	ad Elevation:	0.0 feet						,	
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
	Road Grade:	0.0%			Autos	47.000	0		
	Left View:	-90.0 degree	es		ım Trucks		1		
	Right View:	90.0 degree	es	Hea	vy Trucks	46.830	0		
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Att	ten Berm A	tten
Autos:	70.20	1.32		0.30	-1.20	-4.	.67 0.0	000 (	0.000
Medium Trucks:	81.00	-12.04		0.33	-1.20	-4.	.87 0.0	000	0.000
Heavy Trucks:	85.38	-17.32		0.32	-1.20	-5.	.38 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier at	tenuation)					
VehicleType	Leq Peak Hou			g Evening	Leq N	-	Ldn	CNEL	
Autos:			68.4	67.5		62.4	70.3		70.8
Medium Trucks:	68		66.1	63.0		60.1	67.9		68.3
Heavy Trucks:	67		65.5	61.2		57.9	66.3		66.6
Vehicle Noise:	73	3.7	71.6	69.5	5	65.3	73.2	2	73.7
Centerline Distan	ce to Noise C	ontour (in feet,			1 -				
				70 dBA	65 a		60 dBA	55 dBA	
			Ldn:	90		194	419		903
		CI	NEL:	97		209	451		971

dnesday, November 4, 2020

	FHW	A-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION MO	DDEL			
Road Nar	rio: GPBOP (204 ne: Redlands Bl ent: s/o Ironwood	vd.					t Name: lumber:		oreno Valle	ey Trade	
	SPECIFIC INI	PUT DATA							L INPUT	s	
Highway Data				2	site Cor	nditions	(Hara :				
Average Daily	Traffic (Adt): 2	23,127 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tr	ucks (2	Axles):	15		
Peak I	Hour Volume:	2,313 vehicles	3		He	eavy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ane Distance:	58 feet		F.		icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	-	13.5%	94.36%
Ra	rrier Height:	0.0 feet			M	ledium T	rucks:	76.2%	9.4%	14.4%	4.35%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.29%
	ist. to Barrier:	55.0 feet		1	loise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	55.0 feet				Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustmen	: 0.0
F	ad Elevation:	0.0 feet				•					
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distar	nce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 47	.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 46	3.830			
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten
Autos:		1.09		0.30		-1.20		-4.67		000	0.000
Medium Trucks:		-12.27		0.33		-1.20		-4.87		000	0.000
Heavy Trucks:		-17.55		0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Nois								-		1 -	
VehicleType	Leq Peak Hour		_	Leq Ev			Night	<u> </u>	Ldn		NEL
Autos:			68.2		67.3		62		70.0	-	70.6
Medium Trucks:		-	65.9		62.8		59	-	67.7		68.0
Heavy Trucks:			65.3		61.0		57		66.		66.4
Vehicle Noise:		-	71.4		69.3	}	65	.0	73.0	)	73.5
Centerline Distan	ce to Noise Co	ntour (in feet)	1	70 a	IRΔ	65	dBA	-	60 dBA	55	dBA
			Ldn:	700	87	00	18		405		872
			VEL:		94		20:	-	405		938
		CI	VLL.		94		20.	۷	430	'	938

	FH	WA-RD-77-10	8 HIGI	HWAY	NOISE P	REDICI	ION MC	JUEL			
	c: GPBOP (2								oreno Valle	y Trade	
	e: Redlands E					Job N	lumber:	12975			
Road Segmen	t: s/o SR-60	Westbound R	amps								
	PECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily 1	Fraffic (Adt):	27,212 vehic	les					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	edium Ti	ucks (2	Axles).	15		
Peak Ho	our Volume:	2,721 vehicle	es		He	eavy Tru	cks (3+	Axles).	15		
	icle Speed:	50 mph		F	Vehicle	Mix					
Near/Far Lan	e Distance:	58 feet		İ	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	4 14.6%	13.5%	92.99%
Barı	rier Heiaht:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.52%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy 7	rucks:	81.8%	6 7.7%	10.6%	2.49%
Centerline Dis		55.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		55.0 feet				Auto	s: O	.000			
Barrier Distance to		0.0 feet			Mediu	m Truck		.297			
Observer Height (A	,	5.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		-		•					
	d Elevation:	0.0 feet		-	Lane Eq				reet)		
R	Road Grade:	0.0%				Auto		.000			
	Left View:	-90.0 degre				m Truck		5.811			
	Right View:	90.0 degre	ees		неа	vy Truck	S: 46	5.830			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20			0.3		-1.20		-4.67		000	0.00
Medium Trucks:	81.00		-	0.3		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-13.98	3	0.3	32	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Ho		,	Leq E	vening		Night		Ldn		VEL
Autos:		1.0	68.8		67.9		62	-	70.7		71.
Medium Trucks:		3.7	66.8		63.7		60	-	68.5		68.
Heavy Trucks:		).5	68.9		64.6		61		69.6		70.
Vehicle Noise:	75	5.0	73.0		70.6		66	.4	74.5	5	74.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			!	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		109		23		507		1,093
		(	NEL:		117		25	2	544		1.171

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MC	DEL			
Road Nam	io: GPBOP (2 ne: Redlands E nt: n/o Eucaly	Blvd.					Name: umber:		oreno Valle	ey Trade	
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,250 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	2,825 vehicle	:S		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		1/	ehicle	Miv					
Near/Far La	ne Distance:	58 feet				icleType		Dav	Evening	Niaht	Dailv
Site Data					***		Autos:	72.0%		13.5%	. ,
	rrier Height:	0.0 feet			M	edium Ti	rucks:	76.2%		14.4%	
Barrier Type (0-W		0.0				Heavy Ti	rucks:	81.8%	7.7%	10.6%	2.669
Centerline Dis	. ,	55.0 feet									
Centerline Dist.		55.0 feet		۸	oise S	ource El			eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height (	Above Pad):	5.0 feet				m Truck		.297	0	·	
	ad Elevation:	0.0 feet			неа	vy Truck	s: 8	.004	Grade Ad	justment	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Auto	s: 47	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.811			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 46	.830			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos:	70.20			0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-13.54		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	ıation)						
	Leq Peak Hot			Leq Ev			Night		Ldn		NEL
Autos:		1.2	69.0		68.1		62.	-	70.	-	71.
Medium Trucks:		3.8	66.9		63.8		60.	-	68.		69.
Heavy Trucks:		1.0	69.3		65.0		61.		70.		70.
Vehicle Noise:	75	5.2	73.3		70.8		66.	7	74.	7	75.
Centerline Distanc	ce to Noise C	ontour (in fee	t)			1					
			L	70 d		65	dBA		60 dBA		dBA
		_	Ldn:		113		244		526		1,13
		С	NEL:		122		262	2	564		1,21

Wednesday, November 4, 2020

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MODEL		
	o: GPBOP (20 e: Redlands B t: s/o Eucalyp	lvd.				Name: Alt1 lumber: 129	Moreno Valley 75	/ Trade
	SPECIFIC IN	PUT DATA			N	IOISE MOI	DEL INPUTS	
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage: our Volume:	28,495 vehicle 10.00% 2,850 vehicles	8			Auto ucks (2 Axle cks (3+ Axle	s): 15	
	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	58 feet		Veh	nicleType	Day	Evening	Night Daily
Site Data					-	Autos: 72.0	0% 14.6%	13.5% 94.89%
Ran	rier Height:	0.0 feet		М	ledium Ti	rucks: 76.2	2% 9.4%	14.4% 3.94%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 81.8	3% 7.7%	10.6% 1.17%
Centerline Dis	t. to Barrier:	55.0 feet		Noise S	ource El	evations (in	feet)	
Centerline Dist. t	o Observer:	55.0 feet			Auto	-		
Barrier Distance t	o Observer:	0.0 feet		Mediu	ım Truck			
Observer Height (A	Above Pad):	5.0 feet			vy Truck		Grade Adiu	stment: 0.0
	d Elevation:	0.0 feet			•			
Roa	d Elevation:	0.0 feet		Lane Eq		Distance (i	in feet)	
F	Road Grade:	0.0%			Auto			
	Left View:	-90.0 degree	S		m Truck	10.011		
	Right View:	90.0 degree	S	Hea	vy Truck	s: 46.830		
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte	
Autos:	70.20	2.03		0.30	-1.20	-4.6		
Medium Trucks:	81.00	-11.79		0.33	-1.20	-4.8		
Heavy Trucks:	85.38	-17.08		0.32	-1.20	-5.3	0.00	0.000
Unmitigated Noise								
	Leq Peak Hou			q Evening		Night	Ldn	CNEL
Autos:	71		9.1	68.2		63.1	71.0	71.6
Medium Trucks:	68		6.4	63.3		60.4	68.1	68.5
Heavy Trucks:	67		5.8	61.5		58.1	66.5	66.9
Vehicle Noise:	74		2.1	70.1		65.8	73.7	74.2
Centerline Distance	e to Noise Co	ntour (in feet)		70 dBA	65	dBA	60 dBA	55 dBA
		,	dn:	70 ава 97	00	210	60 dBA 451	973
		_	an: EL:	105		210	486	1,047
		CN	LL.	105		220	480	1,047

	FH\	WA-RD-77-108	HIGH	IWAY N	IOISE PI	REDICT	ION MO	DEL			
	o: GPBOP (20 e: Redlands E nt: s/o Dwy. 7						Name: lumber:		oreno Valle	ey Trade	•
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	29,128 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%				dium Tr					
Peak H	our Volume:	2,913 vehicle	S		He	avy Tru	cks (3+ i	Axles):	15		
Vel	hicle Speed:	50 mph		١	Vehicle I	Wix					
Near/Far Lar	ne Distance:	58 feet		i i		icleType		Day	Evening	Night	Daily
Site Data						,	Autos:	72.0%	14.6%	13.5%	95.01%
Rar	rier Height:	0.0 feet			Me	edium T	rucks:	76.2%	9.4%	14.49	3.85%
Barrier Type (0-W		0.0			F	Heavy T	rucks:	81.8%	7.7%	10.69	1.14%
Centerline Dis		55.0 feet		١,	Voise Sc	roo E	lovetion	a (in f	n a #1		
Centerline Dist. t	to Observer:	55.0 feet		,	voise Sc	Auto			eet)		
Barrier Distance t	to Observer:	0.0 feet			A 4 = = 60	Auto m Truck		000 297			
Observer Height (	Above Pad):	5.0 feet						297 004	Grade Ad	iuatman	t. 0.0
Pa	d Elevation:	0.0 feet			neav	y Truck	S. 8.	004	Grade Ad	justriieri	t. U.U
Roa	d Elevation:	0.0 feet		L	Lane Eq	uivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 47.	000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	811			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46	830			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	2.13		0.30	0	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-11.79		0.33	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-17.08		0.32	2	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hοι	ır Leq Day	/	Leg Ev	/ening	Leq	Night		Ldn	(	NEL
Autos:	71		69.2		68.3		63.	-	71.		71.7
Medium Trucks:	68		66.4		63.3		60.4		68.		68.5
Heavy Trucks:	67		65.8		61.5		58.		66.		66.9
Vehicle Noise:	74	.2	72.2		70.1		65.	3	73.8	3	74.2
Centerline Distanc	e to Noise Co	ontour (in feet	)								
			L	70 c		65	dBA	4 - 7	60 dBA		5 dBA
			Ldn:		98		211		455		981
		C	NEL:		106		227		490		1,056

