

# El Camino Specific Plan Amendment

NOISE AND VIBRATION ANALYSIS CITY OF SAN JUAN CAPISTRANO

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# LIST OF ABBREVIATED TERMS

(1)	Reference
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
INCE	Institute of Noise Control Engineering
L <sub>eq</sub>	Equivalent continuous (average) sound level
L <sub>max</sub>	Maximum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	El Camino Specific Plan Amendment
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 noise exposure and the necessary noise mitigation measures for the proposed El Camino Specific Plan Amendment development ("Project"). This noise study has been prepared to satisfy applicable City of San Juan Capistrano noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise and Vibration 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.

Anghaig	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Less Than Significant	-		
Operational Noise	9	Less Than Significant	-		
Project Construction Noise		Potentially Significant	Less Than Significant		
Nighttime Concrete Pour	10	Less Than Significant	-		
Construction Vibration		Potentially Significant	Less Than Significant		

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



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# 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed El Camino Specific Plan Amendment (ECSPA). 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 Project site encompasses approximately 5.61 acres of land in the downtown area of the City of San Juan Capistrano, as shown on Exhibit 1-A. The Forster & El Camino Mixed Use Project portion of the Project site is located at 31878 Camino Capistrano on a 3.15-acre property (Assessor's Parcel Numbers: 124-160-37, -51, and -52). The central portion of the Project site includes the Blas Aguilar Adobe and Historic Town Center (HTC) Park (Assessor's Parcel Numbers: 124-160-08, -09, -10, -11, -12, and -27). The Project site is located south of Old Mission Road, east of El Camino Real, and both west and north of Del Obispo Street. Local access to the Project site would be provided by Forster Street and Camino Capistrano. Regional access to the site would be provided by Interstate 5 (I-5), which is located approximately 568 feet northwest of the Project site.

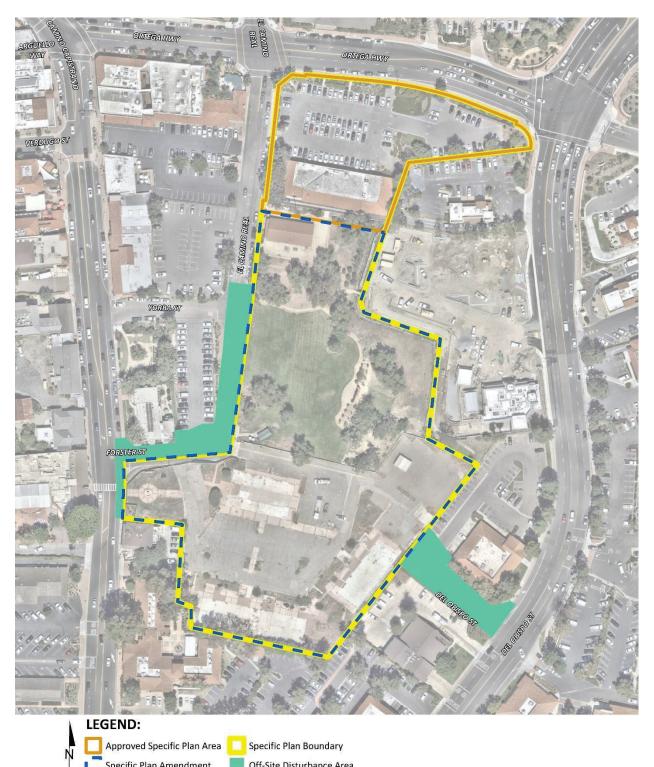
# **1.2** Adopted El Camino Specific Plan

The El Camino Specific Plan (ECSP), adopted in August 2022, includes the recently approved mixed use developed located at the former Downtown Playhouse site. The ECSP site is a 1.68± acre single parcel of land that is generally located south of Old Mission Road, east of El Camino Real. The approved project consists of the development of a 27,457 square-foot (SF) mixed use development in place of the El Camino Real Downtown Playhouse and public parking lot. The Project's retail/commercial space consists of 7,391 SF of retail, of which 2,607 SF is located on the ground floor of the parking structure, and 7,586 SF of restaurant space, plus 5,436 SF of medical office use and 7,044 SF of office space. Parking will be provided via a total of 216 parking spaces; it is expected that this parking structure would also serve as parking to the Project's Performing Arts Center component.

# 1.3 PROPOSED EL CAMINO SPECIFIC PLAN AMENDMENT

With the Project, the El Camino Specific Plan (ECSP), which now totals 1.68± acres, would be amended to encompass eight [8] parcels of land with a combined total of approximately 7.33± acres of land. Approximately 3.15± acres of land on the southern portion of the Project site would be redeveloped with the Forster & El Camino Mixed-Use Development. The middle 2.5± acres of the Project include a 1.0± acre HTC park and a 1.5± acre site that is set aside for development of a Performing Arts Center. Although no development will occur on the 1.0-acre Blas Aguilar Adobe Museum property, it is also proposed to be part of the expanded ECSPA.





**EXHIBIT 1-A: LOCATION MAP** 

Specific Plan Amendment



Off-Site Disturbance Area

The proposed Forster & El Camino mixed-use component of the Project as shown on Exhibit 1-B, consists of 95 multi-family apartment homes with 50 one-bedroom units, and 45 two-bedroom units, a 3,500 SF residential clubhouse/leasing office, and a one building that would house a 4,294 SF quality restaurant and a one-story, 3,100 SF health/fitness club. This Project component will provide a total of 171 parking spaces, comprised of 83 structured spaces in the garage, and 88 surface spaces on site. The middle 2.5± acres of the Project include a 1.0± acre HTC park, and a 1.5±-acre site that is set aside for development of a 49,097 SF performing arts center with a capacity of 352 seats in the Main Auditorium and a capacity of 100 seats in the "Black Box" theater. This Project component is expected to share parking with the 216-space parking structure that is planned as a part of the adopted ECSP development.





EXHIBIT 1-B: FORSTER & EL CAMINO MIXED USE PROJECT SITE PLAN







# 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.

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			
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80			
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			
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	CLEED	
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		NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0			

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

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. (2) 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 1,000 feet, which can cause serious discomfort. (3) 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 metric is the equivalent level ( $L_{eq}$ ). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period 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 noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of San Juan Capistrano 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. (2)

## 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 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. (4)

## 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. (2)

### 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 Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

## 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 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 block the line-of-sight path of sound from the noise source.





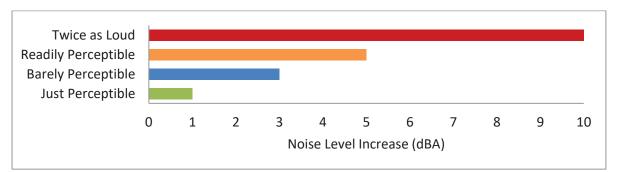
# 2.6 LAND USE COMPATIBILITY WITH NOISE

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. (6)

### 2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen 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 may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. 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 is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)







## 2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual*, 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.

Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Woodframe buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (8). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structurers reduce vibration levels due to the coupling of the building to the soil. 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 (8). 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 (8). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (9). Thus, either can be used in the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits. (8) Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels. As stated in the FTA guidance manual, 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.



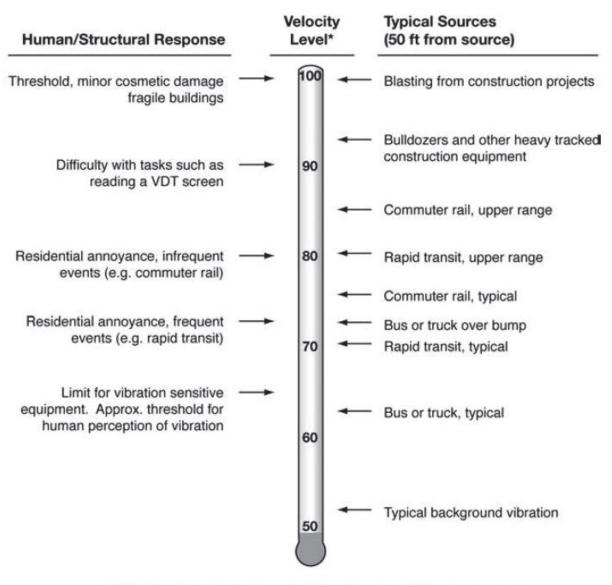


EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

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

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



# **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) OPR identifies suggested land use noise compatibility levels as part of its General Plan Guidelines. These suggested guidelines provide planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. The guidelines identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. In addition, the State through the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

### 3.2 CITY OF SAN JUAN CAPISTRANO GENERAL PLAN NOISE ELEMENT

The City of San Juan Capistrano has adopted a Noise Element to address noise sources in the community and identify ways to reduce the impacts of these noise sources on the community. (11) The Noise Element contains policies and programs to achieve and maintain noise levels compatible with various types of land uses. The following goals and policies are intended to assist the City in determining compatible land uses and provide adequate protection to its residents from noise intrusion related to the project:

Noise Goal 1: Minimize the effects of noise through proper land use planning.

- *Policy 1.1: Utilize noise/land use compatibility standards as a guide for future planning and development decisions.*
- Policy 1.2: Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.

Noise Goal 2: Minimize transportation-related noise impacts.

Policy 2.1: Reduce transportation-related noise impacts to sensitive land uses through the



use of noise control measures.

- Policy 2.2: Control truck traffic routing to reduce transportation-related noise impacts to sensitive land uses.
- *Policy 2.3:* Incorporate sound-reduction design in development projects impacted by transportation-related noise.

Noise Goal 3: Minimize non-transportation-related noise impacts.

- *Policy 3.1: Reduce the impacts of noise-producing land uses and activities on noise-sensitive land uses.*
- *Policy 3.2:* Incorporate sound-reduction design in new construction or rehabilitation projects impacted by non-transportation-related noise.

In addition, the Noise Element establishes standards and criteria that specify acceptable limits of noise for various land uses throughout the City designed to integrate noise considerations into land use planning to prevent noise/land use conflicts. Table N-3 in the General Plan Noise Element shown on Exhibit 3-A, present criteria used to assess the compatibility of proposed land uses within the noise environment. These criteria are the basis for the development of specific noise level standards.

#### 3.2.1 LAND USE COMPATIBILITY

The land use compatibility criteria, shown on Exhibit 3-A, provides the city with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Noise/Land Use Compatibility* matrix describes categories of compatibility for use when planning and making development decisions. (12) The commercial retail use of the Project is considered *normally acceptable* with unmitigated exterior noise levels of less than 70 dBA CNEL based on the Land Use Compatibility Matrix shown on Exhibit 3-A. Residential land uses in the Project study area are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL, and *conditionally acceptable* with exterior noise levels of up to 70 dBA CNEL. For *conditionally acceptable* exterior noise levels of *noise requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.* (11)

#### 3.2.2 INTERIOR AND EXTERIOR NOISE STANDARDS

In addition to the *Noise/Land Use Compatibility* matrix that describes categories of compatibility, the City of San Juan Capistrano has adopted interior and exterior noise standards. Exhibit 3-B presents the city noise standards outlined on Table N-2 for various types of land uses. The noise standards represent the maximum acceptable noise level and are used to determine noise impacts. For noise sensitive residential land use, the City identifies an exterior noise level standard of 65 dBA CNEL and an interior noise level standard of 45 dBA CNEL.



Land Use Category		Com	munity l	Noise E CNEL, 6	quivaler 1B	nt Level	
	5	5	60	65	70	75	80
Residential - Single Family, Multifamily, Duplex	A	A	В	В	С		
Residential - Mobile Homes	A	A	В	С	С		
Transient Lodging - Motels, Hotels	A	A	В	В	С	С	
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	В	С	С		
Auditoriums, Concert Halls, Amphitheaters Meeting Halls	В	В	С	С			
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	A	A	A	В	В		
Playgrounds, Neighborhood Parks	A	A	A	В	С		
Golf Courses, Riding Stables, Cemeteries	A	A	A	A	В	С	С
Office and Professional Buildings .	A	A	A	В	В	С	
Commercial Retail, Banks, Restaurants, Theaters	A	A	A	A	В	В	С
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	A	A	A	A	В	В	В
Agriculture	A	A	А	А	A	А	A

#### EXHIBIT 3-A: NOISE/LAND USE COMPATIBILITY MATRIX

Source: Taken in part from Aircraft Noise Impact Planning Guidelines for Local Agencies, U.S. Department of Housing and Urban Development, TE/NA-472, November 1972.

- A = Normally Acceptable Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- B = Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- C = Normally Unacceptable New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- --- Clearly Unacceptable New construction or development should generally not be undertaken.

Source: City of San Juan Capistrano General Plan Noise Element, Table N-3.



Land Use	Noise Sta	indards'
	Exterior	Interior
Residential (all)- Single family, multi-family, duplex, mobile home	65 dB(A)	45 dB(A)
Residential- Transient lodging, hotels, motels, nursing homes, hospitals, assisted care facilities	65 dB(A)	45 dB(A)
Private offices, churches, libraries, theaters, concert halls, meeting halls, schools	65 dB(A)	45 dB(A)
General commercial, retail, reception, restaurant	65 dB(A)	50 dB(A)
Manufacturing, industrial <sup>2</sup>		
Parks, playgrounds	$65 \mathrm{dB}(\mathrm{A})^3$	
Golf courses, outdoor spectator sports	70 dB(A) <sup>3</sup>	

#### EXHIBIT 3-B: INTERIOR AND EXTERIOR NOISE STANDARDS

<sup>1</sup> In Community Noise Level Equivalent (CNEL).

<sup>2</sup> Noise standards not applied to Industrial districts.

<sup>3</sup> Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

Source: City of San Juan Capistrano General Plan Noise Element, Table N-2.

#### 3.3 CITY OF SAN JUAN CAPISTRANO MUNICIPAL CODE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the El Camino Specific Plan Amendment, stationary-source (operational) noise levels and noise from construction activities are typically evaluated against standards established under the City's Municipal Code.

#### **3.3.1** OPERATIONAL NOISE STANDARDS

Section 9-3.531 – Table 3-29, of the City of San Juan Capistrano Municipal Code outlines the base exterior noise level standards affecting uses within the residential, public and institutional and commercial districts land uses as shown on Table 3-1. For the noise sensitive residential, public and institutional land uses, the Municipal Code identifies a noise level standard of 65 dBA L<sub>eq</sub>, during the daytime hours of 7:00 a.m. to 10:00 p.m., 55 dBA L<sub>eq</sub> during the evening hours of 7:00 p.m. to 10:00 p.m. and 45 dBA L<sub>eq</sub> during the nighttime hour of 10:00 p.m. to 7:00 a.m. (12) For commercial uses, the municipal codes identifies a noise level limit of 65 dBA L<sub>eq</sub> anytime during the day. The City of San Juan Capistrano Municipal Code Noise Standards are included in Appendix 3.1.



City	Land Use	Exterior No	(dBA Leq) <sup>2</sup>	
City	Land Use	Daytime	Evening	Nighttime
San Juan Capistrano <sup>1</sup>	Residential, Public and Institutional	65	55	45
Capistrano	Commercial	65	65	65

#### TABLE 3-1: OPERATIONAL NOISE STANDARDS

<sup>1</sup> City of San Juan Capistrano Municipal Code, Section 9-3.531 Noise Standards - Table 3-29 (Appendix 3.1).

<sup>2</sup> Leq represents a steady state sound level containing the same total energy as a time varying signal over a given period. "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.

#### **3.3.2** CONSTRUCTION NOISE STANDARDS

The City of San Juan Capistrano has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 9-3.531[d][4] of the City's Municipal Code states that the following activities shall be exempted from the provisions of this section: *Noise sources associated with construction, repairs, remodeling, or the grading of any real property, except that such activities shall not be exempt from the provisions of this section if conducted from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday. While the City's Municipal Code exempts construction noise during the noise hours, neither the City's General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a <i>substantial temporary or periodic noise increase*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA Leq as a reasonable threshold. (8 p. 179)

### **3.4 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. (8)



To analyze vibration impacts originating from the operation and construction of the El Camino Specific Plan Amendment, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of San Juan Capistrano does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (9 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations with a maximum acceptable continuous vibration threshold of 0.25 PPV(in/sec).



# 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?

# 4.1 Noise Level Increases (Threshold A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of 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 a noise impact significant*. (13) 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. The ambient noise level is the composite of noise from all sources, excluding the alleged offensive noise. In this context, it represents the normal or existing level of environmental noise at a given location for a specified time of day or night.

### 4.1.1 TRANSPORTATION NOISE (SUBSTANTIAL PERMANENT NOISE LEVEL INCREASE)

The Federal Interagency Committee on Noise (FICON) (14) 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 (L<sub>eq</sub>).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (13) 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, a *readily perceptible* 5 dBA or greater

project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. 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 baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level 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. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (15 p. 2\_48).

## 4.1.2 NON-TRANSPORTATION NOISE (SUBSTANTIAL PERMANENT NOISE LEVEL INCREASE)

The FICON criteria are also used to determine if Project-related stationary source (operational) noise level increases are significant at off-site receiver locations. For non-transportation noise source activities, a substantial permanent noise level increase consists of increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying ambient noise levels.

## 4.1.3 CONSTRUCTION NOISE (SUBSTANTIAL TEMPORARY NOISE LEVEL INCREASE)

To control the noise-generating construction activities, the temporary noise level increases over the existing *ambient* conditions must be considered under CEQA Significance Threshold A. In California a *substantial* noise increase occurs when the project's predicted noise level exceeds the existing ambient noise level by 12 dBA or more. (16) The use of 12 dB was established in California many years ago and is based on the concept that a 10 dB increase generally is perceived as a doubling of loudness. (2 pp. 3-2) Therefore, if the Project-related construction noise levels generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA L<sub>eq</sub>, then the Project construction noise level increases will be considered a *potentially significant impact*.

# 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.4, the vibration impacts originating from the construction of El Camino Specific Plan Amendment, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations with a maximum acceptable continuous vibration threshold of 0.25 PPV (in/sec).



# 4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is the John Wayne Airport located roughly 16 miles northwest 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 Appendix G to the CEQA Guidelines, Noise Threshold C.

### 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 that includes the allowable criteria used to identify potentially significant incremental noise level increases.

Analysia	Condition(a)	S	ignificance Crit	eria
Analysis	Condition(s)	Daytime	Evening	Nighttime
	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
Off-Site Traffic <sup>1</sup>	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase		
Traffic	If ambient is > 65 dBA CNEL	≥ 1.5 d	BA CNEL Projec	t increase
	Exterior Noise Level Standards <sup>2</sup>		See Table 3-1	1
Operational	If ambient is < 60 dBA Leq <sup>1</sup>	≥ 5 dBA L <sub>eq</sub> Project increase		
Operational	If ambient is 60 - 65 dBA Leq <sup>1</sup>	$\geq$ 3 dBA L <sub>eq</sub> Project increase		
	If ambient is > 65 dBA Leq <sup>1</sup>	$\geq$ 1.5 dBA L <sub>eq</sub> Project increase		
Construction	Exempt from the provisions of noise ordinance except from 6:00 p.m. to 7:00 a.m on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at an time on Sunday or a national holiday <sup>3</sup>			-
Construction	Noise Level Threshold <sup>4</sup>	80 dBA L <sub>eq</sub>		
	Exterior Noise Level Increase		12 dBA L <sub>eq</sub> <sup>5</sup>	
	Vibration Level Threshold <sup>6</sup>		0.25 PPV (in/se	ec)

TABLE 4-1:	SIGNIFICANCE CRITERIA SUMMARY

<sup>1</sup> FICON, 1992.

<sup>2</sup> City of San Juan Capistrano Municipal Code Section 9-3.531 Noise Standards - Table 3-29 (Appendix 3.1).

<sup>3</sup> City of San Juan Capistrano Municipal Code Chapter Section 9-3.531[d][4].

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

<sup>5</sup> Caltrans substantial noise level increase criteria.

<sup>6</sup> Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

"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.



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# 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at six 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, long-term noise level measurements were collected by Urban Crossroads, Inc. on Thursday, November 30, 2023. 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 equivalent 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 receiver locations as possible to assess the existing equivalent 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. (2) 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. (8)* 

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. (8) 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 noise level measurements at the nearby receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise increase due to the Project's contribution to the ambient noise levels. This approach is necessary to calculate the temporary or permanent increase in *ambient* noise levels as required by the CEQA Guidelines Environmental Checklist.

## 5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the equivalent or the energy average hourly sound levels ( $L_{eq}$ ) to describe the existing *ambient* conditions. 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 (7:00 a.m. to 7:00 p.m.), evening (7:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

Location <sup>1</sup>	Description	Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>			
		Daytime	Evening	Nighttime	
L1	Located north of the site near the Camino Real Playhouse building at 31776 El Camino Real	60.7	56.7	54.5	
L2	Located east of the site boundary in the parking lot near 31791 Del Obispo St.	63.0	61.0	59.9	
L3	Located south of the site near the Mercado Village building at 31952 Camino Capistrano	57.4	55.3	54.3	
L4	Located west of the site near the Egan House at 31892 Camino Capistrano	60.0	56.8	58.6	
L5	Located west of the site near the El Adobe restaurant building at 31891 Camino Capistrano	63.5	63.4	59.9	
L6	Located west of the site within the Veterans Park.	61.6	58.0	54.8	

#### TABLE 5-1: AMBIENT NOISE LEVEL MEASUREMENTS

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

<sup>2</sup> Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.

"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 5-1 provides the equivalent 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.





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

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# 6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future transportation related noise environment. Consistent with City of San Juan Capistrano *Noise/Land Use Compatibility* Matrix (see Exhibit 3-A), 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)

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

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the seven off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of San Juan Capistrano General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study area presented on Tables 6-2 and 6-3 are based on the *El Camino Specific Plan Amendment Traffic Impact Analysis Report*, prepared by Linscott, Law & Greenspan, Engineers for the following traffic scenarios without and with the potential future extension of Forster Lane to Del Obispo Street (21).

#### Without Forster Extension

- Existing (E)
- Existing plus Project (EP)
- Existing plus Cumulative (EC 2028) without Project Conditions
- Existing plus Cumulative (ECP 2028) with Project Conditions
- General Plan Buildout (GPBO) without Project Conditions
- General Plan Buildout (GPBO) with Project Conditions



With Forster Extension

- Existing (E)
- Existing plus Project (EP)
- Existing plus Cumulative (EC 2028) without Project Conditions
- Existing plus Cumulative (ECP 2028) with Project Conditions
- General Plan Buildout (GPBO) without Project Conditions
- General Plan Buildout (GPBO) with Project Conditions

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. In addition, the off-site traffic noise analysis is based on a PM peak hour to average daily traffic (peak-to-daily) relationship of 10%. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study. The Project is anticipated to generate a net total of 1,234 two-way trips per day (actual vehicles). Table 6-4 provides the time of day (daytime, evening, and nighttime) vehicle splits. Table 6-5 shows the traffic flow by vehicle type (vehicle mix).

ID	Roadway	Segment	Classification <sup>1</sup>	Receiving Land Use <sup>2</sup>	Distance from Centerline to Receiving Land Use (Feet) <sup>3</sup>	Vehicle Speed (mph)
1	Old Mission Rd.	e/o Camino Capistrano	Secondary	Sensitive	40'	25
2	Ortega Hwy.	w/o I-5 SB Ramps	Primary	Sensitive	50'	45
3	Ortega Hwy.	at I-5 Fwy. Overpass	Primary	Non-Sensitive	50'	45
4	Camino Capistrano	n/o Del Obispo St.	Secondary	Non-Sensitive	30'	40
5	Del Obispo St.	e/o Camino Capistrano	Primary	Non-Sensitive	50'	40
6	Del Obispo St.	e/o Alipaz St.	Primary	Sensitive	50'	40
7	Del Obispo St.	w/o Camino Capistrano	Primary	Non-Sensitive	50'	40

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

<sup>1</sup> El Camino Specific Plan Amendment Traffic Impact Analysis Report, Linscott Law & Greenspan, Engineers.

<sup>2</sup> Based on a review of existing aerial imagery.

<sup>3</sup> Distance to receiving land use is based upon the right-of-way distances.



			Average Daily Traffic Volumes <sup>1</sup>						
ID	Roadway	Segment	Existing		EC 2028		GPBO		
			Without Project	With Project	Without Project	With Project	Without Project	With Project	
1	Old Mission Rd.	e/o Camino Capistrano	6,183	6,940	7,745	8,502	7,745	8,502	
2	Ortega Hwy.	w/o I-5 SB Ramps	36,749	37,506	41,774	42,531	41,774	42,531	
3	Ortega Hwy.	at I-5 Fwy. Overpass	39,479	39,972	43,617	44,110	45,274	45,767	
4	Camino Capistrano	n/o Del Obispo St.	13,722	14,197	16,584	17,059	16,584	17,059	
5	Del Obispo St.	e/o Camino Capistrano	23,538	23,538	27,198	27,198	27,198	27,198	
6	Del Obispo St.	e/o Alipaz St.	30,588	30,736	34,799	34,947	34,799	34,947	
7	Del Obispo St.	w/o Camino Capistrano	33,448	33,596	38,498	38,646	38,498	38,646	

#### TABLE 6-2: ADT VOLUMES (WITHOUT FORSTER EXTENSION)

<sup>1</sup> El Camino Specific Plan Amendment Traffic Impact Analysis Report, Linscott Law & Greenspan, Engineers.

#### TABLE 6-3: ADT VOLUMES (WITH FORSTER EXTENSION)

			Average Daily Traffic Volumes <sup>1</sup>						
ID	Roadway	Segment	Existing		EC 2028		GPBO		
			Without Project	With Project	Without Project	With Project	Without Project	With Project	
1	Old Mission Rd.	e/o Camino Capistrano	6,183	6,737	7,745	8,299	7,745	8,299	
2	Ortega Hwy.	w/o I-5 SB Ramps	36,749	37,506	41,774	42,531	41,774	42,531	
3	Ortega Hwy.	at I-5 Fwy. Overpass	39,479	39,972	43,617	44,110	45,274	45,767	
4	Camino Capistrano	n/o Del Obispo St.	13,722	14,009	16,584	16,871	16,584	16,871	
5	Del Obispo St.	e/o Camino Capistrano	23,538	23,726	27,198	27,386	27,198	27,386	
6	Del Obispo St.	e/o Alipaz St.	30,588	30,736	34,799	34,947	34,799	34,947	
7	Del Obispo St.	w/o Camino Capistrano	33,448	33,596	38,498	38,646	38,498	38,646	

<sup>1</sup> El Camino Specific Plan Amendment Traffic Impact Analysis Report, Linscott Law & Greenspan, Engineers.

#### TABLE 6-4: TIME OF DAY VEHICLE SPLITS

		Total of Time of		
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

"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.



Classification		Tatal			
Classification	Autos	Medium Trucks	Heavy Trucks	Total	
All Segments	97.42%	1.84%	0.74%	100.00%	

#### TABLE 6-5: DAILY VEHICLE MIX

<sup>1</sup>Typical California Vehicle Mix.



# 7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *the El Camino Specific Plan Amendment Traffic Impact Analysis Report*, prepared by Linscott, Law & Greenspan, Engineers. (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 receiving 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 and 7-2 present a summary of the exterior CNEL traffic noise levels at the receiving land use without barrier attenuation for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

			CNEL at Receiving Land Use (dBA) <sup>1</sup>								
ID	Deadwar	Segment	Exis	ting	EC 2	.028	GPBO				
	Roadway	Segment	Without Project	With Project	Without Project	With Project	Without Project	With Project			
1	Old Mission Rd.	e/o Camino Capistrano	61.1	61.6	62.1	62.5	62.1	62.5			
2	Ortega Hwy.	w/o I-5 SB Ramps	73.0	73.1	73.6	73.7	73.6	73.7			
3	Ortega Hwy.	at I-5 Fwy. Overpass	74.8	74.8	75.2	75.2	75.4	75.4			
4	Camino Capistrano	n/o Del Obispo St.	70.0	70.1	70.8	70.9	70.8	70.9			
5	Del Obispo St.	e/o Camino Capistrano	69.8	69.8	70.4	70.4	70.4	70.4			
6	Del Obispo St.	e/o Alipaz St.	71.0	71.0	71.5	71.5	71.5	71.5			
7	Del Obispo St.	w/o Camino Capistrano	71.3	71.4	72.0	72.0	72.0	72.0			

## TABLE 7-1: OFF-SITE TRAFFIC NOISE ANLAYSIS (WITHOUT FORSTER)

<sup>1</sup> Off-site traffic noise level calculations and contours are included in Appendix 7.1.



			CNEL at Receiving Land Use (dBA) <sup>1</sup>								
ID		Comment	Exis	ting	EC 2	028	GPBO				
	Roadway	Segment	Without Project	With Project	Without Project	With Project	Without Project	With Project			
1	Old Mission Rd.	e/o Camino Capistrano	61.1	61.4	62.1	62.4	62.1	62.4			
2	Ortega Hwy.	w/o I-5 SB Ramps	73.0	73.1	73.6	73.7	73.6	73.7			
3	Ortega Hwy.	at I-5 Fwy. Overpass	74.8	74.8	75.2	75.2	75.4	75.4			
4	Camino Capistrano	n/o Del Obispo St.	70.0	70.1	70.8	70.9	70.8	70.9			
5	Del Obispo St.	e/o Camino Capistrano	69.8	69.9	70.4	70.5	70.4	70.5			
6	Del Obispo St.	e/o Alipaz St.	71.0	71.0	71.5	71.5	71.5	71.5			
7	Del Obispo St.	w/o Camino Capistrano	71.3	71.4	72.0	72.0	72.0	72.0			

TABLE 7-2: OFF-SITE TRAFFIC NOISE ANLAYSIS (WITH FORSTER)

<sup>1</sup> Off-site traffic noise level calculations and contours are included in Appendix 7.1.

## 7.2 WITHOUT FORSTER PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-3 provides a summary of the without Forster Project traffic noise level increases for each of the traffic scenarios. Table 7-3 shows that the off-site traffic noise level increases attributed to the Project range from 0.0 to 0.5 dBA CNEL on the study area roadway segments. 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 impacts due to unmitigated without Forster Project-related traffic noise level increases.

## 7.3 WITH FORSTER PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-4 provides a summary of the with Forster Project traffic noise level increases for each of the traffic scenarios. Table 7-4 shows that the off-site traffic noise level increases attributed to the Project range from 0.0 to 0.3 dBA CNEL on the study area roadway segments. 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 impacts due to unmitigated with Forster Project-related traffic noise level increases.



ID	Roadway	Segment		ect CNEL Tr e Increase (		Incremental Noise Level Increase Threshold <sup>3</sup>		
			Existing	EC 2028	GPBO	Limit	Exceeded?	
1	Old Mission Rd.	e/o Camino Capistrano	0.5	0.4	0.4	3.0	No	
2	Ortega Hwy.	w/o I-5 SB Ramps	0.1	0.1	0.1	1.5	No	
3	Ortega Hwy.	at I-5 Fwy. Overpass	0.0	0.0	0.0	1.5	No	
4	Camino Capistrano	n/o Del Obispo St.	0.1	0.1	0.1	1.5	No	
5	Del Obispo St.	e/o Camino Capistrano	0.0	0.0	0.0	1.5	No	
6	Del Obispo St.	e/o Alipaz St.	0.0	0.0	0.0	1.5	No	
7	Del Obispo St.	w/o Camino Capistrano	0.1	0.0	0.0	1.5	No	

TABLE 7-3: PROJECT TRAFFIC NOISE LEVEL INCREASES (WITHOUT FORSTER)

<sup>1</sup> CNEL at Receiving Land Use (dBA) as shown on Table 7-1. Off-site traffic noise level calculations and contours are included in Appendix 7.1.

#### TABLE 7-4: PROJECT TRAFFIC NOISE LEVEL INCREASES (WITH FORSTER)

	ID Roadway	Comment	-	ect CNEL Tr e Increase (	Incremental Noise Level Increase Threshold <sup>3</sup>		
		Segment	Existing	EC 2028	GPBO	Limit	Exceeded?
1	Old Mission Rd.	e/o Camino Capistrano	0.3	0.3	0.3	3.0	No
2	Ortega Hwy.	w/o I-5 SB Ramps	0.1	0.1	0.1	1.5	No
3	Ortega Hwy.	at I-5 Fwy. Overpass	0.0	0.0	0.0	1.5	No
4	Camino Capistrano	n/o Del Obispo St.	0.1	0.1	0.1	1.5	No
5	Del Obispo St.	e/o Camino Capistrano	0.1	0.1	0.1	1.5	No
6	Del Obispo St.	e/o Alipaz St.	0.0	0.0	0.0	1.5	No
7	Del Obispo St.	w/o Camino Capistrano	0.1	0.0	0.0	1.5	No

<sup>1</sup> CNEL at Receiving Land Use (dBA) as shown on Table 7-1. Off-site traffic noise level calculations and contours are included in Appendix 7.1.





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# 8 **RECEIVER LOCATIONS**

To assess the potential for long-term operational and short-term construction noise impacts, the following 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, nine receiver locations in the vicinity of the Project site were identified. Other 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 Camino Real Playhouse at 31776 El Camino Real, approximately 139 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 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 Orange County Fire Authority Station #7 at 31865 Del Obispo Street, approximately 49 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R2 is placed at the building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing Plaza de Prosperidad office building at 31877 Del Obispo Street Capistrano approximately 92 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R3 is placed at the building façade. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing Mercado Village at 31952 Camino Capistrano approximately 9 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the building façade. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.





**EXHIBIT 8-A: RECEIVER LOCATIONS** 

## LEGEND:

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- R5: Location R5 represents Ellie's Table at the Egan House at 31892 Camino Capistrano, approximately 6 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R6: Location R6 represents the El Adobe restaurant building at 31891 Camino Capistrano, approximately 84 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R6 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R7: Location R7 represents the office building at 31866 Forster Street, approximately 10 feet northwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R7 is placed at the building façade. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R8: Location R8 represents the commercial retail building at 31812 Camino Capistrano, approximately 122 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R8 is placed at the building façade. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R9: Location R9 represents the Blas Aguilar Adobe Museum at 31806 El Camino Real, approximately 78 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R9 is placed at the building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment. ambient noise environment.

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# 9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed El Camino Specific Plan Amendment Project. Exhibit 9-A of the Noise Study includes over 83 individual noise sources to fully describe the potential reasonable worst-case noise environment. This includes potential outdoor courtyard activities or crowd noise associated with a Performing Arts Center event.

# 9.1 OPERATIONAL NOISE SOURCES

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. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, courtyard activity, pool activity, trash enclosure activity, and parking lot vehicle movements.