FH	WA-RD-77-108	HIGHWA	Y NOISE F	REDICTIO	N MODEL			
Scenario: GPBOP (2 Road Name: Redlands   Road Segment: s/o Dwy. 7	Blvd.				lame: Alt1 I mber: 1297	Moreno Vall 5	ey Trade	
SITE SPECIFIC II	NPUT DATA			NC	ISE MOD	EL INPUT	s	
Highway Data			Site Co.	nditions (F	lard = 10, S	Soft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	29,243 vehicle 10.00% 2,924 vehicles				Autos ks (2 Axles s (3+ Axles	): 15		
Vehicle Speed:	50 mph		Vehicle	Mix				
Near/Far Lane Distance:	58 feet		Vel	nicleType	Day	Evening	Night	Daily
Site Data				Au	tos: 72.0	% 14.6%	13.5%	95.02%
Barrier Height:	0.0 feet		Λ.	ledium Tru	cks: 76.2	% 9.4%	14.4%	3.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	cks: 81.8	% 7.7%	10.6%	1.14%
Centerline Dist. to Barrier:	55.0 feet		Noise S	ource Elev	ations (in	feet)		
Centerline Dist. to Observer:	55.0 feet			Autos:	0.000			
Barrier Distance to Observer:	0.0 feet		Mediu	ım Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet		Hea	vy Trucks:	8.004	Grade Ad	justment	: 0.0
Pad Elevation:	0.0 feet			•				
Road Elevation:	0.0 feet		Lane Ed		Distance (ir	reet)		
Road Grade:	0.0%			Autos:	47.000			
Left View: Right View:	-90.0 degree 90.0 degree			ım Trucks: vy Trucks:	46.811 46.830			
FHWA Noise Model Calculation	ıs							
VehicleType REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier At	en Ber	m Atten
Autos: 70.20	2.14		0.30	-1.20	-4.67	7 0.	000	0.00
Medium Trucks: 81.00	-11.79		0.33	-1.20	-4.87	0.	000	0.00
Heavy Trucks: 85.38	-17.08		0.32	-1.20	-5.38	3 0.	000	0.00
Unmitigated Noise Levels (with			,					
VehicleType Leq Peak Ho			q Evening	Leq N	-	Ldn		NEL
		69.2	68.3		63.2	71.		71.
		66.4	63.3		60.4	68.		68.
		65.8	61.5		58.1	66.		66.9
		72.2	70.		65.8	73.	8	74.
Centerline Distance to Noise C	ontour (in feet)		70 dBA	65 dE	RΔ	60 dBA	EE	dBA
		Ldn:	98	00 UL	212	456		982
			90					302

	FHV	WA-RD-77-108	HIGH	WAY NO	DISE PI	REDICTI	ON MC	DEL			
Road Nam	no: GPBOP (20 ne: Redlands E nt: s/o Encelia	Blvd.					Name: umber:		oreno Valle	ey Trade	
	SPECIFIC IN	IPUT DATA			ita Car	N ditions			L INPUT	S	
Highway Data				3.	ite Con	uiuons					
Average Daily	. ,	18,055 vehicle	es					Autos:	15		
	Percentage:	10.00%				dium Tru		,			
	lour Volume:	1,806 vehicles	S		He	avy Truc	cks (3+	Axles):	15		
	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	lutos:	72.0%	14.6%	13.5%	94.689
Ra	rrier Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	4.109
Barrier Type (0-W	-	0.0			-	Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.229
Centerline Di	st. to Barrier:	55.0 feet		N	oise S	ource Ele	evation	s (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		-		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		004	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet			rica	ry mache	J. U.	.004	0/440 / 14,	dottriont	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in t	eet)		
	Road Grade:	0.0%				Autos	s: 47	.000			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 46	.811			
	Right View:	90.0 degree	es		Hear	y Trucks	s: 46	.830			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi		Barrier Att		m Atten
Autos:		0.03		0.30		-1.20		-4.67		000	0.00
Medium Trucks:	81.00			0.33		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-18.88		0.32		-1.20		-5.38	0.0	000	0.00
Unmitigated Nois	•							1			
VehicleType	Leq Peak Hou		_	Leq Eve			Night	<u> </u>	Ldn	_	NEL
Autos:			67.1		66.2		61.		69.0		69.
Medium Trucks:			64.6		61.5		58.	-	66.3	-	66.
Heavy Trucks: Vehicle Noise:			64.0 70.2		59.7 68.1		56. 63.		64.7 71.8		65. 72.
Centerline Distant	ce to Noise Co	ontour (in feet	)								
Contornile Distant	00 10 110136 01	in rees		70 dl	ВА	65 (	dBA	6	i0 dBA	55	dBA
			Ldn:		73		156	3	337		726
		CI	NEL:		78		168	3	363		78

Wednesday, November 4, 2020

Fl	IWA-RD-77-108 HI	IGHWAY	NOISE P	REDICTI	ON MOI	DEL			
Scenario: GPBOP (: Road Name: Redlands Road Segment: n/o Alessa	Blvd.				Name: F umber: 1		oreno Valle	y Trade	
SITE SPECIFIC I	NPUT DATA						L INPUTS	5	
Highway Data			Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	16,012 vehicles					lutos:	15		
Peak Hour Percentage:	10.00%				ıcks (2 A	/			
Peak Hour Volume:	1,601 vehicles		He	avy Truc	cks (3+ A	xles):	15		
Vehicle Speed:	50 mph		Vehicle	Mix					
Near/Far Lane Distance:	58 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data				A	lutos:	72.0%	14.6%	13.5%	94.37%
Barrier Height:	0.0 feet		М	edium Tı	ucks:	76.2%	9.4%	14.4%	4.34%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Ti	rucks:	31.8%	7.7%	10.6%	1.29%
Centerline Dist. to Barrier:	55.0 feet		Noise S	ource El	evations	(in fe	eet)		
Centerline Dist. to Observer:	55.0 feet			Autos		•	,		
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck:					
Observer Height (Above Pad):	5.0 feet		Heav	y Truck	s: 8.0	04	Grade Adj	ustment	0.0
Pad Elevation:	0.0 feet			•					
Road Elevation:	0.0 feet		Lane Eq				feet)		
Road Grade:	0.0%			Autos					
Left View:	-90.0 degrees			m Truck					
Right View:	90.0 degrees		Heav	y Truck	s: 46.8	30			
FHWA Noise Model Calculation	<del>,                                     </del>								
VehicleType REMEL		Distance		Road	Fresn		Barrier Atte		m Atten
Autos: 70.2			30	-1.20		4.67	0.0		0.000
Medium Trucks: 81.0			33	-1.20		4.87	0.0		0.000
Heavy Trucks: 85.3			32	-1.20		5.38	0.0	00	0.000
Unmitigated Noise Levels (with				10-	Nicht		l do	_	VEL
VehicleType Leq Peak Ho	8.8 Leq Day		Evening 65.7	,	Night 60.6		Ldn 68.4		VEL 69.0
	6.3 64		61.2		58.3		66.1		66.4
	5.3 63		59.4		56.0		64.4		64.8
	1.8 69		67.7		63.4		71.4		71.9
Centerline Distance to Noise C	Contour (in feet)								
	, , , ,	70	) dBA	65	dBA	6	0 dBA	55	dBA
	Ld	n:	68		147		317		682
	CNE	L:	73		158		340		734

	FHW	A-RD-77-108	HIGH	HWAY N	OISE P	REDICTION	ON MO	DEL			
Road Name	o: GPBOP (204 e: Redlands Bl nt: s/o Alessand	vd.					Name: ımber:		oreno Valle	ey Trade	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				٥	ite Cor	ditions (					
Average Daily	. ,	10,936 vehicle	es					Autos:			
		10.00%				dium Tru		,			
		1,094 vehicles	S		He	avy Truci	ks (3+ ,	Axles):	15		
	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	58 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	72.0%	14.6%	13.5%	94.37%
Rar	rier Height:	0.0 feet			М	edium Tru	ucks:	76.2%	9.4%	14.4%	4.35%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tro	ucks:	81.8%	7.7%	10.6%	1.29%
Centerline Dis		55.0 feet		٨	loise S	ource Ele	vation	s (in fe	eet)		
Centerline Dist. t		55.0 feet				Autos	: 0.	000			
Barrier Distance t		0.0 feet			Mediu	m Trucks	: 2.	297			
Observer Height (	,	5.0 feet			Hear	y Trucks	: 8.	004	Grade Ad	justmeni	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Eq	uivalent		_ •	feet)		
F	Road Grade:	0.0%				Autos		000			
	Left View:	-90.0 degree				m Trucks		811			
	Right View:	90.0 degree	es		Hea	y Trucks	: 46.	830			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi	_	Barrier Att		rm Atten
Autos:	70.20	-2.16		0.30		-1.20		-4.67		000	0.000
Medium Trucks:	81.00	-15.52		0.33		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-20.81		0.32		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	•					l o a h	liabt	T	Ldn		NEL
VehicleType Autos:	Leq Peak Hour		64.9	Leq Ev	ening 64.0	Leq N	vignt 58.1	1	Lan 66.1		NEL 67.4
Medium Trucks:	64.0	-	62.6		59.6		56.	-	64.4	-	64.8
Heavy Trucks:	63.	-	62.0		57.8		54.4	-	62.8		63.1
Vehicle Noise:	70.2		68.2		66.0		61.6		69.7		70.2
Centerline Distance	e to Noise Cor	ntour (in feet,	)								
				70 d	BA .	65 d	IBA .	6	60 dBA	55	i dBA
			Ldn:		53		114		246	i	529
		CI	NEL:		57		123		264		569

FHWA-RD	)-77-108 HIGH	N YAWF	OISE P	REDICT	TON MO	DDEL						
Scenario: GPBOP (2040) Road Name: John F Kennedy I Road Segment: s/o Cactus Av.	Or.		Project Name: Alt1 Moreno Valley Trade Job Number: 12975									
SITE SPECIFIC INPUT	DATA						L INPUTS	3				
Highway Data		S	Site Con	ditions	(Hard	= 10, Sc	oft = 15)					
Average Daily Traffic (Adt): 13,14	5 vehicles					Autos:	15					
Peak Hour Percentage: 10.00	%		Me	dium Tr	ucks (2	Axles):	15					
Peak Hour Volume: 1,315	vehicles		He	avy Tru	cks (3+	Axles):	15					
Vehicle Speed: 45	mph	ī	/ehicle	Vix								
Near/Far Lane Distance: 36	feet		Veh	icleType	9	Day	Evening	Night	Daily			
Site Data					Autos:	72.0%	14.6%	13.5%	94.34%			
Barrier Height: 0.	0 feet		М	edium T	rucks:	76.2%	9.4%	14.4%	4.36%			
Barrier Type (0-Wall, 1-Berm): 0.			-	Heavy T	rucks:	81.8%	7.7%	10.6%	1.29%			
Centerline Dist. to Barrier: 44.	0 feet	^	loise So	ource E	levatio	ns (in fe	eet)					
	0 feet			Auto		.000	,					
	0 feet		Mediu	m Truck	s: 2	.297						
	0 feet			y Truck		.004	Grade Adj	ustment	0.0			
	0 feet	-		•								
	0 feet	L	ane Eq			_ •	eet)					
Road Grade: 0.0%	-			Auto		1.460						
	0 degrees			m Truck vy Truck		).241 ).262						
Right View. 90.	0 degrees		rical	y IIuch	3. 40	1.202						
FHWA Noise Model Calculations												
		stance		Road	Fres		Barrier Atte		m Atten			
Autos: 68.46	-0.90	1.28		-1.20		-4.61	0.0		0.00			
Medium Trucks: 79.45 Heavy Trucks: 84.25	-14.25 -19.53	1.31		-1.20 -1.20		-4.87 -5.50	0.0		0.00			
,				-1.20		-5.50	0.0	00	0.00			
Unmitigated Noise Levels (without To VehicleType Leg Peak Hour	po and barri Leg Day	er atteni Leg Ev			Night	_	Ldn	0	VFL			
Autos: 67.6	65.4	Ley Ev	64.5	Leq	TVIIGITE 59	4	67.3		VEL 67.			
Medium Trucks: 65.3	63.3		60.3		57		65.1		65.			
Heavy Trucks: 64.8	63.2		58.9		55		63.9		64.			
Vehicle Noise: 70.9	68.9		66.7		62		70.4		70.			
Centerline Distance to Noise Contour	(in feet)											
	,,	70 d	IBA	65	dBA	- 6	0 dBA	55	dBA			
	Ldn:		47		10	1	218		471			

Scenario: GPBOP (2	2040)				Project N	lame: A	It1 Mc	oreno Valle	v Trade	
Road Name: Moreno B					Job Nui			oreno vane	y made	
Road Segment: n/o SR-60		mps			000 1441	inder. I	2310			
SITE SPECIFIC I	NPUT DATA							L INPUT	s	
Highway Data			S	te Con	ditions (F	lard = :	10, So	ft = 15)		
Average Daily Traffic (Adt):	25,155 vehicle	es				A	lutos:	15		
Peak Hour Percentage:	10.00%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume:	2,515 vehicles	S		Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Speed:	40 mph		V	ehicle N	Nix					
Near/Far Lane Distance:	48 feet		F		cleType	- 1	Day	Evening	Night	Daily
Site Data							72.0%	-	13.5%	,
Barrier Height:	0.0 feet			Ме	dium Tru	cks:	76.2%	9.4%	14.4%	4.41
Barrier Type (0-Wall, 1-Berm):	0.0			Н	łeavy Tru	cks: 8	31.8%	7.7%	10.6%	1.31
Centerline Dist. to Barrier:	50.0 feet		N	oise So	urce Elev	vations	(in fe	et)		
Centerline Dist. to Observer:	50.0 feet		-		Autos		•			
Barrier Distance to Observer:	0.0 feet			Mediun	n Trucks:					
Observer Height (Above Pad):	5.0 feet				y Trucks:			Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet		L	ane Equ	ıivalent E	Distanc	e (in f	eet)		
Road Grade:	0.0%				Autos:					
Left View:	-90.0 degree	es			n Trucks:					
Right View:	90.0 degree	es		Heav	y Trucks:	43.9	166			
FHWA Noise Model Calculation	ns									
VehicleType REMEL	Traffic Flow	Distar		Finite		Fresne		Barrier Att		m Atter
Autos: 66.5			0.71		-1.20		4.65		000	0.0
Medium Trucks: 77.72			0.74		-1.20		4.87		000	0.0
Heavy Trucks: 82.99			0.73		-1.20		5.43	0.0	000	0.0
Unmitigated Noise Levels (with		_								
VehicleType Leq Peak Ho		_	eq Eve		Leq N	•		Ldn		NEL
		66.2		65.3		60.2		68.1		68
		64.4		61.3		58.4		66.2 65.5	-	66
		64.7 70.0		60.4		57.1 63.5		71.5		65 72
				0/./		03.5		/1.	)	/2
	ontour (in feet	)								
Centerline Distance to Noise C	, ,,,,		70 dl	RA I	65 dF	3 <i>A</i> I		n dra		
Centerline Distance to Noise C	, ,	Ldn:	70 dl	BA 63	65 dE	3A 136	ь	0 dBA 292		dBA 62

Wednesday, November 4, 2020

FI	IWA-RD-77-108 I	HIGHWAY	NOISE P	REDICT	ION MODE	L	
Scenario: GPBOP ( Road Name: Moreno B Road Segment: s/o SR-60	each Dr.	ps			Name: Alt1 lumber: 129	Moreno Valley 75	Trade
SITE SPECIFIC	NPUT DATA			ı	IOISE MO	DEL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	46,522 vehicles 10.00% 4,652 vehicles 50 mph	S	He	avy Tru	Aut ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance:	82 feet		Vehicle				
	02 1001		Veh	icleType			Night Daily
Site Data							13.5% 93.76%
Barrier Height:	0.0 feet			edium T			14.4% 4.40%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 81.	8% 7.7%	10.6% 1.84%
Centerline Dist. to Barrier:	67.0 feet		Noise So	ource El	levations (i	n feet)	
Centerline Dist. to Observer:	67.0 feet			Auto			
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck			
Observer Height (Above Pad):			vy Truck			stment: 0.0	
Pad Elevation:			•				
Road Elevation:	0.0 1001		Lane Eq		t Distance (		
Road Grade:	0.070			Auto			
Left View:	-90.0 degrees	S		m Truck		1	
Right View:	90.0 degrees	S	Hear	y Truck	s: 53.076	i	
FHWA Noise Model Calculation	ns		1				
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 70.2	0 4.10	-0	.51	-1.20	-4.	71 0.00	0.000
Medium Trucks: 81.0	0 -9.18	-0	.49	-1.20	-4.	88 0.00	0.000
Heavy Trucks: 85.3	8 -12.96	-0	.49	-1.20	-5.	29 0.00	0.000
Unmitigated Noise Levels (wit	hout Topo and b	arrier atte	enuation)				
VehicleType Leq Peak H	our Leq Day	Leq	Evening	Leq	Night	Ldn	CNEL
Autos:	72.6 7	0.4	69.5		64.3	72.2	72.8
Medium Trucks:	70.1 6	8.2	65.1		62.2	69.9	70.3
Heavy Trucks:	70.7 6	9.1	64.8		61.4	69.8	70.2
Vehicle Noise:	76.1 7	4.1	71.8		67.6	75.6	76.0
Centerline Distance to Noise	Contour (in feet)						
			0 dBA	65	dBA	60 dBA	55 dBA
	-	.dn:	158		340	733	1,579
	CN	EL:	170		365	787	1,696

F	HWA-RD-77-10	8 HIG	A YAWH	IOISE P	REDICT	ION MO	DEL					
Scenario: GPBOP Road Name: Moreno E Road Segment: s/o Aless	Beach Dr.			Project Name: Alt1 Moreno Valley Trade Job Number: 12975								
SITE SPECIFIC	INPUT DATA			a:: a				L INPUT	s			
Highway Data				Site Cor	ditions	(Hard =	10, S	oft = 15)				
Average Daily Traffic (Adt):	32,972 vehic	les					Autos:					
Peak Hour Percentage:	10.00%					ucks (2 )						
Peak Hour Volume:	3,297 vehicle	es		He	avy Tru	cks (3+ )	Axles):	15				
Vehicle Speed:	50 mph			Vehicle	Mix							
Near/Far Lane Distance:	82 feet		F	Veh	icleType	9	Day	Evening	Night	Daily		
Site Data						Autos:	72.0%	14.6%	13.5%	94.31%		
Barrier Height	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.39%		
Barrier Type (0-Wall, 1-Berm)	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.30%		
Centerline Dist. to Barrier				Noise S	ource E	levation	s (in f	eet)				
Centerline Dist. to Observer.					Auto	s: 0.	000					
Barrier Distance to Observer				Mediu	m Truck	s: 2.	297					
Observer Height (Above Pad). Pad Elevation.				Hea	y Truck	s: 8.	004	Grade Adj	iustment	0.0		
Road Elevation				Lane Eq	uivalen	t Distan	ce (in	feet)				
Road Grade			Ī	,	Auto		226	,				
Left View		ees		Mediu	m Truck	s: 53.	059					
Right View				Hea	y Truck	s: 53.	076					
FHWA Noise Model Calculation	ns											
VehicleType REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Bei	m Atten		
Autos: 70.2	0 2.63	3	-0.5	1	-1.20		-4.71	0.0	000	0.000		
Medium Trucks: 81.0		-	-0.4	-	-1.20		-4.88		000	0.000		
Heavy Trucks: 85.3			-0.4		-1.20		-5.29	0.0	000	0.000		
Unmitigated Noise Levels (wi		_										
VehicleType Leq Peak H		_	Leq E	vening		Night		Ldn	_	NEL		
	71.1	68.9		68.0		62.9	-	70.8		71.3		
	68.6	66.6		63.6		60.7		68.4		68.8		
,	67.7	66.0		61.8		58.4	_	66.8		67.2		
	74.2	72.2		70.0		65.8	3	73.7	7	74.2		
Centerline Distance to Noise	Contour (in fee	t)	70 (	dBA	65	dBA		60 dBA	55	dBA		
		Ldn:		119		257	_	553		1,191		
	,	NEL:		128		276		594		1,280		

Scanario	: GPBOP (20	240)				Projec	Mama	Alt1 M	oreno Valle	v Trada				
	: Moreno Be							12975	oreno vane	y made				
Road Segment	=					3001	iuiiibei.	12313						
		IPUT DATA					NOISE	MODE	L INPUT	8				
Highway Data				S	Site Conditions (Hard = 10, Soft = 15)									
Average Daily T	raffic (Adt):	25,889 vehic	es					Autos:	15					
Peak Hour F	Percentage:	10.00%			Me	dium Tı	ucks (2	Axles):	15					
Peak Ho	ur Volume:	2,589 vehicle	es		He	avy Tru	cks (3+	Axles):	15					
Veh	icle Speed:	50 mph			ehicle l	Miv								
Near/Far Lan	e Distance:	82 feet		<u> </u>		icleType	9	Dav	Evening	Night	Daily			
Site Data							Autos:	72.0%		13.5%	,			
Ran	ier Height:	0.0 feet			M	edium 7	rucks:	76.2%	9.4%	14.4%	4.37%			
Barrier Type (0-Wa		0.0			F	leavy 7	rucks:	81.8%	7.7%	10.6%	1.30%			
Centerline Dist	t. to Barrier:	67.0 feet		^	loise So	ource E	levatio	ns (in f	eet)					
Centerline Dist. to		67.0 feet				Auto	s: (	0.000	,					
Barrier Distance to		0.0 feet			Mediu	m Truck		2.297						
Observer Height (A		5.0 feet			Heav	y Truck	s: 8	3.004	Grade Adj	ustment	: 0.0			
	d Elevation:	0.0 feet		_		•								
	d Elevation:	0.0 feet		L	ane Eq			_ •	feet)					
R	oad Grade:	0.0%				Auto		3.226						
	Left View:	-90.0 degre				m Truck		3.059						
	Right View:	90.0 degre	es		Heav	y Truck	s: 50	3.076						
FHWA Noise Mode	Calculation:	s												
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Atte		rm Atten			
Autos:	70.20	1.58		-0.51		-1.20		-4.71		000	0.00			
Medium Trucks:	81.00	-11.76		-0.49		-1.20		-4.88		000	0.00			
Heavy Trucks:	85.38			-0.49		-1.20		-5.29	0.0	000	0.00			
Unmitigated Noise										1				
	Leq Peak Hou	- 4	_	Leq Ev		Leq	Night		Ldn		NEL			
Autos:	70		67.9		66.9		61		69.7 67.4		70.			
Medium Trucks:	67		65.6		62.5		59				67.			
Heavy Trucks: Vehicle Noise:	66 73		65.0 71.1		60.7		57 64		65.7 72.7		66. 73.			
veriicie ivoise.					09.0		04		12.1		13.			
		ontour (in fee	()					_		,				
Centerline Distance	e to Noise Co	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		70 d	BΔ	65	dRΔ		SO ARA	55	dRA			
Centerline Distance	e to Noise Co	mour (mree	Ldn:	70 d	<i>BA</i> 101	65	dBA 21		60 dBA 470	55	dBA 1.012			

		WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTION	ом ис	DEL						
	c: GPBOP (2	/			Project Name: Alt1 Moreno Valley Trade Job Number: 12975									
	e: Moreno Be					Job Nu	mber:	12975						
Road Segmen	t: s/o John F	Kennedy Dr.												
	SPECIFIC IN	NPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)									
Highway Data				31	Site Conditions (Hard = 10, Soft = 15)									
Average Daily 1	. ,	34,349 vehicl	es					Autos:	15					
Peak Hour F		10.00%				dium Tru		,	15					
	our Volume:	3,435 vehicle	s		He	avy Truci	(s (3+ )	Axles):	15					
	nicle Speed:	50 mph		V	ehicle l	Mix								
Near/Far Lan	ne Distance:	82 feet			Veh	icleType		Day	Evening	Night	Daily			
Site Data						A	utos:	72.0%	14.6%	13.5%	94.359			
Ban	rier Heiaht:	0.0 feet			M	edium Tru	icks:	76.2%	9.4%	14.4%	4.369			
Barrier Type (0-Wa		0.0			I	Heavy Tru	icks:	81.8%	7.7%	10.6%	1.299			
Centerline Dis	t. to Barrier:	67.0 feet		M	nien Sa	ource Ele	vation	e (in fe	not)					
Centerline Dist. t	o Observer:	67.0 feet		74	UISE SC	Autos		000	eu					
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Trucks		297						
Observer Height (A	Above Pad):	5.0 feet				vy Trucks.		004	Grade Ad	iustmant	0.0			
Pa	d Elevation:	0.0 feet			i icas	ry Trucks.	0.	004	Orace Au	ustriicht.	0.0			
Roa	d Elevation:	0.0 feet		La	ane Eq	uivalent	Distan	ce (in t	eet)					
F	Road Grade:	0.0%				Autos.	53.	226						
	Left View:	-90.0 degre	es		Mediu	m Trucks	53.	059						
	Right View:	90.0 degre	es		Heav	y Trucks	53.	076						
FHWA Noise Mode	l Calculation	ıs												
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten			
Autos:	70.20			-0.51		-1.20		-4.71		000	0.00			
Medium Trucks:	81.00			-0.49		-1.20		-4.88		000	0.00			
Heavy Trucks:	85.38	-15.82		-0.49		-1.20		-5.29	0.0	000	0.00			
Unmitigated Noise				attenu	ation)			_						
	Leq Peak Ho			Leq Eve		Leg N	-		Ldn		VEL			
Autos:		1.3	69.1		68.2		63.	-	70.9		71.			
Medium Trucks:		3.8	66.8		63.7		60.8	-	68.6		68.			
Heavy Trucks:		7.9	66.2		61.9		58.6	-	67.0		67.			
Vehicle Noise:	74	1.3	72.3		70.2		66.0	)	73.9	)	74.			
* 07/1/010 1 * 10/000:			1											
	e to Noise C	ontour (in fee	,	70 45	2.4	CF -	D 4		0 40 4		-10.4			
	e to Noise C	ontour (in fee		70 dE		65 d		1 -	i0 dBA		dBA			
Centerline Distance	e to Noise C		Ldn:	70 dE	122 131	65 d	BA 263 283		60 dBA 567 610		dBA 1,22° 1.313			

Wednesday, November 4, 2020

FI	IWA-RD-77-108 H	IIGHWAY	NOISE PI	REDICT	ION MODE	_				
Scenario: GPBOP (: Road Name: Iris Av. Road Segment: e/o Nasor	*				Name: Alt1 lumber: 129	Moreno Valle 75	ey Trade			
SITE SPECIFIC I	NPUT DATA					DEL INPUT	S			
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)				
Average Daily Traffic (Adt):	46,156 vehicles				Auto	os: 15				
Peak Hour Percentage:	10.00%		Medium Trucks (2 Axles): 15							
Peak Hour Volume:	4,616 vehicles		He	avy Tru	cks (3+ Axle	s): 15				
Vehicle Speed:	50 mph		Vehicle I	Mix						
Near/Far Lane Distance:	82 feet			icleType	Day	/ Evening	Night Daily			
Site Data					Autos: 72.	0% 14.6%	13.5% 94.31%			
Barrier Height:	0.0 feet		M	edium T	rucks: 76.	2% 9.4%	14.4% 4.39%			
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 81.	8% 7.7%	10.6% 1.30%			
Centerline Dist. to Barrier:	67.0 feet		Noise So	ource El	levations (ii	n feet)				
Centerline Dist. to Observer:	67.0 feet			Auto						
Barrier Distance to Observer:	0.0 feet 5.0 feet		Mediu	m Truck	s: 2.297					
Observer Height (Above Pad):		Heav	y Truck	s: 8.004	Grade Ad	ljustment: 0.0				
Pad Elevation:	0.0 feet				. Di-4 (	·- f4)				
Road Elevation:	0.0 feet		Lane Eq		t Distance (					
Road Grade:			A deceller	Auto m Truck						
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck vy Truck						
Right view.	90.0 degrees		77001	y much	3. 33.070	'				
FHWA Noise Model Calculatio	<del>,                                     </del>		_							
VehicleType REMEL	Traffic Flow	Distance	Finite		Fresnel	Barrier Att				
Autos: 70.2		-0.		-1.20	-4.7		0.00			
Medium Trucks: 81.0 Heavy Trucks: 85.3		-0.4 -0.4		-1.20 -1.20	-4.8 -5.2		0.00 0.00			
,				-1.20	-3.4	29 0.1	0.00			
Unmitigated Noise Levels (wit					N II I-4	1 -1	ONE			
VehicleType Leq Peak Ho		).4	Evening 69.4	Leq	Night 64.3	Ldn 72.3	2 CNEL 2 72.			
		3.1	65.0		62.1	69.5				
		7.5	63.2		59.9	68.				
		3.6	71.5		67.3	75.2				
Centerline Distance to Noise (	Contour (in feet)									
		70	dBA	65	dBA	60 dBA	55 dBA			
	Lo	dn:	149		321	692	1,491			
	CNE	=1 -	160		345	744	1,603			

Vednesday, November 4, 2020 Wednesday, November 4, 2020

	FHV	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DDEL			
Scenario Road Name Road Segment		,					t Name: lumber:		oreno Valle	ey Trade	
	PECIFIC IN	IPUT DATA			24- 0-				L INPUT	S	
Highway Data					orte Cor	nditions	(Hara =				
Average Daily T		61,802 vehicle	es					Autos:	15		
Peak Hour F		10.00%				edium Tr		,			
	ur Volume:	6,180 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
	icle Speed:	50 mph		١	/ehicle	Mix					
Near/Far Lan	e Distance:	82 feet			Vel	hicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	94.27%
Barr	ier Height:	0.0 feet			M	1edium T	rucks:	76.2%	9.4%	14.4%	4.42%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	1.31%
Centerline Dist		67.0 feet		1	loise S	ource E	levation	ns (in fe	eet)		
Centerline Dist. to		67.0 feet				Auto	s: 0	.000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	ım Truck	s: 2	.297			
Observer Height (A		5.0 feet 0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	Pad Elevation:			<u> </u>				-			
	d Elevation:	0.0 feet		1	ane Eq	quivalen			feet)		
R	oad Grade:	0.0%				Auto		.226			
	Left View:	-90.0 degree				ım Truck		.059			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 53	.076			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos:	70.20	5.36		-0.5		-1.20		-4.71		000	0.000
Medium Trucks:	81.00	-7.93		-0.49		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-13.21		-0.49		-1.20		-5.29	0.0	000	0.000
Unmitigated Noise						_					
	Leq Peak Hou			Leq E			Night		Ldn	_	NEL
Autos:	73		71.6		70.7		65.	-	73.	-	74.1
Medium Trucks:	71		69.4		66.3	-	63.		71.2	_	71.6
Heavy Trucks:	70		68.8		64.5		61.		69.6		69.9
Vehicle Noise:	76		74.9		72.8	3	68.	.5	76.	5	77.0
Centerline Distance	e to Noise Co	ontour (in feet	)	70 c	ID A	65	dBA	-	i0 dBA	5.6	i dBA
			Ldn:	700	181		39 <sup>-</sup>		842		1.814
			NEL:		195		420	-	905		1,814
		Ci	VLL.		195		421	J	905	'	1,951

	FH	WA-RD-77-108	HIGH\	NAY N	OISE P	REDICT	ION MODEL		
Scenari Road Name Road Segmen		,					t Name: Alt1 lumber: 1297		y Trade
SITE S	SPECIFIC IN	NPUT DATA					NOISE MOD		3
Highway Data				S	ite Cor	ditions	(Hard = 10,	Soft = 15)	
Peak He	Percentage: our Volume:	50,468 vehicle 10.00% 5,047 vehicle					Auto rucks (2 Axles rcks (3+ Axles	:): 15	
	nicle Speed:	50 mph		ν	ehicle	Mix			
Near/Far Lar	ne Distance:	82 feet			Veh	icleType	e Day	Evening	Night Daily
Site Data							Autos: 72.0	% 14.6%	13.5% 94.25%
	rier Height:	0.0 feet				edium 1			14.4% 4.43%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks: 81.8	% 7.7%	10.6% 1.31%
Centerline Dis		67.0 feet		٨	loise S	ource E	levations (in	feet)	
Centerline Dist. t		67.0 feet				Auto	s: 0.000	,	
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck			
Observer Height (	Above Pad):	5.0 feet				vy Truck		Grade Adi	ustment: 0.0
Pa	d Elevation:	0.0 feet				•			
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance (i	n feet)	
F	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53.059		
	Right View:	90.0 degre	es		Hea	y Truck	s: 53.076		
FHWA Noise Mode	l Calculation	ıs							
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	70.20	4.48		-0.51		-1.20	-4.7	1 0.0	0.00
Medium Trucks:	81.00	-8.80		-0.49		-1.20	-4.8	8 0.0	0.00
Heavy Trucks:	85.38	-14.08		-0.49		-1.20	-5.2	9 0.0	0.00
<b>Unmitigated Noise</b>	Levels (with	out Topo and	barrie	r attenu	ıation)				
VehicleType	Leq Peak Ho	ur Leq Da	V	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos:	73	3.0	70.8		69.8		64.7	72.6	73.
Medium Trucks:	70	0.5	68.5		65.5		62.6	70.3	70.
Heavy Trucks:	69	9.6	67.9		63.7		60.3	68.7	69.
Vehicle Noise:	76	3.0	74.0		71.9		67.7	75.6	76.
Centerline Distance	e to Noise C	ontour (in fee	)						
			L	70 d		65	dBA	60 dBA	55 dBA
		_	Ldn:		159		342	737	1,587
		С	NEL:		171		368	792	1,706

Scenario: GPBOP (2	040)				Project N	ame: Al	1 Moi	reno Valle	v Trade	
Road Name: Eucalyptus						nber: 12		cno vanc	y made	
Road Segment: e/o Nason					000 / 10/	11001. 12	0.0			
SITE SPECIFIC II	NPUT DATA							INPUT	S	
Highway Data			S	ite Con	ditions (F	lard = 1	), Sof	t = 15)		
Average Daily Traffic (Adt):	26,395 vehicl	les				Au	itos:	15		
Peak Hour Percentage:	10.00%			Med	dium Truc	ks (2 Ax	les):	15		
Peak Hour Volume:	2,640 vehicle	es		Hea	avy Truck	s (3+ Ax	les):	15		
Vehicle Speed:	40 mph		v	ehicle N	Nix					
Near/Far Lane Distance:	48 feet		ľ		cleType	D	ay	Evening	Night	Daily
Site Data					Au	tos: 7	2.0%	14.6%	13.5%	94.29
Barrier Height:	0.0 feet			Me	edium Tru	cks: 7	3.2%	9.4%	14.4%	4.40
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Tru	cks: 8	1.8%	7.7%	10.6%	1.30
Centerline Dist. to Barrier:	50.0 feet		۸	loise So	urce Elev	rations	in fee	et)		
Centerline Dist. to Observer:	50.0 feet		F		Autos:					
Barrier Distance to Observer:	0.0 feet			Mediur	n Trucks:		-			
Observer Height (Above Pad):	5.0 feet				v Trucks:	8.00		Grade Ad	ustment	0.0
Pad Elevation:	0.0 feet		_							
Road Elevation:	0.0 feet		L	ane Equ	ıivalent D		•	eet)		
Road Grade:	0.0%				Autos:					
Left View:	-90.0 degre	es			n Trucks:					
Right View:	90.0 degre	es		Heav	y Trucks:	43.96	i6			
HWA Noise Model Calculation	is									
VehicleType REMEL	Traffic Flow		ance	Finite		Fresnei	_	Barrier Att	_	m Atter
Autos: 66.51			0.71		-1.20		.65		000	0.0
Medium Trucks: 77.72			0.74		-1.20		.87		000	0.00
Heavy Trucks: 82.99	-15.96	i	0.73	3	-1.20	-5	i.43	0.0	000	0.00
Inmitigated Noise Levels (with		_			/ A/	in to 4		l ala		
VehicleType Leq Peak Ho  Autos: 6	ur Leq Da	66.4	Leq Ev	ening 65.5	Leq Ni	60.4		Ldn 68.3		NEL 68
	5. <i>1</i> 5.6	64.6		61.5		58.6		66.4		66
	5.6	64.9		60.6		57.3		65.7		66
	2.2	70.2		67.9		63.7		71.7		72
Centerline Distance to Noise C	ontour (in fee	t)								
			70 d	BA	65 dE	3A	60	) dBA	55	dBA
		I also		0.5		140		301		64
		Ldn:		65		140		301		04