## 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 reasonable worst-case noise environment with the typical noise sources operating at the same time. These sources of noise activity will likely vary throughout the day.

## 9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision 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)





EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS



Noise Source <sup>1</sup>	Noise Source	Ν	/lin./Hou	r <sup>2</sup>	Reference Noise	Sound Power
Noise Source-	Height (Feet)	Day	Eve	Night	Level (dBA L <sub>eq</sub> ) @ 50 Feet	Level (dBA) <sup>3</sup>
Roof-Top Air Conditioning Units	5'	39	39	28	57.2	88.9
Courtyard Activity	5'	60	60	30	59.8	91.5
Pool Activity	5'	60	60	0	54.7	86.4
Trash Enclosure Activity	5'	60	60	30	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	30	52.6	81.1

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

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

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

<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.

#### 9.2.2 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 57.2 dBA Leg. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated 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 building.

#### 9.2.3 COURTYARD ACTIVITY

To describe the outdoor common area courtyards activity areas, a reference noise level measurement was taken. At 50 feet, the reference noise level is 59.8 dBA Lea at a noise source height of 5 feet. The reference noise level measurement includes outdoor eating, drinking, laughing, and talking. In addition, it is expected that the Performing Arts Center will include outdoor courtyard activities or crowd noise with guests gathering outside. This will likely take place before an event, during intermission and for a short period of time after the event.

#### **9.2.4 POOL ACTIVITY**

To represent the noise levels associated with potential hotel pool activities, Urban Crossroads collected a reference noise level measurement at the Covenant Hill Clubhouse Pool in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise level at 50 feet is 54.7 dBA Leg for pool activity. The pool activity noise levels include kids playing, running, screaming, splashing, playing with a ball, and parents talking. Pool and Spa activities are estimated to occur for 60 minutes during all the daytime hours, with no nighttime activities.



## 9.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. 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 reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building.

#### 9.2.6 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term reference noise level measurement was collected for twenty-nine hours in the center of activity within a large parking lot. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA  $L_{eq}$ . The parking lot noise levels are mainly due to cars pulling in and out of parking spaces in combination with car doors opening and closing.

# 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 9613-2 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 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L<sub>w</sub>) to describe individual noise sources.

While sound pressure levels (e.g.,  $L_{eq}$ ) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels ( $L_w$ ) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because 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 CadnaA 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 screenwall used to estimate the Project operational noise levels presented in this section.



# 9.4 PROJECT STATIONARY OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include rooftop air conditioning units, courtyard activity, pool activity, trash enclosure activity, and parking lot vehicle movements, Urban Crossroads, Inc. calculated the stationary source operational 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 receiver locations. Table 9-2 shows the Project stationary operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 45.9 to 58.4 dBA L<sub>eq</sub>.

Noise Source <sup>1</sup>	0	Operational Noise Levels by Receiver Location (dBA Leq)								
Noise Source-	R1	R2	R3	R4	R5	R6	R7	R8	R9	
Roof-Top Air Conditioning Units	43.1	45.6	43.8	43.7	52.0	47.2	49.7	43.5	44.2	
Courtyard Activity	42.1	40.4	25.2	29.2	49.1	52.7	54.0	43.9	46.1	
Pool Activity	12.5	19.9	18.5	22.8	30.0	29.7	25.4	16.3	14.8	
Trash Enclosure Activity	30.9	30.8	22.4	21.3	55.8	29.9	38.5	35.2	34.6	
Parking Lot Vehicle Movements	30.1	46.7	43.5	50.4	49.7	36.1	39.7	35.0	34.0	
Total (All Noise Sources)	45.9	49.8	46.7	51.3	58.5	53.9	55.6	47.3	48.6	

#### TABLE 9-2: DAYTIME PROJECT STATIONARY OPERATIONAL NOISE LEVELS

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

Table 9-3 shows the Project operational noise levels during the evening hours of 7:00 p.m. to 7:00 a.m. The evening hourly noise levels at the off-site receiver locations are expected to range from 45.9 to 58.5 dBA  $L_{eq}$ .

Noise Source <sup>1</sup>	0	Operational Noise Levels by Receiver Location (dBA Leq)									
	R1	R2	R3	R4	R5	R6	R7	R8	R9		
Roof-Top Air Conditioning Units	43.1	45.6	43.8	43.7	52.0	47.2	49.7	43.5	44.2		
Courtyard Activity	42.1	40.4	25.2	29.2	49.1	52.7	54.0	43.9	46.1		
Pool Activity	12.5	19.9	18.5	22.8	30.0	29.7	25.4	16.3	14.8		
Trash Enclosure Activity	30.9	30.8	22.4	21.3	55.8	29.9	38.5	35.2	34.6		
Parking Lot Vehicle Movements	30.1	46.7	43.5	50.4	49.7	36.1	39.7	35.0	34.0		
Total (All Noise Sources)	45.9	49.8	46.7	51.3	58.5	53.9	55.6	47.3	48.6		

TABLE 9-3: EVENING PROJECT STATIONARY OPERATIONAL NOISE LEVELS

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

Table 9-4 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. with no pool activity. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 43.8 to 55.9 dBA  $L_{eq}$ . The differences between the daytime, evening and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.



Notes Coursel	0	Operational Noise Levels by Receiver Location (dBA Leq)								
Noise Source <sup>1</sup>	R1	R2	R3	R4	R5	R6	R7	R8	R9	
Roof-Top Air Conditioning Units	41.7	44.1	42.3	42.2	50.6	45.7	48.3	42.1	42.8	
Courtyard Activity	39.0	37.4	22.2	26.2	46.1	49.7	51.0	40.9	43.1	
Pool Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Trash Enclosure Activity	27.9	27.8	19.4	18.3	52.8	26.9	35.5	32.2	31.6	
Parking Lot Vehicle Movements	27.1	43.6	40.5	47.4	46.7	33.1	36.7	32.0	31.0	
Total (All Noise Sources)	43.8	47.4	44.5	48.6	55.9	51.2	53.0	45.0	46.3	

#### TABLE 9-4: NIGHTTIME PROJECT STATIONARY OPERATIONAL NOISE LEVELS

1 See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

#### 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 San Juan Capistrano exterior noise level standards at the nearest receiver locations. Table 9-5 shows the operational noise levels associated with El Camino Specific Plan Amendment will not exceed the City of San Juan Capistrano daytime, evening, and nighttime exterior noise level standards. Therefore, the operational noise impacts are considered *less than significant* at the nearby receiver locations.

Receiver	Lond		ject Operational Levels (dBA Leq) <sup>2</sup>		Noise Level Standards (dBA Leq) <sup>3</sup>			Noise Level Standards Exceeded? <sup>4</sup>			
Location	036	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime	
R1	Commercial	45.9	45.9	43.8	65	65	65	No	No	No	
R2	Commercial	49.8	49.8	47.4	65	65	65	No	No	No	
R3	Commercial	46.7	46.7	44.5	65	65	65	No	No	No	
R4	Commercial	51.3	51.3	48.6	65	65	65	No	No	No	
R5	Commercial	58.5	58.5	55.9	65	65	65	No	No	No	
R6	Commercial	53.9	53.9	51.2	65	65	65	No	No	No	
R7	Commercial	55.6	55.6	53.0	65	65	65	No	No	No	
R8	Commercial	47.3	47.3	45.0	65	65	65	No	No	No	
R9	Commercial	48.6	48.6	46.3	65	65	65	No	No	No	

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

 $^{\rm 1}$  See Exhibit 8-A for the receiver locations.

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

<sup>3</sup> Exterior noise level standards, as shown on Table 4-1.

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

"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.



# 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 that may be 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. (2) Instead, they must be logarithmically added using the following base equation:

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

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 describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-6, 9-7 and 9-8, respectively. As indicated on Tables 9-6, the Project will generate a daytime operational noise level increases ranging from 0.1 to 2.3 dBA  $L_{eq}$  at the nearest receiver locations. Table 9-7 shows that the Project will generate an evening operational noise level increase ranging from 0.3 to 4.0 dBA  $L_{eq}$  at the nearest receiver locations. Table 9-8 shows that the Project-related operational noise level increases will not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, the increases at the receiver locations will be *less than significant*.

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	45.9	L1	60.7	60.8	0.1	3.0	No
R2	49.8	L2	63.0	63.2	0.2	3.0	No
R3	46.7	L3	57.4	57.8	0.4	5.0	No
R4	51.3	L3	57.4	58.3	0.9	5.0	No
R5	58.5	L4	60.0	62.3	2.3	5.0	No
R6	53.9	L5	63.5	64.0	0.5	3.0	No
R7	55.6	L6	61.6	62.6	1.0	3.0	No
R8	47.3	L6	61.6	61.8	0.2	3.0	No
R9	48.6	L1	60.7	61.0	0.3	3.0	No

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

<sup>2</sup> Total Project daytime operational noise levels as shown on Table 9-5.

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

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

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

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

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



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	45.9	L1	56.7	57.0	0.3	5.0	No
R2	49.8	L2	61.0	61.3	0.3	3.0	No
R3	46.7	L3	55.3	55.9	0.6	5.0	No
R4	51.3	L3	55.3	56.7	1.4	5.0	No
R5	58.5	L4	56.8	60.8	4.0	5.0	No
R6	53.9	L5	63.4	63.9	0.5	3.0	No
R7	55.6	L6	58.0	60.0	2.0	5.0	No
R8	47.3	L6	58.0	58.4	0.4	5.0	No
R9	48.6	L1	56.7	57.3	0.6	5.0	No

TABLE 9-7: EVENING OPERATIONAL NOISE LEVEL INCREASES

 $^{\rm 1}$  See Exhibit 8-A for the receiver locations.

 $^{\rm 2}$  Total Project evening operational noise levels as shown on Table 9-5.

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

 $^{\rm 4}$  Observed evening ambient noise levels as shown on Table 5-1.

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

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

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

#### TABLE 9-8: 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	43.8	L1	54.5	54.9	0.4	5.0	No
R2	47.4	L2	59.9	60.1	0.2	5.0	No
R3	44.5	L3	54.3	54.7	0.4	5.0	No
R4	48.6	L3	54.3	55.3	1.0	5.0	No
R5	55.9	L4	58.6	60.5	1.9	5.0	No
R6	51.2	L5	59.9	60.5	0.6	5.0	No
R7	53.0	L6	54.8	57.0	2.2	5.0	No
R8	45.0	L6	54.8	55.2	0.4	5.0	No
R9	46.3	L1	54.5	55.1	0.6	5.0	No

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

<sup>2</sup> Total Project nighttime operational noise levels as shown on Table 9-5.

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

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

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

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

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

# **10 CONSTRUCTION ANALYSIS**

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 nearest receiver locations previously described in Section 8. To prevent high levels of construction noise, the City of San Juan Capistrano Municipal Code Section 9-3.531[d][4] exempts noise sources associated with construction from the provision of the noise standards; the following activities shall be exempted from the provisions of this section: *Noise sources associated with construction, repairs, remodeling, or the grading of any real property, except that such activities shall not be exempt from the provisions of this section if conducted from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday.* 

# **10.1** CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

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

## **10.2** CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this 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. (22) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.







#### 15534-05 NA

N



💹 Limits of Construction Activity Receiver Locations 🛛 Distance from receiver to Project site boundary (in feet)

# **10.3** 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 receiver locations were completed. Consistent with FTA guidance for detailed construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming all equipment operates at the same time. To account for the dynamic nature of construction activities, the CadnaA construction noise analysis evaluates the equipment as multiple moving point sources within the construction area (Project site boundary). Construction impacts are based on the highest noise level calculated at each receiver location. As shown on Table 10-2, the construction noise levels are expected to range from 61.2 to 79.0 dBA  $L_{eq}$  at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

Construction Stage	Reference Construction Equipmnet <sup>1</sup>	Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> )	Composite Reference Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>	Reference Power Level (dBA L <sub>w</sub> ) <sup>3</sup>	
C'I	Tractor	80			
Site Preparation	Backhoe	74	84.0	115.6	
rieparation	Grader	81			
	Scraper	80		114.9	
Grading	Excavator	77	83.3		
	Dozer	78			
	Crane	73		112.2	
Building Construction	Generator	78	80.6		
construction	Front End Loader	75			
	Paver	74			
Paving	Dump Truck	72	77.8	109.5	
	Roller	73			
	Man Lift	68			
Architectural Coating	Compressor (air)	74	76.2	107.8	
Coating	Generator (<25kVA)	70			

#### TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

<sup>1</sup> FHWA Road Construction Noise Model.

<sup>2</sup> Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

<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.

# 10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level of 80 dBA  $L_{eq}$  is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will not exceed the reasonable daytime



80 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 are considered *less than significant* at all receiver locations.

		Co	Construction Noise Levels (dBA Leq)						
Receiver Location <sup>1</sup>	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>			
R1	69.0	68.3	65.6	62.9	61.2	69.0			
R2	74.1	73.4	70.7	68.0	66.3	74.1			
R3	70.6	69.9	67.2	64.5	62.8	70.6			
R4	76.2	75.5	72.8	70.1	68.4	76.2			
R5	79.0	78.3	75.6	72.9	71.2	79.0			
R6	69.8	69.1	66.4	63.7	62.0	69.8			
R7	77.7	77.0	74.3	71.6	69.9	77.7			
R8	69.6	68.9	66.2	63.5	61.8	69.6			
R9	72.1	71.4	68.7	66.0	64.3	72.1			

TABLE 10-2: ON-SITE CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

<sup>1</sup> Construction noise source and receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

#### TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

	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	69.0	80	No					
R2	74.1	80	No					
R3	70.6	80	No					
R4	76.2	80	No					
R5	79.0	80	No					
R6	69.8	80	No					
R7	77.7	80	No					
R8	69.6	80	No					
R9	72.1	80	No					

 $^{1}\mbox{Construction}$  noise source and receiver locations are shown on Exhibit 10-A.

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

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

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



## **10.5** CONSTRUCTION NOISE LEVEL INCREASE

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing *ambient* noise levels measurements at the nearest off-site receiver locations. The difference between the combined Project-construction and ambient noise levels is used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the *ambient* daytime conditions are presented on Table 5-1. As indicated in Table 10-4, the Project will contribute unmitigated construction noise level increases ranging from 7.2 to 19.1 dBA L<sub>eq</sub> during the daytime hours at the closest receiver locations. The unmitigated construction noise analysis shows that the nearest receiver locations will exceed the Caltrans *substantial* 12 dBA L<sub>eq</sub> noise level increase significance threshold during Project construction activities. The temporary construction noise are considered *potentially significant* without mitigation.

Therefore, a minimum 8-foot-high temporary noise barrier is required at the limits of construction as shown on Exhibit 10-B. Table 10-5 shows that the mitigated construction noise levels at the nearest noise sensitive receiver locations are expected to range from 64.2 to 71.7 dBA L<sub>eq</sub>. Appendix 10.2 includes the mitigated construction CadnaA noise calculations. The mitigated Project construction noise level increases will range from 3.8 to 12.0 dBA L<sub>eq</sub> and will not exceed the Caltrans *substantial* 12 dBA L<sub>eq</sub> increase threshold. With the required 8-foot-high temporary noise barrier and the construction noise mitigation measures outlined below in Section 10.6, the construction noise impacts are considered *less than significant*.



Receiver Location <sup>1</sup>	Total Project Construction 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	69.0	L1	60.7	69.6	8.9	12	No
R2	74.1	L2	63.0	74.4	11.4	12	No
R3	70.6	L3	57.4	70.8	13.4	12	Yes
R4	76.2	L3	57.4	76.3	18.9	12	Yes
R5	79.0	L4	60.0	79.1	19.1	12	Yes
R6	69.8	L5	63.5	70.7	7.2	12	No
R7	77.7	L6	61.6	77.8	16.2	12	Yes
R8	69.6	L6	61.6	70.2	8.6	12	No
R9	72.1	L1	60.7	72.4	11.7	12	No

TABLE 10-4: CONSTRUCTION NOISE LEVEL INCREASES

 $^{\rm 1}$  See Exhibit 10-A for the receiver locations.

<sup>2</sup> Highest construction noise levels as shown on Table 10-3.

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

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

<sup>5</sup> Represents the combined ambient conditions plus the Project construction activities.

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

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

#### TABLE 10-5: MITIGATED CONSTRUCTION NOISE LEVEL INCREASES

Receiver Location <sup>1</sup>	Total Project Construction 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	64.2	L1	60.7	65.8	5.1	12	No
R2	69.1	L2	63.0	70.1	7.1	12	No
R3	65.7	L3	57.4	66.3	8.9	12	No
R4	68.6	L3	57.4	68.9	11.5	12	No
R5	71.7	L4	60.0	72.0	12.0	12	No
R6	64.9	L5	63.5	67.3	3.8	12	No
R7	70.8	L6	61.6	71.3	9.7	12	No
R8	64.8	L6	61.6	66.5	4.9	12	No
R9	67.2	L1	60.7	68.1	7.4	12	No

<sup>1</sup> See Exhibit 10-A for the receiver locations.

<sup>2</sup> Mitigated Project construction noise level calculations are included in Appendix 10.2.

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

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

<sup>5</sup> Represents the combined ambient conditions plus the mitigated Project construction activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed mitigated Project construction activities.