Wednesday, November 4, 2020

	FH\	WA-RD-77-10	B HIGHV	NAY N	OISE PI	REDICTION	ON MOD	EL		
Road Nan	nio: GPBOP (20 ne: Eucalyptus ent: e/o Fir Av.						Vame: A mber: 1		reno Valley l	Frade
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODE	LINPUTS	
Highway Data				S	ite Con	ditions (	Hard = 1	0, So	ft = 15)	
	Traffic (Adt): Percentage:	29,071 vehic 10.00% 2,907 vehicle				dium Truc avy Truck	cks (2 A	/	15 15 15	
	ehicle Speed:	40 mph	,,,				10 (0 : 71)		10	
	ane Distance:	48 feet		ν	ehicle l					
	ino Biotanoo.	40 1001			Veh	icleType		Day	-	ight Daily
Site Data								2.0%		3.5% 94.30%
Ва	rrier Height:	0.0 feet				edium Tru		6.2%		4.4% 4.40%
Barrier Type (0-VI	Vall, 1-Berm):	0.0			ı	Heavy Tru	icks: 8	1.8%	7.7% 1	0.6% 1.30%
Centerline Di	ist. to Barrier:	50.0 feet			loise Sc	ource Ele	vations	(in fe	et)	
Centerline Dist.	to Observer:	50.0 feet		F.	.0.00 00	Autos:		•		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks.				
Observer Height (Above Pad): 5.0 feet						y Trucks:			Grade Adjus	tment: 0.0
Pad Elevation: 0.0 feet					1 Icas	y Trucks.	0.0	J <del>-4</del>	0,440,714,40	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in f	eet)	
	Road Grade:	0.0%				Autos:	44.1	47		
	Left View:	-90.0 degre	es		Mediu	m Trucks.	43.9	47		
	Right View:	90.0 degre	es		Heav	y Trucks.	43.9	66		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	l I	Barrier Atten	Berm Atten
Autos:	66.51	3.05	5	0.71		-1.20	-	4.65	0.000	0.00
Medium Trucks:		-10.26	6	0.74	ļ.	-1.20	-	4.87	0.000	0.000
Heavy Trucks:	82.99	-15.54	ļ	0.73	3	-1.20	-	5.43	0.000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	atteni	uation)					
VehicleType	Leq Peak Hou	ur Leq Da	y	Leq Ev	ening	Leq N	light		Ldn	CNEL
Autos:	69	9.1	66.9		65.9		60.8		68.7	69.3
Medium Trucks:		7.0	65.0		61.9		59.0		66.8	67.2
Heavy Trucks:	67	7.0	65.3		61.1		57.7		66.1	66.4
Vehicle Noise:	72	2.6	70.6		68.3		64.1		72.1	72.0
Centerline Distan	ce to Noise Co	ontour (in fee	t)							
				70 d	BA	65 d	BA	6	0 dBA	55 dBA
			Ldn:		69		149		321	692
		C	NEL:		74		160		345	743

y, November 4, 2020 Wednesday, November 4, 2020

	FH	WA-RD-77-108	HIGH	YAW	NOISE F	REDICT	ION MO	DEL			
Road Nam	io: GPBOP (2 ne: Eucalyptus nt: w/o Moren	Av.					t Name: lumber:		oreno Vall	ey Trac	le
	SPECIFIC II	IPUT DATA							L INPUT	s	
Highway Data					Site Co.	nditions	(Hard =				
Average Daily	Traffic (Adt):	15,749 vehicle	es					Autos:			
Peak Hour	Percentage:	10.00%					ucks (2 )	/			
Peak H	lour Volume:	1,575 vehicles	S		H	eavy Tru	cks (3+ )	Axles).	15		
Ve	hicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	48 feet				nicleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	4.6%	13.5	% 95.40%
Ba	rrier Heiaht:	0.0 feet			٨	ledium 1	rucks:	76.2%	9.4%	14.4	% 3.55%
Barrier Type (0-W		0.0				Heavy 1	rucks:	81.8%	6 7.7%	10.6	% 1.05%
Centerline Di	st. to Barrier:	50.0 feet			Noice S	ourco E	levation	c (in f	oot)		
Centerline Dist.	to Observer:	50.0 feet			NOISE 3	Auto		000	eeij		
Barrier Distance	to Observer:	0.0 feet			Modis	mull Im Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truci		004	Grade Ad	livetma	nt: 0.0
P	ad Elevation:	0.0 feet			пеа	vy IIuci	15. 0.	004	Graue Au	justine	nt. 0.0
Ro	ad Elevation:	0.0 feet			Lane Ed	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44.	147			
	Left View:	-90.0 degree	es		Mediu	ım Truck	s: 43	947			
	Right View:	90.0 degree	es		Hea	vy Truci	s: 43	966			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier At	ten B	erm Atten
Autos:	66.51			0.		-1.20		-4.65		000	0.000
Medium Trucks:					74	-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-19.13		0.	73	-1.20		-5.43	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq l	Evening		Night		Ldn		CNEL
Autos:			64.2		63.3		58.	_	66.		66.7
Medium Trucks:			61.4		58.4		55.4		63.	_	63.6
Heavy Trucks:			61.7		57.5		54.		62.	_	62.8
Vehicle Noise:	69	9.4	67.4		65.3	3	61.0	)	69.	0	69.5
Centerline Distant	ce to Noise C	ontour (in feet,	)								
			L	70	dBA	65	dBA		60 dBA		55 dBA
			Ldn:		43		92		199		429
		CI	VEL:		46		99		214	1	461

		WA-RD-77-108	HIIGI	WAI N	OISE P	KEDIC I	TO IV	SDEE			
	o: GPBOP (2	,							oreno Valle	ey Trade	
	e: Eucalyptus					Job N	lumber	12975			
Road Segmen	nt: e/o Auto M	all Dr.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	10,722 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	10.00%			Me	edium Ti	ucks (2	Axles):	15		
Peak H	our Volume:	1,072 vehicle	s		He	eavy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	40 mph		ı	ehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		F		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	92.379
Rar	rier Height:	0.0 feet			М	edium 7	rucks:	76.2%	9.4%	14.4%	4.08%
Barrier Type (0-W		0.0				Heavy 7	rucks:	81.8%	5 7.7%	10.6%	3.55%
Centerline Dis	st. to Barrier:	50.0 feet			loico S	ource E	lovatio	ne (in f	innt)		
Centerline Dist. t	to Observer:	50.0 feet			10/36 01	Auto		0.000	coty		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height (A	Above Pad):	5.0 feet				nn Truck vy Truck		3.004	Grade Ad	iustmant	. 00
Pa	d Elevation:	0.0 feet			пеа	y Huck	15. (	0.004	Orace Au	Justinoni	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 4	1.147			
	Left View:	-90.0 degre	es		Mediu	m Truck	(S: 4	3.947			
	Right View:	90.0 degre	es		Hea	vy Truck	(S: 4:	3.966			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Bei	m Atten
Autos:	66.51	-1.37		0.71		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-14.92		0.74		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-15.52		0.73	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	y	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	64	1.7	62.4		61.5		56	.4	64.3	3	64.
Medium Trucks:	62	2.3	60.4		57.3		54	.4	62.	1	62.
Heavy Trucks:	67	'.O	65.3		61.1		57	.7	66.	1	66.
Vehicle Noise:	69	9.8	68.0		65.1		61	.1	69.2	2	69.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 d		65	dBA		60 dBA		dBA
			Ldn:		45		_	6	207		445
		С	NEL:		48		10	2	221		476

	FH	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DDEL			
	io: GPBOP (2 ne: Eucalyptus nt: e/o Dwy. 1	Av.						Alt1 M 12975	oreno Valle	ey Trade	
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	11,846 vehic	es					Autos:			
Peak Hour	Percentage:	10.00%				dium Tr		,			
	lour Volume:	1,185 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
	hicle Speed:	40 mph		ν	'ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	72.0%	14.6%	13.5%	89.659
Bai	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	4.319
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy T	rucks:	81.8%	7.7%	10.6%	6.059
Centerline Dis	st. to Barrier:	50.0 feet			loisa S	ource El	lovatio	ne (in fi	oot)		
Centerline Dist.	to Observer:	50.0 feet			10/36 0	Auto		.000	001)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (	'Above Pad):	5.0 feet				v Truck		.004	Grade Ad	liustment	0.0
Pá	ad Elevation:	0.0 feet			7700	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	o			,	
Ros	ad Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
I	Road Grade:	0.0%				Auto		.147			
	Left View:	-90.0 degre	es			m Truck		3.947			
	Right View:	90.0 degre	es		Hea	y Truck	s: 43	3.966			
FHWA Noise Mode	el Calculation	ıs		'							
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51			0.71		-1.20		-4.65		000	0.00
Medium Trucks:	77.72			0.74		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-12.78	1	0.73		-1.20		-5.43	0.	000	0.00
Unmitigated Noise				er attenu	ıation)						
	Leq Peak Ho			Leq Ev			Night		Ldn		NEL
Autos:	-	5.0	62.7		61.8		56		64.	-	65.
Medium Trucks:	-	3.0	61.0		58.0		55		62.	-	63
Heavy Trucks:		9.8	68.1		63.8		60		68.		69
Vehicle Noise:	7	1.6	69.8		66.6		62	.8	71.	U	71
Centerline Distanc	ce to Noise C	ontour (in fee	t)	70 -	D.4		-(D.4		CO -ID 4		-10.4
			Ldn:	70 d		65	dBA		60 dBA		dBA
		_	Lan:		58		12	-	269		579
		C	IVEL:		62		13	3	286	)	61

Wednesday, November 4, 2020

	FH\	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MODEL		
	o: GPBOP (20 e: Eucalyptus t: w/o Dwy. 5	Av.					Name: Alt1 lumber: 1297	Moreno Valle	y Trade
SITE S	PECIFIC IN	IPUT DATA				N	IOISE MOD	EL INPUTS	3
Highway Data				S	ite Con	ditions	(Hard = 10,	Soft = 15)	
	Percentage: our Volume:	12,620 vehicle 10.00% 1,262 vehicle					Auto ucks (2 Axles cks (3+ Axles	s): 15	
	icle Speed:	40 mph		ν	ehicle l	Wix			
Near/Far Lan	e Distance:	48 feet		-	Veh	icleType	Day	Evening	Night Daily
Site Data					М	edium Ti	Autos: 72.0		13.5% 91.38% 14.4% 4.35%
Barrier Type (0-Wa		0.0 feet 0.0				Heavy T			10.6% 4.27%
Centerline Dis		50.0 feet		Ν	loise So	ource El	levations (in	feet)	
Centerline Dist. to Barrier Distance to Observer Height (A	o Observer:	50.0 feet 0.0 feet 5.0 feet 0.0 feet				Auto m Truck y Truck	s: 2.297	Grade Adju	ustment: 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	t Distance (i	n feet)	
R	Road Grade:	0.0%				Auto	s: 44.147		
	Left View: Right View:	-90.0 degree				m Truck ry Truck			
FHWA Noise Mode	I Calculation	s							
Vehicle Type	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	66.51	-0.71		0.71		-1.20	-4.6	5 0.0	0.000
Medium Trucks:	77.72	-13.93		0.74		-1.20	-4.8	7 0.0	0.000
Heavy Trucks:	82.99			0.73		-1.20	-5.4	3 0.0	0.000
Unmitigated Noise									
	Leq Peak Hou			eq Ev			Night	Ldn	CNEL
Autos:	65		63.1		62.2		57.1	65.0	65.5
Medium Trucks:	63		61.4		58.3		55.4	63.1	63.5
Heavy Trucks:	68		66.9		62.6		59.2	67.6	68.0
Vehicle Noise:	71		69.2		66.2		62.3	70.4	70.8
Centerline Distance	e to Noise Co	ontour (in feet,	1	70 di	RA.	65	dBA	60 dBA	55 dBA
			Ldn:	, o u	53	50	115	247	532
			VEL:		57		122	263	567

Wednesday, November 4, 2020

	FHW	A-RD-77-108	HIGH	HWAY N	OISE P	REDICTI	ON MC	DEL			
Road Nam	io: GPBOP (204 ne: Eucalyptus A nt: w/o Redland	۸v.					Name: umber:		oreno Valle	ey Trade	•
	SPECIFIC INI	PUT DATA							L INPUT	s	
Highway Data				2	site Cor	ditions			oft = 15)		
Average Daily		11,588 vehicle	es					Autos:	15		
		10.00%				dium Tru		,			
		1,159 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
	hicle Speed:	40 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						- A	lutos:	72.0%	14.6%	13.5%	95.04%
Rai	rrier Height:	0.0 feet			М	edium Tr	ucks:	76.2%	9.4%	14.4%	3.82%
Barrier Type (0-W	'all, 1-Berm):	0.0				Heavy Tr	ucks:	81.8%	7.7%	10.6%	1.13%
Centerline Dis		50.0 feet		1	loise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		50.0 feet				Autos	s: 0.	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2.	297			
Observer Height (	Above Pad):	5.0 feet				y Trucks		004	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq	uivalent		_ •	feet)		
I	Road Grade:	0.0%				Autos		.147			
	Left View:	-90.0 degree				m Trucks		.947			
	Right View:	90.0 degree	es		Hea	y Trucks	s: 43	.966			
FHWA Noise Mode					,						
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi		Barrier Att		rm Atten
Autos:	66.51	-0.91		0.71		-1.20		-4.65		000	0.000
Medium Trucks:	77.72	-14.86		0.74		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-20.14		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise VehicleType	Leg Peak Hour			er atteni Leg Ev		Lea	Night	1	Ldn		NEL
Autos:	65.		62.9	Luy Lv	62.0	_	56	9	64.		65.3
Medium Trucks:	62.4	-	60.4		57.3		54	-	62.	-	62.6
Heavy Trucks:	62.4	-	60.7		56.5		53.		61.	_	61.8
Vehicle Noise:	68.3		66.3		64.1		59.		67.		68.3
Centerline Distance	ce to Noise Cor	ntour (in feet	)								
				70 a	IBA	65 (	dBA	6	0 dBA	55	dBA
			Ldn:		36		77	, –	166	_	358
		C	NEL:		38		83	3	179	1	385

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PI	REDICT	ION M	ODEL			
	o: GPBOP (20 e: Eucalyptus t: e/o Redlan	Av.						: Alt1 M : 12975	oreno Valle	ey Trade	
SITE S	PECIFIC IN	IPUT DATA		Cit	۰ ۲۰۰				L INPUT	S	
Average Daily 1 Peak Hour F Peak Ho	Percentage: our Volume: nicle Speed:	19,426 vehicle 10.00% 1,943 vehicle 40 mph 48 feet			Me He hicle	dium Tri avy Trui <b>Viix</b>	ucks (2 cks (3+	Autos: Axles): Axles):	15 15 15		
	ic Distance.	40 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data  Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium T Heavy T		72.0% 76.2% 81.8%	9.4%	13.5% 14.4% 10.6%	4.44%
	o Observer: o Observer: Above Pad): d Elevation:	50.0 feet 50.0 feet 0.0 feet 5.0 feet 0.0 feet		ı	Mediu Heav	Auto Truck Truck	s: ( s: 2 s: 8	0.000 2.297 3.004	Grade Ad	iustment	: 0.0
F	d Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree			Mediu	Auto Truck ry Truck	s: 44	1.147 3.947 3.966	ieet)		
FHWA Noise Mode			D: /		,						
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 66.51 77.72 82.99	1.30 -11.97 -17.25	Dista	0.71 0.74 0.73	rinite	-1.20 -1.20 -1.20	Fres	-4.65 -4.87 -5.43	0.0	000 000 000	0.000 0.000 0.000
Unmitigated Noise	I evels (with	out Tono and	harrier	attenua	tion)						
	Leq Peak Hou			.eq Ever		Leq	Night		Ldn	C	NEL
Autos: Medium Trucks:	67 65	.3 i.3	65.1 63.3	,	64.2 60.2		59 57	.3	67.0 65.1	)	67.5 65.5
Heavy Trucks:_ Vehicle Noise:	65 70		63.6 68.9		59.3 66.6		56 62		70.4		70.9
Centerline Distance	e to Noise Co	ontour (in feet	)								
			Ldn:	70 dB	53	65	dBA 11	4	50 dBA 246		dBA 531
		C	NEL:		57		12	3	264		570

Scenario: GPBOP (2	2040)				Project N	ame. I	It1 M	oreno Valle	v Trade	
Road Name: Encilia Av					Job Nur			oreno vane	ey made	
Road Segment: e/o Essen					000 1441	inder. I	2010			
SITE SPECIFIC I	NPUT DATA							L INPUT	S	
Highway Data			S	ite Con	ditions (F	lard =	10, Sc	ft = 15)		
Average Daily Traffic (Adt):	4,629 vehicles	3				A	Autos:	15		
Peak Hour Percentage:	10.00%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume:	463 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Speed:	45 mph		ν	ehicle N	Mix					
Near/Far Lane Distance:	36 feet		Ė		cleType		Day	Evening	Night	Daily
Site Data					Au	tos:	72.0%	14.6%	13.5%	95.03
Barrier Height:	0.0 feet			Ме	edium Tru	cks:	76.2%	9.4%	14.4%	3.83
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Tru	cks:	81.8%	7.7%	10.6%	1.14
Centerline Dist. to Barrier:	44.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observer:	44.0 feet				Autos:			- /		
Barrier Distance to Observer:	0.0 feet			Mediur	n Trucks:					
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.0	104	Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet		L	ane Equ	uivalent D			eet)		
Road Grade:	0.0%				Autos:					
Left View:	-90.0 degrees				n Trucks:					
Right View:	90.0 degrees	3		Heav	y Trucks:	40.2	262			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Distar		Finite		Fresn		Barrier Att		m Atter
Autos: 68.46			1.28		-1.20		4.61		000	0.0
Medium Trucks: 79.45			1.31		-1.20		-4.87		000	0.0
Heavy Trucks: 84.25			1.31		-1.20		-5.50	0.0	000	0.0
Unmitigated Noise Levels (with		_							_	
VehicleType Leq Peak Ho		0.9	eq Ev	ening 60.0	Leq Ni	ght 54.9		Ldn 62.1		NEL 63
									-	
		8.2		55.2		52.3		60.0 58.8	-	60
		8.1 4.1		53.8		50.4		58.6 65.6		59 66
		4.1		61.9		57.7		65.6	0	66
	ontour (in feet)		70.0		05.15	2.4	-	0 dBA		dBA
Centerline Distance to Noise C			/U al	BA I	65 ar					
centeriine distance to Noise C	1	dn:	70 di	23	65 dE	49	C	105A		UDA 22

Wednesday, November 4, 2020

	HWA	-RD-77-108 I	HIGI	HWAY	NOISE P	REDICTI	ION M	ODEL			
Scenario: GPBOP Road Name: Encilia I Road Segment: e/o Moz	v.	•						: Alt1 M : 12975	loreno Vall	ey Trade	)
SITE SPECIFIC	INP	UT DATA			Site Con				oft = 15)	s	
Average Daily Traffic (Adl Peak Hour Percentage Peak Hour Volume Vehicle Speed	Road Segment: e/o Mozart Wy.  SITE SPECIFIC INPUT DATA  yay Data  verage Daily Traffic (Adt): 5,434 vehicles Peak Hour Percentage: 10,00%  Peak Hour Volume: 543 vehicles Vehicle Speed: 45 mph  Near/Far Lane Distance: 36 feet  ata  Barrier Height: 0,0 feet er Type (0-Wall, 1-Berm): 0,0 Centerline Dist, to Barrier: 44,0 feet nier Distance to Observer: 44,0 feet rier Distance to Observer: 0,0 feet				Me He Vehicle	edium Tru eavy Truc <b>Mix</b>	ucks (2 cks (3+	Autos Axles) Axles)	: 15 : 15 : 15		
Site Data	•	00 1001			Veh	icleType	Autos:	72.09	Evening 6 14.6%	Night 13.5%	Daily 95.77%
						edium Ti Heavy Ti	rucks:	76.29 81.89	6 9.4%	14.4%	3.27%
	-				Noise S	ource El	evatio	ns (in f	eet)		
Barrier Distance to Observe Observer Height (Above Pag	: :	0.0 feet 5.0 feet				Auto: m Truck: yy Truck:	s: 2	0.000 2.297 3.004	Grade Ad	ljustmen	t: 0.0
Road Elevation	0.0 1001				Lane Eq	uivalent	Dista	nce (in	feet)		
Left View	r: -	90.0 degree:				Auto: m Truck: yy Truck:	s: 4	0.460 0.241 0.262			
FHWA Noise Model Calculat	ons										
VehicleType REMEL	T	raffic Flow	Di	stance	Finite	Road	Fre	snel	Barrier Att	ten Be	rm Atten
Autos: 68		-4.67		1.3	28	-1.20		-4.61	0.	000	0.000
Medium Trucks: 79 Heavy Trucks: 84		-19.35 -24.63		1.3	31 31	-1.20 -1.20		-4.87 -5.50		000 000	0.000
Unmitigated Noise Levels (w	ithou	t Topo and b	arri	er atte	nuation)						
VehicleType Leq Peak	lour	Leq Day		Leq E	vening	Leq	Night		Ldn	(	NEL
Autos:	63.9	6	1.6		60.7	•	55	.6	63.	5	64.1
Medium Trucks:	60.2	5	8.2		55.2			.3	60.	-	60.4
Heavy Trucks:	59.7		8.1		53.8		50		58.	-	59.2
Vehicle Noise:	66.5	6	4.4		62.4		58	.1	66.	0	66.5
Centerline Distance to Noise	Cont	our (in feet)							00 /04		- 10.4
			[	70	dBA	65	dBA		60 dBA		5 dBA
		CN	.dn: EL:		24 26		_	6	111 120		239 258