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



**EXHIBIT 10-B: CONSTRUCTION NOISE MITIGATION MEASURES** 

# LEGEND:

N

Limits of Construction Activity 💶 Temporary Noise Barrier

- Receiver Locations
- remporary noise burner
- Distance from receiver to Project site boundary (in feet)



# **10.6 PROJECT CONSTRUCTION NOISE MITIGATION MEASURES**

The following mitigation measures are required to reduce noise levels produced by the construction equipment.

- MM-1 Install a minimum 8-foot-high temporary construction noise barrier as shown on Exhibit 10-B. The noise control barriers must have a solid face from top to bottom. The noise control barriers must meet the minimum height and be constructed as follows:
  - 1. The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.
  - 2. The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
  - 3. The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- MM-2 All construction activities shall comply with City of San Juan Capistrano Municipal Code Section 9-3.531[d][4] restricting construction activities during the from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday
- MM-3 Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.
- MM-4 All stationary construction equipment shall be placed in such a manner so that emitted noise is directed away from any sensitive receivers.
- MM-5 Construction equipment staging areas shall be located at the greatest feasible distance between the staging area and the nearest sensitive receivers.
- MM-6 The construction contractor shall limit equipment and material deliveries to the same hours specified for construction equipment for MM-2.
- MM-7 Electrically powered air compressors and similar power tools shall be used, when feasible, in place of diesel equipment.
- MM-8 No music or electronically reinforced speech from construction workers shall be allowed.

## **10.7** CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-6. 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 calculate the vibration levels, the FTA provides the following equation:  $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$ 





Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

TABLE 10-6: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 10-7 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 6 to 145 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.015 to 1.786 PPV (in/sec). Based on maximum acceptable continuous vibration threshold of 0.25 PPV (in/sec), the typical Project construction vibration levels will exceed the building damage thresholds at receiver locations R4, R5 and R7. The Project-related construction vibration impacts will be *potentially significant* during the construction activities at the Project site and mitigation is required.

	Distance to Const.		Typical	Thresholds	Thresholds				
Location <sup>1</sup>	ion <sup>1</sup> Activity (Feet) <sup>2</sup>	Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level	PPV (in/sec) <sup>4</sup>	Exceeded? <sup>5</sup>
R1	139'	0.000	0.003	0.006	0.007	0.016	0.016	0.25	No
R2	49'	0.001	0.013	0.028	0.032	0.077	0.077	0.25	No
R3	92'	0.000	0.005	0.011	0.013	0.030	0.030	0.25	No
R4	9'	0.014	0.162	0.352	0.412	0.972	0.972	0.25	Yes
R5	6'	0.026	0.298	0.646	0.757	1.786	1.786	0.25	Yes
R6	84'	0.000	0.006	0.012	0.014	0.034	0.034	0.25	No
R7	10'	0.012	0.138	0.300	0.352	0.830	0.830	0.25	Yes
R8	122'	0.000	0.003	0.007	0.008	0.019	0.019	0.25	No
R9	145'	0.000	0.003	0.005	0.006	0.015	0.015	0.25	No

<sup>1</sup>Construction noise source and receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Distance from receiver to limits of construction activity.

<sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 10-6).

<sup>4</sup> Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.

<sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

Therefore, a 25-foot buffer setback mitigation measure is required which would restrict the use of large, loaded trucks, heavy mobile equipment greater than 80,000 pounds, jack hammers and vibratory rollers within 25-feet of receiver location R4, R5 and R7. Instead, small rubber-tired or alternative equipment, as well as soil compaction equipment shall be used during Project construction to reduce vibration effects on nearby structures and their occupants. Table 10-8 shows that with the 25-foot setback buffer, Project construction vibration levels will not exceed the 0.25 PPV (in/sec) construction vibration threshold.

	Distance to Const.	Typical Construction Vibration Levels PPV (in/sec) <sup>3</sup> Threshold							
Location <sup>1</sup>	Activity (Feet) <sup>2</sup>	Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level	PPV (in/sec)⁴	Thresholds Exceeded?⁵
R4	25'	0.003	0.035	0.076	0.089	0.210	0.210	0.25	No
R5	25'	0.003	0.035	0.076	0.089	0.210	0.210	0.25	No
R7	25'	0.003	0.035	0.076	0.089	0.210	0.210	0.25	No

#### TABLE 10-8: MITIGATED PROJECT CONSTRUCTION VIBRATION LEVELS

<sup>1</sup>Construction noise source and receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Distance from receiver to limits of construction activity.

<sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 10-4).

<sup>4</sup> Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.

<sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity



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- 22. 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 El Camino Specific Plan Amendment 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.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 1133 Camelback #8329 Newport Beach, CA 92658 (949) 581-3148 blawson@urbanxroads.com



#### 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 San Diego • March, 2018 Certified Acoustical Consultant – County of Orange • February, 2011 FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013



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APPENDIX 3.1:

CITY OF SAN JUAN CAPISTRANO MUNICIPAL CODE

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#### San Juan Capistrano, California Municipal Code

TITLE 9. LAND USE

CHAPTER 3. ZONING DISTRICTS AND STANDARDS

Article 5. Supplemental District Regulations

# Sec. 9-3.531. Noise standards (residential and nonresidential).

(a) Noise level measurements. Any noise level measurement made pursuant to the provisions of this Code shall be performed using a sound level meter. For the purposes of this section, "sound level meter" shall mean an instrument meeting the American National Standard Institute's Standard 51.4-1971 for Type 1 or Type 2 sound level meters or an instrument with associated recording and analyzing equipment which will provide equivalent data.

(b) Minimum exterior noise standards.

(1) The following noise standards in Table 3-29 and 3-30 shall be used as the base of measurement for determining noise violations affecting uses within the residential, public and institutional and commercial districts. The General Plan contains noise compatibility standards for use when planning and making development decisions.

#### **Table 3-29**

Noise Level	Time Period
65 dB(A)	7:00 a.m. to 7:00 p.m.
55 dB(A)	7:00 p.m. to 10:00 p.m.
45 dB(A)	10:00 p.m. to 7:00 a.m.

#### Exterior Noise Standards for Residential and Public and Institutional Districts

#### Table 3-30

#### **Exterior Noise Standards for**

#### **Commercial Districts**

Noise Level	Time Period
65 dB(A)	At any time during the day

Each of the noise levels set forth in this subsection shall be reduced by five (5) dB(A) for impacts of simple tone noises or noises consisting of speech or music.

(2) No person at any location within the City, including the industrial and open space districts, shall create any noise, or permit the creation of any noise, which causes the noise level within a residential, public and institutional or commercial district to exceed the standards included in Tables 3-29 and 3-30 by the amount and for the period of time identified in Table 3-31.

#### Table 3-31

#### Maximum Noise Levels Not to be Exceeded

Maximum Noise Level Not to be Exceeded During Period of Time	Period of Time
Exterior noise standard plus 20 dB(A)	Any period of time
Exterior noise standard plus 15 dB(A)	Cumulative period of more than 1 minute in any hour
Exterior noise standard plus 10 dB(A)	Cumulative period of more than 5 minutes
Exterior noise standard plus 5 dB(A)	Cumulative period of more than 15 minutes in any hour
Exterior noise standard	Cumulative period of more than 30 minutes in any hour

(3) The location selected for measuring exterior noise levels shall be at a point within the affected property.

(c) Interior noise standards.

(1) No person at any location, including the industrial and open space districts, within the City shall create any noise, or permit the creation of any noise, on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured within a dwelling unit on any residential property during the period from 10:00 p.m. to 7:00 a.m., to exceed:

(A) The noise standard plus ten (10) dB(A) for any period of time; or

(B) The noise standard plus five (5) dB(A) for a cumulative period of more than one minute in any hour; or

(C) The noise standard for a cumulative period of more than five (5) minutes in any hour.

(2) The method of noise level measurement for interior noise shall be made with the windows and doors closed with the measurements made at a point at least four (4) feet from the wall, ceiling, or floor nearest the noise source in the affected residential unit.

(d) Special provisions. The following activities shall be exempted from the provisions of this section:

(1) School bands, school athletic, and school entertainment events;

(2) Carnivals, festivals, parades, arts and crafts exhibits, public dances, skating, and entertainment events provided such events are conducted pursuant to a permit issued by the Planning Director pursuant to the provisions of Section 9-3.553 Temporary Uses and Structures;

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

(4) Noise sources associated with construction, repairs, remodeling, or the grading of any real property, except that such activities shall not be exempt from the provisions of this section if conducted from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday;

(5) Any mechanical device, apparatus, or equipment utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions;

(6) Mobile noise sources associated with agricultural operations, except that such operations shall not be exempt from the provisions of this section if conducted from 8:00 p.m. to 7:00 a.m. on Monday through Saturday or at any time on Sunday or a Federal holiday;

(7) Mobile noise sources associated with agricultural pest control through pesticide applications provided such applications are made in accordance with restricted material permits issued by, or regulations enforced by, the County Agriculture Commissioner;

(8) Noise sources associated with the maintenance of real property used for residential purposes provided such activities take place from 7:00 a.m. to 8:00 p.m. on any day except Sunday or from 9:00 a.m. to 8:00 p.m. on Sunday, for example, mowing lawns and carpentry repairs; and

(9) Any activity for which regulation is preempted by State or Federal laws.

(e) Nuisances. Noise shall be considered a nuisance pursuant to Article 4 of Chapter 2 of this title. (Ord. No. 869, § 2)

# **Contact:**

City Clerk: 949-443-6308

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APPENDIX 5.1:

**STUDY AREA PHOTOS** 



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15534\_L1\_B 1.North 33, 30' 3.600000", 117, 39' 39.890000"



15534\_L1\_B 2.South 33, 30' 3.600000", 117, 39' 39.890000"



15534\_L1\_B 3.East 33, 30' 3.580000", 117, 39' 39.800000"



15534\_L1\_B 4.West 33, 30' 3.580000", 117, 39' 39.830000"



15534\_L2\_O 1.North 33, 29' 59.710000", 117, 39' 37.280000"



15534\_L2\_O 2.South 33, 29' 59.680000", 117, 39' 37.300000"



15534\_L2\_O 3.East 33, 29' 59.630000", 117, 39' 37.300000"



15534\_L2\_O 4.West 33, 29' 59.620000", 117, 39' 37.330000"



15534\_L3\_D 1.North 33, 29' 56.140000", 117, 39' 42.110000"



15534\_L3\_D 2.South 33, 29' 56.070000", 117, 39' 42.080000"



15534\_L3\_D 3.East 33, 29' 56.090000", 117, 39' 42.060000"



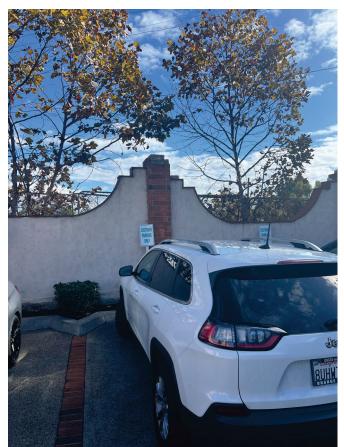
15534\_L3\_D 4.West 33, 29' 56.100000", 117, 39' 42.110000"



15534\_L4\_E 1.North 33, 29' 58.390000", 117, 39' 43.650000"



15534\_L4\_E 2.South 33, 29' 58.350000", 117, 39' 43.730000"



15534\_L4\_E 3.East 33, 29' 58.350000", 117, 39' 43.760000"



15534\_L4\_E 4.West 33, 29' 58.370000", 117, 39' 43.790000"



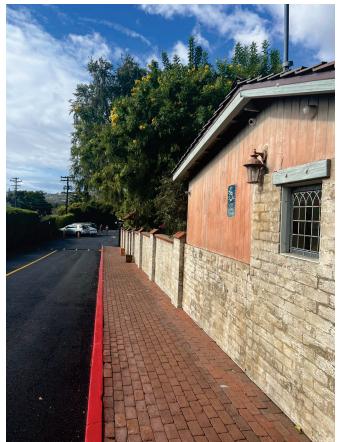
15534\_L5\_L 1.North 33, 29' 58.120000", 117, 39' 45.680000"



15534\_L5\_L 2.South 33, 29' 58.080000", 117, 39' 45.930000"



15534\_L5\_L 3.East 33, 29' 58.090000", 117, 39' 45.870000"



15534\_L5\_L 4.West 33, 29' 58.050000", 117, 39' 45.850000"

## JN:15534



15534\_L6\_G 1.North 33, 30' 1.570000", 117, 39' 44.530000"



15534\_L6\_G 2.South 33, 30' 1.480000", 117, 39' 44.450000"



15534\_L6\_G 3.East 33, 30' 1.540000", 117, 39' 44.450000"



15534\_L6\_G 4.West 33, 30' 1.500000", 117, 39' 44.500000"

APPENDIX 5.2:

**NOISE LEVEL MEASUREMENT WORKSHEETS** 



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						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date:	Thursday, N	November 30	), 2023		Location	<sup>:</sup> L1 - Located	north of th	e site near th	e Camino Re	al Playhouse	Meter:	Piccolo II			JN:	15534
Project:	El Camino S	SPA				building at 3									Analyst:	Z. Ibrahim
							Hourly L <sub>eq</sub>	dBA Readings	(unadjusted)							
85.0 (80.0 (80.0 75.0 70.0 # 65.0	)						1									
<b>3</b> 80.0 <b>€</b> 75.0	}															
<b>Vap</b> 75.0 70.0 65.0 <b>P</b> 60.0																
_ <sup>e</sup> 60 0	) ++					4 9					0.00					
λιπ 55.0 μπο 45.0 40.0	ິ	- N O	00	3.1	58.1	60.4 59.6	57.6	56.8 57.8	<u> </u>	- <mark>63</mark>	64.	<u>60.1</u>	57.1 56.0	7.0	56.1	- <u>-</u>
		50.5 49.0	49.	53.1	O		- <sup>0</sup>	56.					56	57	in in its	54.7
35.0		1 2						10 11	42 4		45 46	47	10 10		24 22	
	0	1 2	3	4 5	6	7 8	9	10 11 Hour Be	12 1 eginning	.3 14	15 16	17	18 19	20	21 22	23
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>	Adj.	Adj. L <sub>eq</sub>
	0	51.5	55.9	48.7	55.6	55.3	54.7	53.9	52.0	50.9	49.3	49.0	48.8	51.5	10.0	61.5
	1	50.5	54.7	47.0	54.5	54.4	53.7	53.0	51.1	49.8	47.9	47.5	47.1	50.5	10.0	60.5
	2	49.0	53.8	45.3	53.4	53.0	52.1	51.4	49.8	48.4	46.1	45.7	45.4	49.0	10.0	59.0
Night	3	49.8	56.8	45.5	56.4	56.1	55.0	52.7 54.7	50.1 53.7	48.6	46.3	45.9 51.2	45.6	49.8	10.0 10.0	59.8
	4 5	53.1 57.5	56.0 63.2	50.9 54.5	55.8 62.8	55.7 62.6	55.2 62.0	54.7 60.8	53.7	52.8 56.2	51.5 55.0	51.2	51.0 54.6	53.1 57.5	10.0	63.1 67.5
	6	58.1	61.3	56.4	61.0	60.7	59.9	59.5	58.5	57.9	56.9	56.6	56.4	58.1	10.0	68.1
	7	60.4	62.7	58.8	62.4	62.2	61.8	61.5	60.8	60.3	59.3	59.1	58.9	60.4	0.0	60.4
	8	59.6	63.3	57.8	62.9	62.7	61.9	61.4	59.9	59.2	58.2	58.1	57.9	59.6	0.0	59.6
	9	57.6	62.3	55.9	61.8	61.3	60.5	59.9	57.7	57.0	56.2	56.1	55.9	57.6	0.0	57.6
	10 11	56.8 57.8	60.8 60.4	54.6 56.4	60.4 60.1	60.0 59.9	59.2 59.3	58.7 59.0	57.3 58.2	56.2 57.5	55.1 56.7	54.9 56.6	54.7 56.5	56.8 57.8	0.0 0.0	56.8 57.8
	12	60.1	63.1	58.7	62.7	62.3	61.5	61.1	60.5	60.0	59.1	58.9	58.8	60.1	0.0	60.1
Day	13	62.1	64.3	60.5	64.1	63.9	63.5	63.2	62.5	61.9	61.0	60.8	60.6	62.1	0.0	62.1
	14	63.1	65.0	61.6	64.9	64.7	64.4	64.2	63.5	62.9	62.0	61.8	61.6	63.1	0.0	63.1
	15	64.0	65.9	62.5	65.8	65.6	65.3	65.1	64.4	63.9	63.0	62.8	62.6	64.0	0.0	64.0
	16 17	62.6 60.2	65.4 62.0	61.1 59.2	65.1 61.7	64.7 61.4	64.1 61.1	63.9 60.9	62.9 60.4	62.3 60.1	61.5 59.5	61.4 59.4	61.2 59.3	62.6 60.2	0.0 0.0	62.6 60.2
	18	57.1	60.0	55.6	59.7	59.5	58.9	58.4	57.3	56.8	56.0	55.9	55.7	57.1	0.0	57.1
	19	56.0	58.9	54.4	58.6	58.3	57.6	57.2	56.4	55.7	54.9	54.7	54.5	56.0	5.0	61.0
Evening	20	57.0	58.8	55.7	58.6	58.4	58.1	57.9	57.4	57.0	56.1	55.9	55.8	57.0	5.0	62.0
	21	57.1	64.0	54.5	63.4	63.1	61.0	59.7	56.9	56.0	55.0	54.8	54.5	57.1	5.0	62.1
Night	22 23	56.1 54.7	60.1 57.3	53.2 52.7	59.9 57.1	59.6 56.9	59.0 56.3	58.4 56.0	56.9 55.1	55.5 54.5	53.8 53.3	53.5 53.0	53.3 52.8	56.1 54.7	10.0 10.0	66.1 64.7
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	56.8	60.0	54.6	59.7	59.5	58.9	58.4	57.3	56.2	55.1	54.9	54.7	Daytime	Evening	Nighttime
(7am-7pm)	Max	64.0	65.9	62.5	65.8	65.6	65.3	65.1	64.4	63.9	63.0	62.8	62.6	(7am-10pm)	(7pm-7pm)	(10pm-7am)
Evening	Average Min	60.7 56.0	58.8	erage: 54.4	62.6 58.6	62.3 58.3	61.8 57.6	61.4 57.2	60.5 56.4	59.8 55.7	59.0 54.9	58.8 54.7	58.6 54.5	60.7	56.7	54.5
(7pm-10pm)	Max	57.1	64.0	55.7	63.4	63.1	61.0	59.7	57.4	57.0	56.1	55.9	55.8		Hour CNEL (a	
Energy	Average	56.7	Ave	erage:	60.2	60.0	58.9	58.3	56.9	56.2	55.3	55.1	54.9			
Night	Min	49.0	53.8	45.3	53.4	53.0	52.1	51.4	49.8	48.4	46.1	45.7	45.4		62.6	
(10pm-7am)	Max Average	58.1	63.2	56.4 erage:	62.8 57.4	62.6 57.1	62.0 56.4	60.8 55.6	58.5 53.8	57.9 52.7	56.9 51.1	56.6 50.8	56.4 50.5	-	02.0	
Energy	Average	54.5	AVe	erage.	57.4	57.1	56.4	55.0	53.8	52.7	51.1	50.8	50.5			