	FH	WA-RD-77-108	HIGI	HWAY	NOISE PI	REDICT	ION MO	DEL			
Road Nan	io: GPBOP (2 ne: Encilia Av. nt: w/o Redlar	,					Name: . lumber:		oreno Valle	ey Trade	
	SPECIFIC II	NPUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	•				
Average Daily		6,900 vehicl	es					Autos:			
	Percentage:	10.00%					ucks (2 A	,			
	lour Volume:	690 vehicle	s		He	avy Tru	cks (3+ A	(xles	15		
	hicle Speed:	45 mph		f	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	72.0%	14.6%	13.5%	96.40%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	76.2%	9.4%	14.4%	2.77%
Barrier Type (0-W		0.0			1	Heavy T	rucks:	81.8%	7.7%	10.6%	0.82%
Centerline Di	st. to Barrier:	44.0 feet		-	Noise So	urco E	lovation	r (in f	not)		
Centerline Dist.	to Observer:	44.0 feet		-	NOISE SC	Auto		000	eu		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				y Truck		004	Grade Ad	iustman	t· 0.0
P	ad Elevation:	0.0 feet								dotmom	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Auto		460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degre	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn	_	Barrier Att		rm Atten
Autos:	68.46			1.2		-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-24.30	1	1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois		-	barri	er attei	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn	_	NEL
Autos:	-	1.9	62.7		61.8		56.7		64.6		65.2
Medium Trucks:		0.5	58.6		55.5		52.6		60.3		60.7
Heavy Trucks:		).1	58.4		54.1		50.8		59.2		59.5
Vehicle Noise:		7.2	65.2		63.3		58.8	3	66.8	3	67.3
Centerline Distan	ce to Noise C	ontour (in fee	t)							_	
			L	70	dBA	65	dBA	6	60 dBA		dBA
			Ldn:		27		58		125		269
		С	NEL:		29		62		135		290

FH	WA-RD-77-108 I	HIGHWA	Y NOISE F	REDICTIO	ON MODE	L		
Scenario: GPBOP (2 Road Name: Alessandr Road Segment: e/o Lassel	Blvd.				lame: Alt1 mber: 129	Moreno Va 175	lley Trad	de
SITE SPECIFIC I	NPUT DATA					DEL INPU	TS	
Highway Data  Average Daily Traffic (Adt):  Peak Hour Percentage:  Peak Hour Volume:	36,442 vehicles 10.00% 3.644 vehicles	S	М	edium Truc eavy Truck	Aut cks (2 Axle	es): 15		
Vehicle Speed: Near/Far Lane Distance:	50 mph 82 feet		Vehicle		Da	,	Nigh	t Daily
Site Data  Barrier Height:	0.0 feet			Au ledium Tru Heavv Tru	icks: 76.	0% 14.6% 2% 9.4% 8% 7.7%	14.4	% 4.41%
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer:	0.0 67.0 feet 67.0 feet			ource Ele	vations (i		0 10.0	70 1.31%
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	0.0 feet 5.0 feet 0.0 feet		Hea	Autos: im Trucks: vy Trucks: <b>juivalent l</b>	2.297 8.004	. Grade A	djustme	ent: 0.0
Road Elevation. Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree: 90.0 degree:		Mediu	Autos: im Trucks: vy Trucks:	53.226 53.059	6		
FHWA Noise Model Calculation								
VehicleType REMEL  Autos: 70.20  Medium Trucks: 81.00  Heavy Trucks: 85.38	-10.23	-	e   Finite 0.51 0.49 0.49	-1.20 -1.20 -1.20	-4. -4.	88 C	1.000 1.000 1.000	0.00 0.00 0.00
Unmitigated Noise Levels (with	out Tono and h	arrier at	tenuation)					
VehicleType Leq Peak Ho			Evening	Leq N	light	Ldn		CNEL
		9.3 7.1	68.4 64.0		63.3 61.1	71 68	.2 3.9	71. 69.
,		2.6	62.2 70.5		58.9 66.2	67 74	'.3  .2	67. 74.
Centerline Distance to Noise C	ontour (in feet)							
		.dn: IEL:	70 dBA 128 137	65 di	275 295	60 dBA 59 63	12	55 dBA 1,275 1,371

		WA-KD-77-100	HIGH	I YAWI	NOISE PI	REDICTION	OM MO	DEL_			
	: GPBOP (2 : Alessandro : e/o Nason	Blvd.					Name: I Imber:		oreno Valle	ey Trade	
	PECIFIC II	NPUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions (					
Average Daily T	. ,	27,272 vehic	les					Autos:	15		
Peak Hour P		10.00%				dium Tru		,			
	ur Volume:	2,727 vehicle	es		He	avy Truci	ks (3+ A	(xles	15		
	icle Speed:	50 mph		ı	Vehicle I	Mix					
Near/Far Lane	e Distance:	58 feet		ı	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	72.0%	14.6%	13.5%	94.30
Barr	ier Heiaht:	0.0 feet			M	edium Tru	ucks:	76.2%	9.4%	14.4%	4.39
Barrier Type (0-Wa	II, 1-Berm):	0.0			1	leavy Tru	ucks:	81.8%	7.7%	10.6%	1.30
Centerline Dist		55.0 feet		Ī	Noise So	urce Ele	vations	s (in fe	eet)		
Centerline Dist. to		55.0 feet		Ī		Autos	: 0.0	000			
Barrier Distance to		0.0 feet			Mediu	n Trucks	: 2.2	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks	: 8.0	004	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet		-		•					
	d Elevation:	0.0 feet		-	Lane Eq				reet)		
Ri	oad Grade:	0.0%				Autos					
	Left View:	-90.0 degre				n Trucks					
,	Right View:	90.0 degre	es		Heav	y Trucks	: 46.	330			
FHWA Noise Model		-									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn		Barrier Att		rm Atter
Autos:	70.20			0.3		-1.20		-4.67		000	0.00
Medium Trucks:	81.00			0.3		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38			0.3		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	•		_							1 -	
	.eq Peak Ho		_	Leq E	vening	Leq N			Ldn		NEL
Autos:		1.1	68.9		68.0		62.9		70.8	-	71
Medium Trucks:		3.6	66.6		63.6		60.7		68.4		68
Heavy Trucks:		7.7	66.0		61.8		58.4		66.8		67
Vehicle Noise:		1.2	72.1		70.0		65.8		73.7	′	74
Centerline Distance	to Noise C	ontour (in fee	t)	70	dBA	65 d	IBA		60 dBA	55	5 dBA
			Ldn:		98		210		453		97

Wednesday, November 4, 2020

FH	WA-RD-77-108 H	IIGHWAY	NOISE PI	REDICT	ON MODE	L		
Scenario: GPBOP (2 Road Name: Alessandr Road Segment: e/o Moren	o Blvd.				Name: Alt umber: 12	1 Moreno Vall 975	ey Trade	
SITE SPECIFIC I	NPUT DATA					DEL INPUT	s	
Average Daily Traffic (Adt): Peak Hour Percentage:	27,661 vehicles	;			•	tos: 15 es): 15		
Peak Hour Volume: Vehicle Speed:	2,766 vehicles 50 mph		He Vehicle		cks (3+ Axl	es): 15		
Near/Far Lane Distance:	58 feet			icleType	Da	y Evening	Night	Daily
Site Data						.0% 14.6%	13.5%	94.35%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			edium Ti Heavy Ti		.2% 9.4% .8% 7.7%		4.36% 1.29%
Centerline Dist. to Barrier:	55.0 feet		Noise So	ource El	evations (	in feet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	55.0 feet 0.0 feet 5.0 feet 0.0 feet			Auto m Truck ry Truck	s: 2.29	7	ljustment:	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			Auto m Truck ry Truck	s: 46.81	1		
FHWA Noise Model Calculation	15		1					
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Att		n Atten
Autos: 70.20		-	.30	-1.20			000	0.000
Medium Trucks: 81.00 Heavy Trucks: 85.38		-	.33 .32	-1.20 -1.20			000	0.000
Unmitigated Noise Levels (with	out Topo and b	arrier atte	enuation)					
VehicleType Leq Peak Ho			Evening	Leq	Night	Ldn		IEL
		9.0	68.0		62.9	70.		71.4
		6.7 6.1	63.6 61.8		60.7 58.4	68. 66.	•	68.8 67.2
· · · · · · · · · · · · · · · · · · ·		2.2	70.1		65.8	73.	-	74.3
Centerline Distance to Noise C	ontour (in feet)							
		7	0 dBA	65	dBA	60 dBA	55.0	1BA
		dn:	98	00	212	456		983

ay, November 4, 2020 Wednesday, November 4, 2020

# **APPENDIX 9.1:**

**CADNAA OPERATIONAL NOISE MODEL INPUTS** 





### 12975

CadnaA Noise Prediction Model: 12975\_E Commerce.cna

Date: 11.05.20 Analyst: B. Lawson

#### **Receiver Noise Levels**

Name	M.	ID		Level Lr		Lir	nit. Valı	ue		Land	l Use	Height		C	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	44.3	44.2	50.9	65.0	60.0	0.0				5.00	а	6285795.43	2286852.14	5.00
RECEIVERS		R2	30.9	28.6	35.4	65.0	60.0	0.0				5.00	а	6285832.80	2283837.85	5.00
RECEIVERS		R3	30.0	28.5	35.2	65.0	60.0	0.0				5.00	а	6284622.63	2283845.08	5.00
RECEIVERS		R4 - at 200'	29.2	27.7	34.4	65.0	60.0	0.0				5.00	а	6284889.69	2283757.76	5.00

### Point Source(s)

Name	M.	ID	R	esult. PW	'L		Lw / L	i	Op	erating T	ime	K0	Height		Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			П	Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6284276.19	2284341.01	53.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6286231.53	2284365.09	53.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6286226.71	2284996.00	53.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	0.0	5.00	g	6284276.19	2284945.43	53.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		75.00	0.00	45.00	0.0	5.00	а	6286089.45	2285157.34	5.00

Line Source(s)

	•••	-,-,																	
Name	M.	ID	R	Result. PW	/L	R	esult. PW	'L'		Lw / Li		Op	erating Ti	ime		Moving	Pt. Src		Height
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		DWY01	99.0	88.7	90.1	77.2	66.9	68.3	PWL-Pt	89.7					561.0	52.0	72.0	6.2	8
LINESOURCE		DWY05	84.0	73.3	75.6	65.2	54.5	56.7	PWL-Pt	89.7					35.0	3.0	5.0	6.2	8
LINESOURCE		DWY05	89.2	78.6	80.8	65.2	54.5	56.7	PWL-Pt	89.7					35.0	3.0	5.0	6.2	8
LINESOURCE		DWY07	88.2	78.0	79.5	70.0	59.7	61.2	PWL-Pt	89.7					106.0	10.0	14.0	6.2	8

Name	H	lei	ght		Coordinat	es	
	Begin		End	х	у	Z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	а		6284201.61	2285199.22	8.00	0.00
				6284210.44	2285027.44	8.00	0.00
				6284268.65	2285025.67	8.00	0.00
				6284363.92	2285052.13	8.00	0.00
				6284438.01	2285085.65	8.00	0.00
				6284522.69	2285092.71	8.00	0.00
LINESOURCE	8.00	а		6286117.44	2285082.12	8.00	0.00
				6286265.63	2285083.89	8.00	0.00
				6286270.92	2285117.41	8.00	0.00
				6286272.69	2285187.73	8.00	0.00
LINESOURCE	8.00	а		6286265.63	2285083.89	8.00	0.00
				6286322.08	2285045.08	8.00	0.00
				6286316.82	2284273.12	8.00	0.00
LINESOURCE	8.00	а		6286320.72	2284272.36	8.00	0.00
				6286541.71	2284274.29	8.00	0.00

Area Source(s)

ID	R	esult. PW	'L	Re	esult. PW	L''	Lw	/ Li	Ор	erating Ti	me	М	oving Pt. S	Src	Height
	Day	Evening	Night	Day	Evening	Night	Туре	Value	Day	Special	Night		Number		
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
DOCK01	111.5	111.5	111.5	67.1	67.1	67.1	Lw	111.5							8

Name	ŀ	lei	ght		Coordinat	es	
	Begin		End	х	У	Z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	а		6286117.44	2285177.39	8.00	0.00
				6286117.44	2284990.39	8.00	0.00
				6284522.69	2284990.39	8.00	0.00
				6284522.69	2285177.39	8.00	0.00

Barrier(s)

Name	M.	ID	Abso	rption	Z-Ext.	Canti	lever	Н	ei	ght			Coordinat	es	
			left	right		horz.	vert.	Begin		End		х	у	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						6.00	а			6284027.67	2283877.60	6.00	0.00
											П	6284391.46	2283874.88	6.00	0.00
											П	6284404.65	2283860.32	6.00	0.00
												6284403.29	2283750.28	6.00	0.00
BARRIERS		BARRIERS00002						4.00	а			6284639.26	2283884.29	4.00	0.00

Name	M.	ID	Abso	rption	Z-Ext.	Canti	ilever	H	lei	ght		Coordinat	es	
			left	right		horz.	vert.	Begin		End	х	у	Z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
											6285198.14	2283881.20	4.00	0.00
											6285197.37	2283847.19	4.00	0.00
BARRIERS		BARRIERS00003						4.00	а		6285333.13	2283849.84	4.00	0.00
											6285370.04	2283880.24	4.00	0.00
											6285851.26	2283877.34	4.00	0.00
											6285897.57	2283875.89	4.00	0.00
											6285899.74	2283875.17	4.00	0.00
BARRIERS		BARRIERS00004						4.00	а		6284639.26	2283884.29	4.00	0.00
											6284639.24	2283871.62	4.00	0.00
											6284513.10	2283872.78	4.00	0.00
BARRIERS		BARRIERS00006						14.00	а		6284522.69	2285117.41	14.00	0.00
											6284522.69	2285177.39	14.00	0.00
											6286117.44	2285177.39	14.00	0.00
											6286117.44	2285103.29	14.00	0.00

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height	:		Coordinat	es	
						Begin		х	У	Z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	х	0		48.00	а	6284219.26	2284990.39	48.00	0.00
								6286117.44	2284990.39	48.00	0.00
								6286117.44	2285029.20	48.00	0.00
								6286288.56	2285029.20	48.00	0.00
								6286288.56	2284320.03	48.00	0.00
								6286170.37	2284320.03	48.00	0.00
								6286170.37	2284357.07	48.00	0.00
								6284332.16	2284357.07	48.00	0.00
								6284332.16	2284298.86	48.00	0.00
								6284212.20	2284298.86	48.00	0.00

# **APPENDIX 10.1:**

**CADNAA CONSTRUCTION NOISE MODEL INPUTS** 





### 12975

CadnaA Noise Prediction Model: 12975\_Construction.cna

Date: 11.05.20 Analyst: B. Lawson

#### **Receiver Noise Levels**

Name	M.	ID		Level Lr		Lir	nit. Valı	ue		Land	Use	Height		Co	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	58.6	58.6	65.2	65.0	60.0	0.0				5.00	а	6285795.43	2286852.14	5.00
RECEIVERS		R2	64.7	64.7	71.4	65.0	60.0	0.0				5.00	а	6285832.80	2283837.85	5.00
RECEIVERS		R3	64.5	64.5	71.2	65.0	60.0	0.0				5.00	а	6284622.63	2283845.08	5.00
RECEIVERS		R4 - at 200'	63.2	63.2	69.9	65.0	60.0	0.0				5.00	а	6284889.69	2283757.76	5.00

### Area Source(s)

ID	R	esult. PW	'L	Re	esult. PW	L"	Lw	/ Li	Op	erating Ti	me	M	oving Pt. 9	Src	Height
	Day	17 0 0			Evening	Night	Туре	Value	Day	Special	Night		Number		
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
SITEBOUNDARY00001	128.1	128.1	128.1	73.5	73.5	73.5	Lw"	73.5							8

Name	H	lei	ght			Coordinat	es	
	Begin		End	Ī	х	у	Z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	8.00	а			6284023.88	2285199.01	8.00	0.00
					6286220.93	2285201.61	8.00	0.00
					6286236.56	2285187.73	8.00	0.00
					6286424.06	2285187.73	8.00	0.00
					6286446.63	2285184.25	8.00	0.00
					6286470.93	2285173.84	8.00	0.00
					6286507.39	2285144.32	8.00	0.00
					6286535.17	2285104.39	8.00	0.00
					6286547.32	2285067.93	8.00	0.00
					6286545.59	2284804.04	8.00	0.00
					6286557.74	2284788.42	8.00	0.00
					6286556.00	2284496.75	8.00	0.00
					6286540.38	2284415.16	8.00	0.00
					6286542.11	2284231.13	8.00	0.00
					6286552.53	2284215.50	8.00	0.00
					6286554.27	2283963.77	8.00	0.00
					6284021.14	2283963.27	8.00	0.00

## Barrier(s)

Daille	1/2	,												
Name	M.	ID	Abso	rption	Z-Ext.	Canti	ilever	F	lei	ght		Coordinat	es	
			left	right		horz.	vert.	Begin		End	х	у	Z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						6.00	а		6284027.67	2283877.60	6.00	0.00
											6284391.46	2283874.88	6.00	0.00
											6284404.65	2283860.32	6.00	0.00
											6284403.29	2283750.28	6.00	0.00
BARRIERS		BARRIERS00002						4.00	а		6284639.26	2283884.29	4.00	0.00
											6285198.14	2283881.20	4.00	0.00
											6285197.37	2283847.19	4.00	0.00
BARRIERS		BARRIERS00003						4.00	а		6285333.13	2283849.84	4.00	0.00
											6285370.04	2283880.24	4.00	0.00
											6285851.26	2283877.34	4.00	0.00
											6285897.57	2283875.89	4.00	0.00
											6285899.74	2283875.17	4.00	0.00
BARRIERS		BARRIERS00004						4.00	а		6284639.26	2283884.29	4.00	0.00
											6284639.24	2283871.62	4.00	0.00
											6284513.10	2283872.78	4.00	0.00



# **APPENDIX 10.2:**

**CADNAA CONCRETE POUR CONSTRUCTION NOISE MODEL INPUTS** 





### 12975

CadnaA Noise Prediction Model: 12975\_ConcretePour.cna

Date: 10.01.21 Analyst: B. Lawson

#### **Receiver Noise Levels**

Name	M.	ID		Level Lr		Lir	nit. Valı	ue		Land	Use	Height		Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
RECEIVERS		R1	52.8	52.8	59.5	65.0	60.0	0.0				5.00	а	6285795.43	2286852.14	5.00	
RECEIVERS		R2	55.8	55.8	62.5	65.0	60.0	0.0				5.00	а	6285832.80	2283837.85	5.00	
RECEIVERS		R3	55.8	55.8	62.5	65.0	60.0	0.0				5.00	а	6284622.63	2283845.08	5.00	
RECEIVERS		R4 - at 200'	55.3	55.3	62.0	65.0	60.0	0.0				5.00	а	6284889.69	2283757.76	5.00	

### Area Source(s)

ID	R	esult. PW	/L	Re	esult. PW	L"	Lw	/Li	Оре	erating Ti	me	М	Height		
	Day Evening Night			Day	Evening	Night	Туре	Value	Day	Special	Night		Number		
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
BUILDING00001	122.1 122.1 122.1		71.2	2 71.2 71.2		Lw" 71.2								8	

Name	ŀ	lei	ght		Coordinates									
	Begin		End		х	у	Z	Ground						
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)						
BUILDING	8.00	а			6284219.26	2284990.39	8.00	0.00						
					6286117.44	2284990.39	8.00	0.00						
					6286117.44	2285029.20	8.00	0.00						
					6286288.56	2285029.20	8.00	0.00						
					6286288.56	2284320.03	8.00	0.00						
					6286170.37	2284320.03	8.00	0.00						
					6286170.37	2284357.07	8.00	0.00						
					6284332.16	2284357.07	8.00	0.00						
					6284332.16	2284298.86	8.00	0.00						
					6284212.20	2284298.86	8.00	0.00						

### Barrier(s)

Name	M.	ID	Abso	rption	Z-Ext.	Canti	lever	Height			Coordinates						
			left	right		horz.	vert.	Begin		End	х	у	z	Ground			
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)			
BARRIERS		BARRIERS00001						6.00	а		6284027.67	2283877.60	6.00	0.00			
											6284391.46	2283874.88	6.00	0.00			
											6284404.65	2283860.32	6.00	0.00			
											6284403.29	2283750.28	6.00	0.00			
BARRIERS		BARRIERS00002						4.00	а		6284639.26	2283884.29	4.00	0.00			
											6285198.14	2283881.20	4.00	0.00			
											6285197.37	2283847.19	4.00	0.00			
BARRIERS		BARRIERS00003						4.00	а		6285333.13	2283849.84	4.00	0.00			
											6285370.04	2283880.24	4.00	0.00			
											6285851.26	2283877.34	4.00	0.00			
											6285897.57	2283875.89	4.00	0.00			
											6285899.74	2283875.17	4.00	0.00			
BARRIERS		BARRIERS00004						4.00	а		6284639.26	2283884.29	4.00	0.00			
											6284639.24	2283871.62	4.00	0.00			
											6284513.10	2283872.78	4.00	0.00			

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# **APPENDIX 10.3:**

**CADNAA SHEET PILE SYSTEM CONSTRUCTION NOISE MODEL INPUTS** 





### 12975

CadnaA Noise Prediction Model: 12975\_ConstructionPile.cna

Date: 07.05.20 Analyst: B. Lawson

#### **Receiver Noise Levels**

Name	M.	ID	Level Lr			Lir	ıe		Land	Use	Height	:	Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
PILERECEIVERS		P1	64.0	64.0	70.7	65.0	0.0	0.0				5.00	а	6284093.59	2283838.98	5.00
PILERECEIVERS		P2	62.2	62.2	68.8	65.0	0.0	0.0				5.00	а	6284200.83	2283840.29	5.00
PILERECEIVERS		Р3	P3 57.3 57.3 64.0 65.0		0.0	0.0				5.00	а	6284351.12	2283845.30	5.00		

### Point Source(s)

Name	M.	ID	R	BA) (dBA) (dBA)			Lw / Li			erating Ti	me	KO Height			Co		
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night				Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		PileDriver(Impact)	108.7	108.7	108.7	Lw	108.7					0.0	8.00	a	6284105.32	2283966.70	8.00

Barrier(s)

Name	M.	ID	Abso	rption	Z-Ext.	Canti	lever	Height			Coordinates						
			left	right		horz.	vert.	Begin		End	x	у	Z	Ground			
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)			
BARRIERS		BARRIERS00001						6.00	а		6284027.67	2283877.60	6.00	0.00			
											6284391.46	2283874.88	6.00	0.00			
											6284404.65	2283860.32	6.00	0.00			
											6284403.29	2283750.28	6.00	0.00			
BARRIERS		BARRIERS00002						4.00	а		6284639.26	2283884.29	4.00	0.00			
											6285198.14	2283881.20	4.00	0.00			
											6285197.37	2283847.19	4.00	0.00			
BARRIERS		BARRIERS00003						4.00	а		6285333.13	2283849.84	4.00	0.00			
											6285370.04	2283880.24	4.00	0.00			
											6285851.26	2283877.34	4.00	0.00			
											6285897.57	2283875.89	4.00	0.00			
											6285899.74	2283875.17	4.00	0.00			
BARRIERS		BARRIERS00004						4.00	а		6284639.26	2283884.29	4.00	0.00			
		•									6284639.24	2283871.62	4.00	0.00			
											6284513.10	2283872.78	4.00	0.00			

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