						24-Hou	ur Noise Le	evel Meas	urement S	ummary						
		lovember 30	, 2023		Location:	L2 - Located		site boundar	y in the park	ing lot near	Meter:	Piccolo II				15534 7. Jbashiar
Project:	El Camino S	PA				31791 Del C	bispo St.								Analyst:	Z. Ibrahim
							Hourly L <sub>eq</sub> (	dBA Readings	(unadjusted)							
85.0	)								1							
0000																
( <b>80.0</b> 75.0 70.0																
- 65.0 - 60.0						N										
2 55.0		9		1.3	63.9	65.2		62.4	62.7	63.4 63.4	64.1 62.9		62.1 50.6	.5	61.9 59.2	63.1
(VBP) <sup>ba</sup> l (JINOH 75.00 <sup>ba</sup> l (JINOH 55.00 45.000 45.00 45.000 45.000 45.000 45.0000000000	56.7	56.6	54.4	57.8 61.3				9 9			- • • •	61.	60.	<u> </u>	59 59	
40.0 35.0	} =====		G													
	0	1 2	3	4 5	6	7 8	9 1	LO 11	12 1	3 14	15 16	17	18 19	20	21 22	23
								Hour Be	eginning							
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>	Adj.	Adj. L <sub>eq</sub>
	0	56.7	62.5	52.8	61.8	61.3	59.9	59.2	57.3	56.0	53.9	53.4	53.0	56.7	10.0	66.7
	1	56.6	63.8	51.1	63.4	62.9	61.3	60.1	57.2	54.9	52.2	51.7	51.3	56.6	10.0	66.6
Night	2 3	53.5 54.4	59.6 60.7	46.8 48.1	59.4 60.5	58.9 60.2	57.8 59.0	56.9 58.1	54.5 55.0	52.3 53.0	48.4 49.6	47.6 48.9	47.0 48.3	53.5 54.4	10.0 10.0	63.5 64.4
Night	5 4	54.4	63.0	53.4	62.7	62.4	61.4	60.6	55.0	57.0	49.6 54.6	48.9 54.0	40.5 53.5	54.4	10.0	67.8
	5	61.3	66.5	57.5	66.2	65.9	64.9	63.9	62.0	60.6	58.4	58.0	57.6	61.3	10.0	71.3
	6	63.9	68.0	60.8	67.8	67.5	66.8	66.1	64.5	63.4	61.7	61.3	60.9	63.9	10.0	73.9
	7	65.2	68.8	62.7	68.6	68.2	67.2	66.7	65.7	65.0	63.5	63.2	62.8	65.2	0.0	65.2
	8 9	63.8 62.9	69.0 67.2	60.8 59.7	68.6 66.9	68.2 66.6	67.1 65.8	66.2 65.2	64.3 63.5	63.3 62.3	61.5 60.5	61.2 60.1	60.9 59.8	63.8 62.9	0.0 0.0	63.8 62.9
	9 10	62.9	68.3	59.7	68.0	67.6	66.2	65.0	62.8	61.5	59.6	59.1	59.8	62.9	0.0	62.9
	11	61.9	65.9	59.1	65.6	65.2	64.5	63.9	62.6	61.6	59.8	59.5	59.2	61.9	0.0	61.9
Day	12	62.7	67.0	59.9	66.7	66.4	65.5	64.9	63.3	62.2	60.6	60.2	60.0	62.7	0.0	62.7
Duy	13	63.4	67.3	61.2	67.0	66.6	65.6	65.1	63.9	63.1	61.7	61.5	61.2	63.4	0.0	63.4
	14 15	63.4 64.1	66.1 66.9	61.5 62.5	65.8 66.7	65.4 66.3	64.9 65.6	64.6 65.1	63.9 64.5	63.2 63.9	62.1 63.0	61.8 62.8	61.6 62.6	63.4 64.1	0.0 0.0	63.4 64.1
	15	62.9	66.4	61.0	66.0	65.7	65.0	64.4	63.3	62.6	61.5	61.3	61.1	62.9	0.0	62.9
	17	61.4	65.2	59.2	64.9	64.6	63.8	63.1	61.9	61.0	59.7	59.5	59.3	61.4	0.0	61.4
	18	62.1	69.2	58.3	68.9	68.4	66.7	65.1	62.1	60.9	59.2	58.8	58.5	62.1	0.0	62.1
- ·	19	60.6	64.4	57.5	64.2	63.9	63.1	62.6	61.3	60.2	58.4	58.0	57.6	60.6	5.0	65.6
Evening	20 21	60.5 61.9	64.2 69.1	57.5 57.0	64.0 68.8	63.7 68.3	63.0 67.5	62.5 66.3	61.2 61.7	60.0 59.7	58.3 57.8	57.9 57.5	57.6 57.1	60.5 61.9	5.0 5.0	65.5 66.9
	22	59.2	65.8	55.7	65.2	64.5	62.3	61.2	59.5	58.5	56.6	56.2	55.8	59.2	10.0	69.2
Night	23	63.1	66.0	61.7	65.6	65.2	64.4	64.0	63.3	62.9	62.3	61.9	61.8	63.1	10.0	73.1
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 (7am-7pm)	Min Max	61.4 65.2	65.2 69.2	58.3 62.7	64.9 68.9	64.6 68.4	63.8 67.2	63.1 66.7	61.9 65.7	60.9 65.0	59.2 63.5	58.8 63.2	58.5 62.8	Daytime (7am-10pm)	Evening (7pm-7pm)	Nighttime (10pm-7am)
Energy /		63.1		erage:	67.0	66.6	65.7	64.9	63.5	62.5	61.1	60.8	60.5			
Evening	Min	60.5	64.2	57.0	64.0	63.7	63.0	62.5	61.2	59.7	57.8	57.5	57.1	63.1	61.0	59.9
(7pm-10pm)	Max	61.9	69.1	57.5	68.8	68.3	67.5	66.3	61.7	60.2	58.4	58.0	57.6	24-	Hour CNEL (d	IBA)
	Average	61.0		erage:	65.6	65.3	64.5	63.8	61.4	60.0	58.2	57.8	57.5			
Night (10pm-7am)	Min Max	53.5 63.9	59.6 68.0	46.8 61.7	59.4 67.8	58.9 67.5	57.8 66.8	56.9 66.1	54.5 64.5	52.3 63.4	48.4 62.3	47.6 61.9	47.0 61.8		67.1	
	Average	59.9		erage:	63.6	63.2	62.0	61.1	59.1	57.6	55.3	54.8	54.4	1	J	

## 

						24-Ho	ur Noise Le	evel Meas	urement S	ummary						
Date:	Thursday, N	November 30	, 2023		Location	<sup>2</sup> L3 - Located	l south of the	e site near th	e Mercado V	/illage	Meter:	Piccolo II			JN:	15534
	El Camino S		,					o Capistranc		lindge					Analyst:	Z. Ibrahim
-,						building ut									. ,	
							Hourly L <sub>eq</sub>	dBA Readings	(unadjusted)							
85.0	)						1 1									
(80.0 75.0 70.0 65.0 <b>P</b> 60.0																
<b>B</b> 70.0	í															
65.0 <del>م</del> 60.0																
<b>₹</b> 55.0				~ ~	9	<b>1</b> 6		<mark>н</mark> н	<b>N</b>	<u>ا م</u>	<u>9</u> 0	N	N 0		<u>00</u> N	
<b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0 45.0 <b>4</b> 40.0	52.3	53.3 51.3	49.8	52.6	57.6	58. 57.	56.1	56.	56.	8 – 8 –	57.	57	56.2 55.0	55.1	55.2	54.6
40.0 × 40.0	)	- u - u	4	<u> </u>												
	0	1 2	3	4 5	6	7 8	9	10 11	12 1	3 14	15 16	5 17	18 19	20	21 22	23
									eginning							
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>	Adj.	Adj. L <sub>eq</sub>
	0 1	52.3 53.3	56.1 57.5	50.8 51.7	55.4 56.7	54.9 56.0	54.0 55.0	53.6 54.6	52.5 53.5	52.0 52.9	51.3 52.2	51.2 52.0	51.0 51.8	52.3 53.3	10.0 10.0	62.3 63.3
	2	51.3	55.5	49.2	54.6	53.9	53.0	52.7	51.9	51.1	49.9	49.6	49.3	51.3	10.0	61.3
Night	3	49.8	53.5	47.6	53.2	52.9	52.1	51.6	50.4	49.4	48.0	47.9	47.7	49.8	10.0	59.8
	4	52.6	54.8	51.1	54.6	54.4	54.1	53.8	53.0	52.4	51.6	51.4	51.2	52.6	10.0	62.6
	5	56.2	62.5	53.9	61.9	61.3	59.4	57.5	56.3	55.6	54.4	54.2	54.0	56.2	10.0	66.2
	6	57.6	64.2	55.7	63.0	61.6	59.7	58.9	57.8	57.0	56.2	56.0	55.8	57.6	10.0	67.6
	7 8	58.1 57.9	62.0 61.8	56.3 55.3	61.4 61.1	60.9 60.7	60.0 60.1	59.6 59.7	58.5 58.6	57.7 57.5	56.8 55.9	56.6 55.6	56.4 55.4	58.1 57.9	0.0 0.0	58.1 57.9
	9	56.1	61.2	53.5	60.4	59.9	59.0	58.3	56.6	55.4	54.0	53.8	53.6	56.1	0.0	56.1
	10	56.1	62.6	52.8	61.9	61.3	60.4	59.2	56.6	54.9	53.3	53.1	52.9	56.1	0.0	56.1
	11	56.1	60.9	53.8	60.3	59.8	59.0	58.3	56.5	55.4	54.3	54.1	53.9	56.1	0.0	56.1
Day	12	56.7	59.5	55.0	59.2	58.8	58.2	57.9	57.2	56.5	55.5	55.3	55.1	56.7	0.0	56.7
	13 14	58.1 58.9	61.5 63.1	56.1 56.9	61.0 62.5	60.5 62.0	60.0 61.0	59.7 60.3	58.7 59.4	57.8 58.6	56.7 57.5	56.5 57.3	56.2 57.0	58.1 58.9	0.0 0.0	58.1 58.9
	14	58.6	61.6	57.2	61.2	60.8	59.9	59.6	59.0	58.5	57.6	57.4	57.2	58.6	0.0	58.6
	16	57.8	60.1	56.4	59.8	59.5	59.1	58.9	58.2	57.6	56.8	56.6	56.4	57.8	0.0	57.8
	17	57.2	61.7	55.8	61.0	60.2	59.1	58.4	57.4	56.9	56.2	56.0	55.9	57.2	0.0	57.2
	18	56.2	65.2	53.8	63.7	62.2	59.4	58.2	56.0	54.9	54.1	54.0	53.8	56.2	0.0	56.2
Evening	19 20	55.0 55.1	60.4 57.3	53.3	59.8 57.0	59.0 56.8	57.6 56.2	56.9 56.0	55.0 55.4	54.4 55.0	53.7 54.4	53.5 54.2	53.4 54.1	55.0 55.1	5.0 5.0	60.0 60.1
Evening	20	55.1	62.4	54.0 53.7	57.0 61.9	56.8 61.1	56.2	56.0	55.4	55.0 55.0	54.4 54.1	54.2 53.9	54.1	55.1	5.0	60.1
NI: L ·	22	55.2	61.1	53.4	60.3	59.1	57.6	56.7	55.4	54.7	53.8	53.6	53.4	55.2	10.0	65.2
Night	23	54.6	59.2	52.9	58.5	57.7	56.5	55.9	54.9	54.2	53.3	53.2	53.0	54.6	10.0	64.6
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 Max	56.1 58.9	59.5 65.2	52.8 57.2	59.2 63.7	58.8 62.2	58.2 61.0	57.9 60.3	56.0 59.4	54.9 58.6	53.3 57.6	53.1 57.4	52.9 57.2	Daytime (7am-10pm)	Evening (7pm-7pm)	Nighttime (10pm-7am)
(7am-7pm) Energy	Max Average	58.9		erage:	61.1	60.6	59.6	59.0	59.4	56.8	57.6	57.4	57.2			
Evening	Min	55.0	57.3	53.3	57.0	56.8	56.2	56.0	55.0	54.4	53.7	53.5	53.4	57.4	55.3	54.3
(7pm-10pm)	Max	55.8	62.4	54.0	61.9	61.1	58.9	57.6	55.8	55.0	54.4	54.2	54.1	24-	Hour CNEL (d	IBA)
	Average	55.3		erage:	59.6	58.9	57.6	56.8	55.4	54.8	54.0	53.9	53.8			
Night	Min	49.8	53.5 64.2	47.6	53.2	52.9	52.1	51.6	50.4	49.4	48.0	47.9	47.7		61.5	
(10pm-7am) Energy	Max Average	57.6 54.3	-	55.7 erage:	63.0 57.6	61.6 56.9	59.7 55.7	58.9 55.0	57.8 54.0	57.0 53.3	56.2 52.3	56.0 52.1	55.8 51.9			
Energy		J4.3	200	0.050.	57.0	30.9		- 55.0	54.0		52.5	JZ.1	51.5			



						24-Ho	ur Noise L	evel Measu	urement S	ummary						
Date:	Wednesday	, November	29. 2023		Location:	L4 - Located	l wost of the	site pear the	Egan House	at 21202	Meter:	Piccolo II			JN:	15534
	El Camino S		,			Camino Cap		Site fiear the	Elgannouse	at 31092						Z. Ibrahim
	2. 64					Cannino Cap									,	2.1.0.0
							Hourly L <sub>eq</sub>	dBA Readings	(unadjusted)							
85.0	۱															
l 00.0																
( <b>Ygp</b> ) 70.0 <b>1 AJJINOH</b> 45.0 45.0 45.0 45.0																
g 65.0	Į +−−+	_														
<u> </u>		61.7		v w	61.9	<u>ю</u>	4	3.1	0 0	0 4	- m	9	m m			
<b>50.0</b>		61 55.2	54.6	57.2	61	61.		63.9 63.9	<u> </u>	59.	60. 56.7	<mark>57.6</mark>	56.9	56.9	56.6 55.7	56.2
± 40.0	j <b>⊢ −</b> −	ī	2				+				u			<b>L</b>	<u>и</u> и	L L
35.0																
	0	1 2	3	4 5	6	7 8	9 :	10 11	12 1	3 14	15 16	17	18 19	20	21 22	23
									eginning							
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>	Adj.	Adj. L <sub>eq</sub>
	01	58.2 61.7	66.9	53.7	65.4	64.5 70.4	62.6	61.5 65.7	58.5	56.6	54.7	54.4 55.4	54.0 54.9	58.2 61.7	10.0	68.2
	2	55.2	73.8 66.5	54.7 52.2	71.8 64.3	62.2	67.5 57.6	56.1	61.0 54.9	58.2 54.0	55.8 52.8	55.4 52.6	54.9	55.2	10.0 10.0	71.7 65.2
Night	3	54.6	60.0	51.8	59.0	58.3	57.5	56.9	55.3	53.7	52.8	52.0	52.0	54.6	10.0	64.6
	4	57.2	66.3	54.2	64.5	62.8	60.3	59.3	57.2	56.0	54.8	54.6	54.3	57.2	10.0	67.2
	5	59.3	63.1	57.0	62.6	62.2	61.5	61.1	60.0	58.8	57.5	57.3	57.1	59.3	10.0	69.3
	6	61.9	69.0	58.9	68.0	67.1	65.4	64.7	62.0	60.8	59.4	59.2	58.9	61.9	10.0	71.9
	7	61.6	66.0	59.8	65.2	64.6	63.4	63.0	62.0	61.3	60.3	60.1	59.9	61.6	0.0	61.6
	8	61.5	68.2	59.1	66.9	65.7	63.9	63.3	61.8	60.8	59.7	59.5	59.2	61.5	0.0	61.5
	9 10	59.4 58.9	65.3 64.2	57.3 56.0	64.5 63.5	63.5 62.9	61.8 62.0	61.1 61.2	59.7 59.3	58.9 58.2	57.8 56.6	57.6 56.3	57.4 56.1	59.4 58.9	0.0 0.0	59.4 58.9
	10	63.1	75.7	53.7	74.1	72.3	69.1	67.3	62.7	57.7	56.6	56.5	53.8	63.1	0.0	63.1
	12	60.0	66.7	56.8	66.0	65.2	63.7	62.8	60.6	58.6	57.4	57.1	56.9	60.0	0.0	60.0
Day	13	59.6	64.9	57.5	64.0	63.1	61.7	61.2	60.0	59.2	58.0	57.8	57.6	59.6	0.0	59.6
	14	59.4	65.2	57.1	64.5	63.8	62.0	61.3	59.6	58.8	57.7	57.5	57.2	59.4	0.0	59.4
	15	60.3	68.4	56.2	68.1	67.6	66.4	64.3	59.6	57.9	56.8	56.5	56.3	60.3	0.0	60.3
	16	56.7	63.2	54.2	62.6	61.9	60.3	58.9	56.8	55.8	54.7	54.5	54.3	56.7	0.0	56.7
	17 18	57.6 58.3	65.1 63.4	54.3 56.1	64.6 63.1	64.0 62.6	62.3 61.5	60.8 60.8	57.2 58.7	56.0 57.6	54.8 56.5	54.6 56.3	54.4 56.2	57.6 58.3	0.0 0.0	57.6 58.3
	19	56.9	61.9	54.8	61.3	60.7	59.5	59.0	57.3	56.3	55.2	55.1	54.9	56.9	5.0	61.9
Evening	20	56.9	60.4	55.0	60.1	59.8	59.0	58.5	57.2	56.5	55.5	55.3	55.1	56.9	5.0	61.9
	21	56.6	60.6	54.7	60.4	60.0	59.1	58.3	56.9	56.2	55.2	55.0	54.8	56.6	5.0	61.6
Night	22	55.7	60.4	53.6	59.9	59.4	58.4	57.9	56.1	55.0	54.0	53.9	53.6	55.7	10.0	65.7
	23	56.2	61.2	53.8	60.4	59.8	58.7	58.4	56.6	55.5	54.4	54.2	53.9	56.2	10.0	66.2
Timeframe Day	Hour Min	L <sub>eq</sub> 56.7	L <sub>max</sub> 63.2	L <sub>min</sub> 53.7	L1% 62.6	<i>L2%</i> 61.9	<i>L5%</i> 60.3	<i>L8%</i> 58.9	L25% 56.8	<b>L50%</b> 55.8	<i>L90%</i> 54.4	<i>L95%</i> 54.1	<i>L99%</i> 53.8	Daytime	L <sub>eq</sub> (dBA) Evening	Nighttime
(7am-7pm)	Max	63.1	75.7	53.7	62.6 74.1	72.3	69.1	67.3	62.7	61.3	54.4 60.3	54.1 60.1	53.8	(7am-10pm)	Evening (7pm-7pm)	(10pm-7am)
	Average	60.0		erage:	65.6	64.8	63.2	62.2	59.8	58.4	57.1	56.8	56.6			1
Evening	Min	56.6	60.4	54.7	60.1	59.8	59.0	58.3	56.9	56.2	55.2	55.0	54.8	60.0	56.8	58.6
(7pm-10pm)	Max	56.9	61.9	55.0	61.3	60.7	59.5	59.0	57.3	56.5	55.5	55.3	55.1	24-	Hour CNEL (a	IBA)
	Average	56.8		erage:	60.6	60.2	59.2	58.6	57.1	56.3	55.3	55.1	54.9			
Night	Min	54.6	60.0	51.8	59.0	58.3	57.5	56.1	54.9	53.7	52.5	52.2	52.0		65.3	
(10pm-7am) Energy	Max Average	61.9 58.6	73.8 Ave	58.9 erage:	71.8 64.0	70.4 63.0	67.5 61.1	65.7 60.2	62.0 57.9	60.8 56.5	59.4 55.1	59.2 54.9	58.9 54.6	1	00.0	
Linergy	A Cluge	38.0	AVE	inge.	04.0	05.0	01.1	00.2	57.9	30.5	33.1	54.9	54.0			



						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date:	Thursday, N	November 30	), 2023		Location	: L5 - Located	d west of the	site near the	e El Adobe re	staurant	Meter:	Piccolo II			JN:	15534
Project:	El Camino S	SPA						no Capistranc							Analyst:	Z. Ibrahim
						5		dBA Readings								
							nouny L <sub>eq</sub>	ubA Keuuliigs	(unuujusteu)							
85.0	ע 🕂 א															
( <b>80.0</b> 75.0 70.0 65.0 60.0	ố															
<u>ອ</u> 70.0																
60.0 <b>ت</b> 60.0				10 IN	64.8	4.0.				<u>,                                     </u>	<u>6</u> 0.	4.	2.5 66.4	ი	<u>∞</u> и́	
<b>1</b> 55.0 <b>1</b> 50.0	57.4	57.5	57.6	58.6	ف	63.		<mark>62.</mark>	<mark>83 – 83</mark>	6 64	62. 63.		6	<u> </u>	59.8 60.5	58.6
<b>H</b> 40.0		<u>п</u> п														
35.0		1 2	2	4 5		7 8		10 11	12 1	2 14	15 10	17	10 10	20	21 22	
	0	1 2	3	4 5	6	7 8	9	10 11 Hour Be	12 1 12 12	3 14	15 16	17	18 19	20	21 22	23
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>	Adj.	Adj. L <sub>eq</sub>
	0	57.4	63.7	55.3	63.4	63.0	61.3	60.2	57.0	56.2	55.7	55.6	55.4	57.4	10.0	67.4
	1	57.5	64.5	55.7	63.8	63.2	61.8	60.0	57.0	56.4	56.0	55.9	55.7	57.5	10.0	67.5
Night	2	56.4	59.2	55.5	59.0	58.7	58.1	57.5	56.3	56.1	55.8	55.7	55.6	56.4	10.0	66.4
Night	3 4	57.6 58.6	63.1 66.6	55.6 55.8	62.9 66.3	62.6 65.8	61.4 63.7	60.3 62.0	57.3 57.9	56.6 56.6	56.0 56.2	55.9 56.1	55.7 55.9	57.6 58.6	10.0 10.0	67.6 68.6
	5	60.5	68.3	56.3	67.9	67.5	66.0	64.8	60.4	57.9	56.6	56.6	56.4	60.5	10.0	70.5
	6	64.8	75.2	57.4	74.6	73.7	71.3	68.0	64.7	61.3	58.2	57.8	57.5	64.8	10.0	74.8
	7	63.4	69.3	58.1	68.9	68.4	67.3	66.5	64.4	62.4	59.0	58.6	58.2	63.4	0.0	63.4
	8	63.0	69.4	57.9	68.9	68.3	66.8	65.9	63.9	62.0	58.8	58.4	58.0	63.0	0.0	63.0
	9 10	66.3 62.1	70.1 68.2	64.8 58.3	69.9 67.7	69.5 67.3	68.6 66.1	68.0 65.1	66.7 62.8	65.8 60.9	65.1 58.9	65.0 58.7	64.9 58.5	66.3 62.1	0.0 0.0	66.3 62.1
	10	62.2	68.5	58.4	68.1	67.4	66.1	64.9	62.8	61.2	59.2	58.8	58.5	62.2	0.0	62.2
Day	12	63.9	70.0	59.9	69.5	68.9	67.4	66.7	64.7	63.1	60.6	60.3	60.0	63.9	0.0	63.9
Day	13	63.2	68.1	60.1	67.7	67.3	66.3	65.5	63.8	62.7	60.8	60.5	60.2	63.2	0.0	63.2
	14	64.1	71.0	60.9	70.6	69.9	67.7	66.4	64.4	63.2	61.6	61.3	61.0	64.1	0.0	64.1
	15 16	62.9 63.0	68.3 68.7	60.0 60.1	68.0 68.2	67.5 67.5	66.4 66.0	65.3 65.3	63.3 63.5	62.2 62.4	60.6 60.7	60.3 60.4	60.1 60.2	62.9 63.0	0.0 0.0	62.9 63.0
	10	63.4	71.2	59.8	70.7	69.8	67.8	66.5	63.3	62.4	60.4	60.4	59.9	63.4	0.0	63.4
	18	62.5	69.2	58.6	68.7	68.0	66.4	65.3	62.9	61.4	59.3	59.0	58.7	62.5	0.0	62.5
	19	66.4	80.3	57.5	78.9	77.1	72.2	69.4	63.7	61.3	58.4	58.0	57.6	66.4	5.0	71.4
Evening	20	60.9	67.9	57.2	67.2	66.6	65.0	64.1	61.4	59.5	57.7	57.5	57.3	60.9	5.0	65.9
	21 22	59.8 60.5	67.1 69.2	<u>55.9</u> 56.2	66.6 68.9	66.0 68.4	64.3 66.4	63.4 64.9	60.3 59.9	57.8 57.7	56.3 56.5	56.2 56.4	56.0 56.3	59.8 60.5	5.0	64.8 70.5
Night	23	58.6	65.0	55.9	64.7	64.4	63.1	61.9	58.5	57.0	56.3	56.2	56.0	58.6	10.0	68.6
Timeframe	Hour	L <sub>eq</sub>	L max	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min	62.1	68.1	57.9	67.7	67.3	66.0	64.9	62.8	60.9	58.8	58.4	58.0	Daytime	Evening	Nighttime
(7am-7pm) Energy	Max Average	66.3 63.5	71.2	64.8 erage:	70.7 68.9	69.9 68.3	68.6 66.9	68.0 66.0	66.7 63.9	65.8 62.4	65.1 60.4	65.0 60.1	64.9 59.8	(7am-10pm)	(7pm-7pm)	(10pm-7am)
Evening	Min	59.8	67.1	55.9	66.6	66.0	64.3	63.4	60.3	57.8	56.3	56.2	56.0	63.5	63.4	59.9
(7pm-10pm)	Max	66.4	80.3	57.5	78.9	77.1	72.2	69.4	63.7	61.3	58.4	58.0	57.6	24-	Hour CNEL (d	dBA)
	Average	63.4		erage:	70.9	69.9	67.2	65.6	61.8	59.5	57.5	57.2	57.0			
Night	Min	56.4	59.2	55.3	59.0	58.7	58.1	57.5	56.3	56.1	55.7	55.6	55.4		67.5	
(10pm-7am) Energy	Max Average	64.8 59.9	75.2	57.4 erage:	74.6 65.7	73.7 65.2	71.3 63.7	68.0 62.2	64.7 58.8	61.3 57.3	58.2 56.3	57.8 56.2	57.5 56.1	-	07.0	
LICIEV		59.9	AW		05.7	05.2	03.7	02.2	50.0	57.5	50.5	50.2	50.1			



						24-Ho	ur Noise Le	evel Meas	urement S	Summary						
Date:	Wednesday	y, November	29, 2023		Location						Meter:	Piccolo II			JN:	15534
Project:	El Camino S	SPA				L6 - Locatec	west of the	site within t	he Veterans	Park.					Analyst:	Z. Ibrahim
							Hourly L <sub>eq</sub> (	dBA Readings	(unadjusted)	)						
85.0	۰ ۲															
	ו ב															
( <b>80.0</b> 75.0 70.0 65.0 <b>1</b>																
g 65.0						8	<b>N</b>	.1								
<u></u> <u>→</u> 55.0 <u>-</u> 50.0				2.5 57.6	60.1	59.6 63.3	<u> </u>	<u>66.</u>		0	60.0		- co +		61.2	
<b>1 6 6 6 6 6 6 6 6 6 6</b>	48.4	50.7	19.0	52.5	9				- <u>5</u>	<u>5</u> 5.	60.0 56.0	57	54.4	24.	61 55.7	53.5
35.0	5 + +															
	0	1 2	3	4 5	6	7 8	9 1	10 11 Hour Be	12 1 eginning	13 14	15 16	17	18 19	20	21 22	23
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>	Adj.	Adj. L <sub>ea</sub>
	0	48.4	55.4	44.5	55.0	54.7	53.4	52.4	48.4	46.3	45.1	44.9	44.6	48.4	10.0	58.4
	1	50.7	58.7	46.4	58.3	57.8	56.5	55.3	50.1	48.4	47.0	46.8	46.5	50.7	10.0	60.7
Night	2	48.0 49.0	53.7 56.7	45.3	53.4 56.2	53.1 55.8	51.8	50.6 53.4	48.1 49.0	47.2 46.7	45.9 44.7	45.7	45.4	48.0 49.0	10.0 10.0	58.0 59.0
Night	3	49.0	60.4	44.0 47.8	60.1	55.8	54.6 58.6	53.4	49.0 51.9	46.7	44.7	44.4 48.0	44.1 47.9	49.0 52.5	10.0	62.5
	5	57.6	63.9	53.4	63.6	63.3	62.5	61.6	58.2	55.6	53.8	53.7	53.5	57.6	10.0	67.6
	6	60.1	68.2	53.3	67.8	67.4	66.4	65.0	60.2	56.9	54.0	53.6	53.3	60.1	10.0	70.1
	7	59.6	64.6	54.4	64.4	64.1	63.4	62.8	60.6	58.7	55.3	54.8	54.5	59.6	0.0	59.6
	8 9	63.2 66.2	70.4 72.6	54.8 54.3	69.5 72.2	68.6 71.9	66.8 71.2	66.1 70.4	64.3 67.2	62.7 64.6	56.7 58.2	55.8 56.1	55.0 54.6	63.2 66.2	0.0 0.0	63.2 66.2
	10	66.1	71.4	56.4	71.0	70.8	70.1	69.6	67.3	65.5	59.0	58.0	56.9	66.1	0.0	66.1
	11	63.6	76.1	49.3	74.7	73.3	70.1	68.0	62.0	58.8	54.3	52.7	49.7	63.6	0.0	63.6
Day	12	57.6	64.4	52.0	63.9	63.3	62.3	61.5	59.0	55.2	52.7	52.4	52.1	57.6	0.0	57.6
	13 14	56.4 55.6	64.4 62.3	52.4 51.9	63.7 61.8	63.2 61.2	61.7 59.6	59.9 58.4	56.2 56.0	54.7 54.5	53.0 52.5	52.8 52.3	52.5 52.0	56.4 55.6	0.0 0.0	56.4 55.6
	15	60.0	71.6	51.4	71.2	70.8	67.3	65.0	56.7	54.3	52.2	51.8	51.5	60.0	0.0	60.0
	16	56.0	64.3	50.0	63.9	63.5	61.8	60.1	55.8	53.9	50.8	50.5	50.1	56.0	0.0	56.0
	17	57.1	66.4	49.7	66.1	65.5	63.4	61.8	56.5	54.0	50.8	50.3	49.9	57.1	0.0	57.1
	18 19	55.8 54.4	63.7 61.6	50.9 49.9	63.3 61.1	62.9 60.4	60.7 58.7	59.3 57.5	55.8 54.8	54.2 53.1	51.6 50.6	51.3 50.3	51.0 50.0	55.8 54.4	0.0	55.8 59.4
Evening	20	54.5	62.2	49.7	61.9	61.5	59.9	58.6	54.5	52.3	50.0	50.0	49.7	54.5	5.0	59.5
	21	61.2	69.8	49.4	69.4	69.2	68.5	68.0	55.8	52.2	49.9	49.7	49.5	61.2	5.0	66.2
Night	22 23	55.7 53.5	66.1 61.8	48.3 48.2	65.6 61.5	65.1 61.2	63.4 59.9	61.6 58.4	53.4 53.1	50.7 50.0	48.9 48.6	48.7 48.5	48.4 48.2	55.7 53.5	10.0 10.0	65.7 63.5
Timeframe	Hour	53.5 L <sub>eq</sub>	L max	48.2 L <sub>min</sub>	L1%	61.2 L2%	59.9 L5%	58.4 <b>L8%</b>	L25%	L50%	48.6 <b>L90%</b>	48.5 <b>L95%</b>	48.2 <b>L99%</b>	55.5	L <sub>eq</sub> (dBA)	03.5
Day	Min	55.6	62.3	49.3	61.8	61.2	59.6	58.4	55.8	53.9	50.8	50.3	49.7	Daytime	Evening	Nighttime
(7am-7pm)	Max	66.2	76.1	56.4	74.7	73.3	71.2	70.4	67.3	65.5	59.0	58.0	56.9	(7am-10pm)	(7pm-7pm)	(10pm-7am)
Evening	Average Min	61.6 54.4	61.6	verage: 49.4	67.1 61.1	66.6 60.4	64.8 58.7	63.6 57.5	59.8 54.5	57.6 52.2	53.9 49.9	53.2 49.7	52.5 49.5	61.6	58.0	54.8
(7pm-10pm)	Max	61.2	69.8	49.4	69.4	69.2	68.5	68.0	55.8	53.1	50.6	50.3	50.0		Hour CNEL (d	
Energy	Average	58.0		verage:	64.1	63.7	62.4	61.4	55.0	52.5	50.3	50.0	49.7			
Night	Min	48.0	53.7	44.0	53.4	53.1	51.8	50.6	48.1	46.3	44.7	44.4	44.1		63.2	
(10pm-7am) Energy	Max Average	60.1 54.8	68.2	53.4 verage:	67.8 60.2	67.4 59.8	66.4 58.6	65.0 57.3	60.2 52.5	56.9 50.1	54.0 48.5	53.7 48.2	53.5 48.0		03.2	
Lincigy	, weruge	J4.0	AV	cruge.	00.2	35.0	56.0	37.5	J2.J	50.1	40.5	40.2	40.0			



APPENDIX 7.1:

**OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS** 



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	FHWA-RD	-77-108 HIGH	WAY NO	DISE P	REDIC	TION M	ODEL (S	9/12/20	021)		
	o: E e: Old Mission nt: e/o Camino						Name: E umber: 1		nino SPA		
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUTS	6	
Highway Data				Si	te Con	ditions	(Hard =	10, Sc	oft = 15)		
Peak H	Percentage: our Volume:	6,183 vehicle 10.00% 618 vehicle				dium Tru avy Truc	icks (2 A	,	15 15 15		
	hicle Speed:	25 mph		Ve	ehicle l	Mix					
Near/Far Lar	ne Distance:	48 feet			Veh	icleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	•	9.6%	97.42
Bar	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			I	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		40.0 feet						. C	- 41		
Centerline Dist. I	to Observer:	40.0 feet		NO	oise so	Autos			et)		
Barrier Distance t	to Observer:	0.0 feet			1 4 m ali	Autos m Trucks		000 297			
Observer Height (J	Above Pad):	5.0 feet				m Trucks vy Trucks		297 004	Grade Adji	ustment	0.0
Pa	d Elevation:	0.0 feet			neav	y mucks	s. o.u	104	Grade Auji	usument.	0.0
Roa	d Elevation:	0.0 feet		La	ne Eq	uivalent	Distanc	e (in t	feet)		
F	Road Grade:	0.0%				Autos	32.3	388			
	Left View:	-90.0 degree	es		Mediu	m Trucks	32.1	114			
	Right View:	90.0 degree	es		Heav	ry Trucks	32.1	141			
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	e/	Barrier Atte	en Ben	m Atter
Autos:	58.73	-1.49		2.73		-1.20		-4.59	0.0	00	0.00
Medium Trucks:	70.80	-18.72		2.78		-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	77.97	-22.68		2.78		-1.20		-5.56	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	' Le	eq Eve	ening	Leq	Night		Ldn	CI	IEL
Autos:	58	.8	56.9		55.1		49.1		57.7		58
Medium Trucks:	53	.7	52.1		45.8		44.2		52.7		52
Heavy Trucks:	56	.9	55.4		46.4		47.7		56.0		56
Vehicle Noise:	61	.7	60.0		56.1		52.2		60.7		61
Centerline Distanc	e to Noise Co	ntour (in feet,	)								
				70 dE	BA	65 0	1BA	6	0 dBA	55	dBA
			Ldn: VEL:		10 10		21 22		44 47		90 102

	FHWA-RD	-77-108 HIGHW	/AY NO	ISE PREDI	CTION I	MODEL (	9/12/2	021)		
Scenar								nino SPA		
	e: Old Mission				Job I	Number:	15534			
Road Segme	nt: e/o Camino	Capistrano								
	SPECIFIC IN	PUT DATA						L INPUT	S	
Highway Data				Site Co	nditions	s (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	6,940 vehicles					Autos:	15		
		10.00%				rucks (2 /				
	lour Volume:	694 vehicles		H	leavy Tru	ıcks (3+ )	Axles):	15		
	hicle Speed:	25 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		Ve	hicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Ba	rrier Height:	0.0 feet		1	Medium 1	Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			Heavy 1	Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	40.0 feet		Noise	Source F	levation	e (in fi	aat)		
Centerline Dist.	to Observer:	40.0 feet		10/36	Auto		000			
Barrier Distance	to Observer:	0.0 feet		Medi	um Truci		297			
Observer Height (	(Above Pad):	5.0 feet			avy Truci		004	Grade Ad	iustment.	0.0
	ad Elevation:	0.0 feet			· ·					
	ad Elevation:	0.0 feet		Lane E		nt Distan		feet)		
	Road Grade:	0.0%			Auto		388			
	Left View:	-90.0 degrees			um Truci		114 141			
	Right View:	90.0 degrees		Hea	avy Trucl	KS: 32.	141			
FHWA Noise Mode	el Calculations	:		-						
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	58.73	-0.98		2.73	-1.20		-4.59	0.0	000	0.00
Medium Trucks:	70.80	-18.22		2.78	-1.20		-4.87		000	0.00
Heavy Trucks:	77.97	-22.18		2.78	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise	e Levels (witho	out Topo and b	arrier a	ttenuation	)					
VehicleType	Leq Peak Hou	r Leq Day	Le	q Evening	Leg	Night		Ldn		VEL
Autos:	59.		7.4	55.	-	49.0	-	58.2		58.
Medium Trucks:	54.		2.6	46.		44.		53.2		53.
Heavy Trucks:	57.		5.9	46.		48.2		56.5		56.
Vehicle Noise:	62.	2 6	0.5	56.	6	52.	(	61.2	2	61.
Centerline Distand	ce to Noise Co	ntour (in feet)								
				70 dBA		i dBA		60 dBA		dBA
		L CNI	dn:	1( 11		22		48		103
						24		51		110

Monday, December 4, 2023

FHW	A-RD-7	77-108 HIGH	WAY	NOISE	PREDIC		IODEL (S	9/12/2	021)		
Scenario: EC						Project	Name: E	El Car	nino SPA		
Road Name: Old Mis						Job N	lumber: 1	15534			
Road Segment: e/o Car	nino C	apistrano									
SITE SPECIFIC	C INP	UT DATA								5	
Highway Data					Site Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Ad	t): 1	7,745 vehicle	s				,	Autos:	15		
Peak Hour Percentag	e: 1	0.00%					ucks (2 A				
Peak Hour Volum	e:	775 vehicles			He	eavy Tru	cks (3+ A	xles).	15		
Vehicle Spee	d:	25 mph		ŀ	Vehicle	Mix					
Near/Far Lane Distand	e:	48 feet		ŀ		icleType		Dav	Evening	Night	Daily
Site Data								77.5%	-	9.6%	
Barrier Heigl		0.0 feet			М	edium T	rucks:	84.8%	6 4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Bern		0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.749
Centerline Dist. to Barrie	·	40.0 feet		-							
Centerline Dist. to Observe		40.0 feet		-	Noise Se				eet)		
Barrier Distance to Observe	er:	0.0 feet				Auto		000			
Observer Height (Above Pa		5.0 feet				m Truck		297			
Pad Elevatio	/	0.0 feet			Hear	vy Truck	s: 8.0	004	Grade Adj	ustmen	t: 0.0
Road Elevatio	n:	0.0 feet		ľ	Lane Eq	uivalen	Distanc	e (in	feet)		
Road Grad	le:	0.0%		ľ	,	Auto	s: 32.3	388	,		
Left Vie		-90.0 dearee	s		Mediu	m Truck	s: 32.1	114			
Right Vie		90.0 degree			Hea	vy Truck	s: 32.	141			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	. 7	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atter
Autos: 58	3.73	-0.51		2.7	73	-1.20		-4.59	0.0	000	0.00
Medium Trucks: 70	08.0	-17.75		2.7	78	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 77	.97	-21.70		2.7	78	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels (v	vithou	It Topo and I	barrie	er atter	nuation)						
VehicleType Leq Peak	Hour	Leq Day		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	59.8		57.9		56.1		50.0		58.7		59
Medium Trucks:	54.6		53.1		46.8		45.2		53.7	7	53
Heavy Trucks:	57.8		56.4		47.4		48.6	i	57.0	)	57
Vehicle Noise:	62.7	6	51.0		57.1		53.2		61.7	7	62
Centerline Distance to Nois	e Con	tour (in feet)									
				70	dBA	65	dBA	1	60 dBA	55	ō dBA
		-	Ldn: IEL:		11 12	1	24 25		52 55		11

FHWA-RD-	77-108 HIGHWA	NOISE	PREDIC	TION MO	DDEL (9	/12/20	21)		
Scenario: ECP Road Name: Old Mission Road Segment: e/o Camino (				Project I Job Nu	Vame: E mber: 1		ino SPA		
SITE SPECIFIC INF	UT DATA							s	
Highway Data			Site Con	ditions (l	Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt):	8,502 vehicles				A	lutos:	15		
Peak Hour Percentage:	0.00%		Mee	dium Tru	cks (2 A	xles):	15		
Peak Hour Volume:	850 vehicles		Hei	avy Truck	ks (3+ A	xles):	15		
Vehicle Speed:	25 mph	-	Vehicle N	Niv					
Near/Far Lane Distance:	48 feet	-		cleType		Day	Evening	Night	Daily
Site Data			veni			77.5%	12.9%	9.6%	
	0.0 feet		Me	edium Tru		34.8%	4.9%	10.3%	
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet			leavy Tru		36.5%		10.8%	
Centerline Dist. to Barrier:	40.0 feet	_							
Centerline Dist. to Observer:	40.0 feet	-	Noise So				et)		
Barrier Distance to Observer:	0.0 feet			Autos.					
Observer Height (Above Pad):	5.0 feet		Mediur	n Trucks.	2.2				
Pad Elevation:	0.0 feet		Heav	y Trucks.	8.0	04	Grade Ad	iustment	: 0.0
Road Elevation:	0.0 feet		Lane Equ	uivalent	Distanc	e (in f	eet)		
Road Grade:	0.0%	Ē		Autos					
Left View:	-90.0 degrees		Mediur	n Trucks					
Right View:	90.0 degrees		Heav	y Trucks					
FHWA Noise Model Calculations									
VehicleType REMEL	Traffic Flow Di	istance	Finite	Road	Fresne	el I	Barrier Att	en Ber	m Atten
Autos: 58.73	-0.10	2.7	'3	-1.20	-	4.59	0.0	000	0.000
Medium Trucks: 70.80	-17.34	2.7	8	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks: 77.97	-21.30	2.7	8	-1.20	-	5.56	0.0	000	0.000
Unmitigated Noise Levels (witho	ut Topo and barr	ier atter	nuation)						
VehicleType Leq Peak Hour			vening	Leq N			Ldn		NEL
Autos: 60.2			56.5		50.4		59.1		59.7
Medium Trucks: 55.0			47.2		45.6		54.1		54.3
Heavy Trucks: 58.3			47.8		49.0		57.4		57.5
Vehicle Noise: 63.1			57.5		53.6		62.1	1	62.5
Centerline Distance to Noise Cor	tour (in feet)							_	
			dBA	65 d		6	0 dBA		dBA
	Ldn:		12		26		55		118
	CNEL:		13		27		58		126

	FHWA-RD	-77-108 HIGH	WAY NC	ISE PREDI	CTION M	ODEL (9	/12/202	:1)		
Scenario: Road Name: Road Segment:	Old Mission					Name: E umber: 1		no SPA		
SITE SP	ECIFIC IN	PUT DATA			N	OISE M	ODEL	INPUTS	6	
Highway Data				Site Co	nditions (	'Hard = 1	0, Soft	= 15)		
Average Daily Tra	affic (Adt):	7,745 vehicle	s			A	utos:	15		
Peak Hour Pe	rcentage:	10.00%		M	edium Tru	icks (2 A	xles):	15		
Peak Hou	r Volume:	775 vehicle	6	H	eavy Truc	ks (3+ A)	xles):	15		
Vehic	le Speed:	25 mph		Vehicle	Mix					
Near/Far Lane	Distance:	48 feet			hicleType	1	Dav E	venina	Night	Daily
Site Data							7.5%	12.9%	<b>J</b> .	97.42%
Barrie	r Heiaht:	0.0 feet		/	Aedium Tr	ucks: 8	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall,		0.0			Heavy Tr	ucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. 1		40.0 feet		Noine	ource Ele	vetione	lin foo	41		
Centerline Dist. to	Observer:	40.0 feet		Noise 3	Autos			9		
Barrier Distance to	Observer:	0.0 feet		Madi	m Trucks					
Observer Height (Ab	ove Pad):	5.0 feet			ivy Trucks			ade Adju	istment (	0.0
Pad	Elevation:	0.0 feet		1100	ivy mucks	. 0.0	04 0	naac Aaja	Journerit.	0.0
Road	Elevation:	0.0 feet		Lane E	quivalent	Distance	e (in fe	et)		
Roa	ad Grade:	0.0%			Autos	: 32.3	88			
1	Left View:	-90.0 degree	es		um Trucks					
R	ight View:	90.0 degree	es	Hea	wy Trucks	: 32.1	41			
FHWA Noise Model C	Calculations	5								
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresne	e/ Bi	arrier Atte	n Berm	Atten
Autos:	58.73	-0.51		2.73	-1.20	-	4.59	0.0	00	0.000
Medium Trucks:	70.80	-17.75		2.78	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	77.97	-21.70		2.78	-1.20	-	5.56	0.0	00	0.000
Unmitigated Noise Le			barrier a	ttenuation)						
	q Peak Hou			q Evening	Leq I	•	L	.dn	CNE	
Autos:	59	-	57.9	56.		50.0		58.7		59.3
Medium Trucks:	54	-	53.1	46.	-	45.2		53.7		53.9
Heavy Trucks:	57		56.4	47.		48.6		57.0		57.1
	62	.7	61.0	57.	1	53.2		61.7		62.1
Vehicle Noise:	02									
		ntour (in feet,								
Vehicle Noise: Centerline Distance t				70 dBA	65 d		60	dBA	55 d	
			Ldn:	70 dBA 11 12		IBA 24 25	60	dBA 52 55	55 d	BA 111 118

	FHWA-RD	-77-108 HIGHW	/AY NOI	SE PREDIO	CTION MO	DEL (9	/12/20	021)		
	io: BOP				Project N			nino SPA		
	e: Old Mission nt: e/o Camino				Job Nu	nber: 1	5534			
SITE	SPECIFIC IN	PUT DATA						L INPUT	5	
Highway Data				Site Cor	nditions (H	lard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	8,502 vehicles				A	Autos:	15		
Peak Hour	Percentage:	10.00%		Me	edium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	850 vehicles		He	eavy Truck	s (3+ A	xles):	15		
	hicle Speed:	25 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet			icleType		Dav	Evening	Night	Daily
Site Data					Au	tos:	77.5%	12.9%	9.6%	97.429
Bai	rier Height:	0.0 feet		М	ledium Tru	cks: (	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			Heavy Tru	cks: {	86.5%	2.7%	10.8%	0.749
Centerline Dis	. ,	40.0 feet		Noine C	ource Elev	ationa	(in fo	ati		
Centerline Dist.	to Observer:	40.0 feet		NOISE 3	Autos:	0.0		el)		
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:	2.2				
Observer Height (	Above Pad):	5.0 feet			vy Trucks:	8.0		Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			·		- -		aounom	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent L			feet)		
I	Road Grade:	0.0%			Autos:					
	Left View:	-90.0 degrees			m Trucks:					
	Right View:	90.0 degrees		Hea	vy Trucks:	32.1	41			
FHWA Noise Mode										
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresne		Barrier Atte		m Atten
Autos:	58.73	-0.10		2.73	-1.20		4.59		000	0.00
Medium Trucks:	70.80	-17.34		2.78	-1.20		-4.87		000	0.00
Heavy Trucks:	77.97	-21.30		2.78	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise										
	Leq Peak Hour			Evening	Leq N			Ldn		VEL
Autos:	60.3		3.3	56.5		50.4		59.1		59.
Medium Trucks: Heavy Trucks:	55. 58.		3.5 5.8	47.2 47.8		45.6 49.0		54.1 57.4		54. 57.
Vehicle Noise:	58.		5.8 1.4	47.8		49.0		57.4 62.1		57. 62
				07.0		00.0		02.		02.
Centerline Distanc	e to NOISE CO	nour (in feet)		70 dBA	65 dE	BA	6	0 dBA	55	dBA
		L	dn:	12	00 01	26		55		118
			=1 :	12		27		58		126

Monday, December 4, 2023

FHWA-RI	0-77-108 HIGHWA	Y NOISE		ION MODEL	(9/12/2	021)	
Scenario: EP (With Fo Road Name: Old Mission Road Segment: e/o Camino	n Rd.			Project Name Job Number			
SITE SPECIFIC IN	IPUT DATA					L INPUTS	1
Highway Data			Site Condi	tions (Hard	= 10, S	oft = 15)	
Average Daily Traffic (Adt):	6,737 vehicles				Autos:		
Peak Hour Percentage:	10.00%			um Trucks (2	/		
Peak Hour Volume:	674 vehicles		Heav	y Trucks (3+	Axles).	15	
Vehicle Speed:	25 mph	ľ	Vehicle Mi	x			
Near/Far Lane Distance:	48 feet	ľ	Vehicl	еТуре	Day	Evening	Night Dai
Site Data				Autos:	77.5%	6 12.9%	9.6% 97.4
Barrier Height:	0.0 feet		Med	lium Trucks:	84.8%	6 4.9%	10.3% 1.8
Barrier Type (0-Wall, 1-Berm):	0.0		He	avy Trucks:	86.5%	6 2.7%	10.8% 0.7
Centerline Dist. to Barrier:	40.0 feet	-	Noiso Sou	rce Elevatio	ne (in f	oot)	
Centerline Dist. to Observer:	40.0 feet	ŀ	10130 000		0.000		
Barrier Distance to Observer:	0.0 feet		Medium		2.297		
Observer Height (Above Pad):	5.0 feet				3.004	Grade Adii	ustment: 0.0
Pad Elevation:	0.0 feet	_					
Road Elevation:	0.0 feet	-	Lane Equi	valent Dista		feet)	
Road Grade:	0.0%				2.388		
Left View:	-90.0 degrees		Medium		2.114		
Right View:	90.0 degrees		Heavy	Trucks: 3	2.141		
FHWA Noise Model Calculation							
VehicleType REMEL		Distance	Finite R			Barrier Atte	
Autos: 58.73	-1.11	2.7		-1.20	-4.59	0.0	
Medium Trucks: 70.80	-18.35	2.7	-	-1.20	-4.87		
Heavy Trucks: 77.97	-22.31	2.7	-	-1.20	-5.56	0.0	00 0.
Unmitigated Noise Levels (with VehicleType Leg Peak Hou			nuation) Evening	Leg Night		Ldn	CNEL
Autos: 59			55.5	Ley Night 49	4	58.0	-
Medium Trucks: 54		-	46.2	40		53.1	-
Heavy Trucks: 57		-	46.8	49		56.4	-
Vehicle Noise: 62			56.5		.6	61.1	
Centerline Distance to Noise Co	ontour (in feet)						
	,	70	dBA	65 dBA		60 dBA	55 dBA
		10	UDA	00 UDA			
	Ldn		10		2	47	1

	FHWA-RI	0-77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL (9/	12/2	021)		
Scenar	rio: EC (With F	orster)				Project	Name: El	Can	nino SPA		
Road Nan	ne: Old Missior	n Rd.				Job N	umber: 15	5534			
Road Segme	ent: e/o Camino	Capistrano									
	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data				S	Site Con	ditions	(Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,745 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tri	ucks (2 Ax	les):	15		
Peak H	Hour Volume:	775 vehicle	s		He	avy Tru	cks (3+ Ax	les):	15		
Ve	ehicle Speed:	25 mph		1	/ehicle I	Aise					
Near/Far La	ane Distance:	48 feet		-		icleTvpe		ay	Evening	Night	Daily
Site Data					veni			ay 7.5%			97.42%
						, dium Ti		7.5% 4.8%		9.6%	
	rrier Height:	0.0 feet				leavy Ti		4.8% 6.5%		10.3%	
Barrier Type (0-V	. ,	0.0			, r	icavy II	<i>ucits.</i> 8	0.0%	2.1%	10.0%	0.74%
	ist. to Barrier:	40.0 feet		٨	loise So	urce El	evations	(in fe	eet)		
Centerline Dist.		40.0 feet				Auto	s: 0.00	00			
Barrier Distance		0.0 feet			Mediur	n Truck	s: 2.29	97			
Observer Height	· ,	5.0 feet			Heav	y Truck	s: 8.00	)4	Grade Adj	iustment	: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ		Distance	· ·	reet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				n Truck					
	Right View:	90.0 degre	es		Heav	y Truck	s: 32.14	11			
	•										
FHWA Noise Mod	lel Calculation	s									
FHWA Noise Mod VehicleType	el Calculation REMEL	s Traffic Flow	Dista	ance	Finite		Fresne		Barrier Atte	en Ber	m Atten
VehicleType Autos:	REMEL 58.73	-	Dista	ance 2.73		Road -1.20		l 1.59	Barrier Atte 0.0		
VehicleType	REMEL 58.73	Traffic Flow			3		-4			000	0.000
VehicleType Autos:	REMEL 58.73 70.80	Traffic Flow -0.51		2.73	3	-1.20	-4	1.59	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 58.73 70.80 77.97 e Levels (with	<i>Traffic Flow</i> -0.51 -17.75 -21.70 <i>out Topo and</i>	barrier	2.73 2.78 2.78 <b>attenu</b>	3 3 3 uation)	-1.20 -1.20 -1.20	-4 -4 -{	4.59 4.87	0.0 0.0 0.0	000 000 000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Nois</b> VehicleType	REMEL 58.73 70.80 77.97 e Levels (with Leg Peak Hou	Traffic Flow           -0.51           -17.75           -21.70           out Topo and           rr         Leq Day	barrier	2.73 2.78 2.78	3 3 3 uation) vening	-1.20 -1.20 -1.20	-4 -4 -1	4.59 4.87	0.0 0.0 0.0	000 000 000 Ci	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 58.73 70.80 77.97 e Levels (with Leg Peak Hou 59	Traffic Flow         -0.51         -17.75         -21.70         -2	<i>barrier</i> / 1 57.9	2.73 2.78 2.78 <b>attenu</b>	3 3 3 <i>vening</i> 56.1	-1.20 -1.20 -1.20	-4 -4 -{ Night 50.0	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 58.7	000 000 000 C/	0.000 0.000 0.000 NEL 59.3
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 58.73 70.80 77.97 e Levels (with Leq Peak Hou 59 54	Traffic Flow           -0.51           -17.75           -21.70           out Topo and           In         Leq Day           1.8           .6	<i>barrier</i> / 1 57.9 53.1	2.73 2.78 2.78 <b>attenu</b>	3 3 3 <i>vening</i> 56.1 46.8	-1.20 -1.20 -1.20	-4 -4 -8 Night 50.0 45.2	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 58.7 53.7	000 000 000 C/	0.000 0.000 0.000 NEL 59.3 53.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 58.73 70.80 77.97 e Levels (with Leq Peak Hou 59 54 54	Traffic Flow           -0.51           -17.75           -21.70           out Topo and           In         Leq Day           1.8           .6	<i>barrier</i> / 1 57.9	2.73 2.78 2.78 <b>attenu</b>	3 3 3 <i>vening</i> 56.1	-1.20 -1.20 -1.20	-4 -4 -5 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 58.7 53.7 57.0	000 000 000 <i>Ci</i>	0.000 0.000 0.000 NEL 59.3 53.9 57.1
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 58.73 70.80 77.97 e Levels (with Leq Peak Hou 59 54 54	Traffic Flow           -0.51           -17.75           -21.70           out Topo and           ir           Leq Day           .8           .6           .8	<i>barrier</i> / 1 57.9 53.1	2.73 2.78 2.78 <b>attenu</b>	3 3 3 <i>vening</i> 56.1 46.8	-1.20 -1.20 -1.20	-4 -4 -8 Night 50.0 45.2	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 58.7 53.7	000 000 000 <i>Ci</i>	0.000 0.000 0.000 NEL 59.3 53.9 57.1
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL         58.73           58.73         70.80           77.97         7           e Levels (with         Leq Peak Hou           59         54           57         62	Traffic Flow         -0.51           -17.75         -21.70           Out Topo and         ir           Leq Day         1.8           .6         .8           .7         .7	barrier 7 1 57.9 53.1 56.4 61.0	2.73 2.78 2.78 attenu Leq Ev	3 3 3 <i>vening</i> 56.1 46.8 47.4 57.1	-1.20 -1.20 -1.20 <i>Leq</i>	-4 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.59 4.87 5.56	0.0 0.0 <i>Ldn</i> 58.7 53.7 57.0 61.7	000 000 000 7 7 7	0.000 0.000 0.000 NEL 59.3 53.9 57.7 62.1
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL         58.73           58.73         70.80           77.97         7           e Levels (with         Leq Peak Hou           59         54           57         62	Traffic Flow         -0.51           -17.75         -21.70           Out Topo and         ir           Leq Day         1.8           .6         .8           .7         .7	barrier 57.9 53.1 56.4 61.0 )	2.73 2.78 2.78 <b>attenu</b>	3 3 3 <i>vening</i> 56.1 46.8 47.4 57.1	-1.20 -1.20 -1.20 <i>Leq</i>		4.59 4.87 5.56	0.0 0.0 0.0 58.7 53.7 57.0 61.7 50 dBA	000 000 000 7 7 7 55	0.000 0.000 0.000 NEL 59.3 53.9 57.1 62.1 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL         58.73           58.73         70.80           77.97         7           e Levels (with         Leq Peak Hou           59         54           57         62	Traffic Flow         -0.51         -17.75         -21.70         -0.00	barrier 7 1 57.9 53.1 56.4 61.0	2.73 2.78 2.78 attenu Leq Ev	3 3 3 <i>vening</i> 56.1 46.8 47.4 57.1	-1.20 -1.20 -1.20 <i>Leq</i>	-4 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.59 4.87 5.56	0.0 0.0 <i>Ldn</i> 58.7 53.7 57.0 61.7	000 000 7 7 7 9 7 7 9 7 7 9 7 7 7 7 9 7 7 7 7	0.000 0.000 0.000 NEL 59.3 53.9 57.1 62.1

FHWA-RD-77-108 HIC	HWAY NOI	SE PREDICT	ION MODEL	(9/12/20	21)	
Scenario: ECP (With Forster) Road Name: Old Mission Rd. Road Segment: e/o Camino Capistrano		1	Project Name. Job Number.		ino SPA	
SITE SPECIFIC INPUT DATA	4		NOISE	MODE	. INPUTS	
Highway Data		Site Cond	itions (Hard	= 10, So	ft = 15)	
Average Daily Traffic (Adt): 8,299 vehi Peak Hour Percentage: 10.00% Peak Hour Volume: 830 vehic			ium Trucks (2 vy Trucks (3+	,	15 15 15	
Vehicle Speed: 25 mph		Vehicle M	he .			
Near/Far Lane Distance: 48 feet			leType	Dav	Evening N	light Daily
Site Data		Venic	Autos:	77.5%	12.9%	9.6% 97.42°
Barrier Height: 0.0 feet		Мес	dium Trucks:	84.8%	4.9%	10.3% 1.849
Barrier Type (0-Wall, 1-Berm): 0.0		He	eavy Trucks:	86.5%	2.7%	10.8% 0.749
Centerline Dist. to Barrier: 40.0 feet		Noiso Sou	Irce Elevatio	ne (in fo	of	
Centerline Dist. to Observer: 40.0 feet		140136 301		0.000	eij	
Barrier Distance to Observer: 0.0 feet		Modium		297		
Observer Height (Above Pad): 5.0 feet					Grade Adjus	tment: 0.0
Pad Elevation: 0.0 feet		Tieavy	TTUCKS. C	5.004	onduc Aujuc	ament. 0.0
Road Elevation: 0.0 feet		Lane Equ	ivalent Distai	nce (in fe	eet)	
Road Grade: 0.0%			Autos: 32	2.388		
Left View: -90.0 deg	ees	Medium	Trucks: 32	2.114		
Right View: 90.0 deg	ees	Heavy	Trucks: 32	2.141		
FHWA Noise Model Calculations						
VehicleType REMEL Traffic Flow	/ Distanc	e Finite F	Road Free	inel I	Barrier Atten	Berm Atter
Autos: 58.73 -0.2		2.73	-1.20	-4.59	0.00	
Medium Trucks: 70.80 -17.4		2.78	-1.20	-4.87	0.00	
Heavy Trucks: 77.97 -21.4	10 2	2.78	-1.20	-5.56	0.00	0.00
Unmitigated Noise Levels (without Topo an		,				
VehicleType Leq Peak Hour Leq D		Evening	Leq Night		Ldn	CNEL
Autos: 60.1	58.2	56.4	50		59.0	59
Medium Trucks: 54.9	53.4	47.1	45		54.0	54
Heavy Trucks: 58.1	56.7	47.7	48		57.3	57
Vehicle Noise: 63.0	61.3	57.4	53	.5	62.0	62
Centerline Distance to Noise Contour (in fe						55 104
		70 dBA	65 dBA		0 dBA	55 dBA
	Ldn:	12 12	2	-	54	113
	CNEL		2		57	12

FHWA-F	D-77-108 HIG	HWAY	Y NOISE	PREDIC		IODEL (	9/12/20	021)		
Scenario: BO (With Road Name: Old Missio Road Segment: e/o Camir	n Rd.					t Name: lumber:		nino SPA		
SITE SPECIFIC I	NPUT DATA				1	NOISE	NODE	L INPUT	S	
Highway Data				Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	7,745 vehic	les					Autos:	15		
Peak Hour Percentage:	10.00%			Mee	dium Tr	ucks (2 )	Axles):	15		
Peak Hour Volume:	775 vehicl	es		Hei	avy Tru	cks (3+ /	Axles):	15		
Vehicle Speed:	25 mph			Vehicle N	Nix					
Near/Far Lane Distance:	48 feet		F		cleType	•	Dav	Evening	Night	Daily
Site Data						Autos:	77.5%	•	9.6%	
Barrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to Barrier:	40.0 feet		-	N-: 0-			- (	41		
Centerline Dist. to Observer:	40.0 feet		Ľ.	Noise So	Auto			eet)		
Barrier Distance to Observer:	0.0 feet			Mediur			000 297			
Observer Height (Above Pad):	5.0 feet				n Truck y Truck		297 004	Grade Ad	iustmont	0.0
Pad Elevation:	0.0 feet			neav	у писк	S. 0.	004	Grade Au	Justinent	0.0
Road Elevation:	0.0 feet		4	Lane Equ	iivalen	t Distan	ce (in i	feet)		
Road Grade:	0.0%				Auto	s: 32.	388			
Left View:	-90.0 degr	ees		Mediur			114			
Right View:	90.0 degr	ees		Heav	y Truck	is: 32.	141			
FHWA Noise Model Calculatio										
VehicleType REMEL	Traffic Flow	_	istance	Finite		Fresr	-	Barrier Att		m Atten
Autos: 58.7			2.7	-	-1.20		-4.59		000	0.00
Medium Trucks: 70.8			2.7		-1.20		-4.87		000	0.00
Heavy Trucks: 77.9	-21.7	0	2.7	8	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels (wit				<u> </u>			1			
VehicleType Leq Peak Ho				vening	Leq	Night		Ldn		VEL
	9.8	57.9		56.1		50.0		58.		59
	4.6	53.1 56.4		46.8 47.4		45.2 48.6		53. 57.		53
	7.8 2.7	56.4 61.0		57.1		48.0		57.0 61.7		57 62
				57.1		55.4	<u> </u>	01.	1	02
Centerline Distance to Noise C	ontour (in fee	et)	70.	dBA	65	dBA	6	50 dBA	55	dBA
		Ldn:		јва 11	00	ава 24		50 dBA 52		ава 11

Monday, December 4, 2023

	FHWA-RI	D-77-108 HIGH	WAY NO	DISE	PREDIC		ODEL (9	/12/2	021)		
Road Nan	rio: BOP (With ne: Old Missior nt: e/o Camino	n Rd.					Name: E umber: 1		nino SPA		
	SPECIFIC IN	IPUT DATA							L INPUTS	;	
Highway Data				S	Site Cond	ditions	(Hard = 1	10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,299 vehicle	s				A	utos:	15		
	Percentage:	10.00%					ucks (2 A	/			
Peak H	lour Volume:	830 vehicles	3		Hea	avy Truc	cks (3+ A	xles).	15		
	ehicle Speed:	25 mph		v	/ehicle N	lix					
Near/Far La	ane Distance:	48 feet			Vehi	cleType	1	Day	Evening	Night	Daily
Site Data							Autos:	, 77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	dium Ti	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			h	leavy Ti	rucks: 8	36.5%	5 2.7%	10.8%	0.74%
	ist, to Barrier:	40.0 feet			I 0-		evations	6 m #	41		
Centerline Dist.	to Observer:	40.0 feet		~	ioise 30	Auto:			eel)		
Barrier Distance	to Observer:	0.0 feet			1.4 m all 1. m	n Truck	0.0				
Observer Height	(Above Pad):	5.0 feet				n Truck y Truck			Grade Adju	istment	0.0
P	ad Elevation:	0.0 feet				·		-		isuncin.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Auto		88			
	Left View:	-90.0 degree	es		Mediun	n Truck	s: 32.1	14			
	Right View:	90.0 degree	es		Heav	y Truck	s: 32.1	41			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite I	Road	Fresne	e/	Barrier Atte	n Ben	m Atten
Autos:		-0.21		2.73		-1.20	-	4.59	0.00		0.000
Medium Trucks:				2.78		-1.20		4.87	0.00		0.000
Heavy Trucks:	77.97	-21.40		2.78	3	-1.20	-	5.56	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			eq Ev	rening	Leq	Night		Ldn	CI	IEL
Autos:			58.2		56.4		50.3		59.0		59.6
Medium Trucks:			53.4		47.1 47.7		45.5 48.9		54.0		54.2
Heavy Trucks: Vehicle Noise:			56.7 61.3		47.7 57.4		48.9		57.3		57.4
					57.4		53.5		62.0		62.4
Centerline Distan	ce to Noise Co	ontour (in feet)		70 /	0.4	05	-10.4		0.404		-10.4
				70 d		65	dBA	1	60 dBA	55	dBA
			Ldn: VEL:		12		25		54		117 124
					12		27		57		

F	HWA-RD	0-77-108 F	IGHW	AY NOI	SEI	PREDIC	TION	IODÉL	. (9/12/2	021)		
Scenario: E Road Name: O Road Segment: w/									: El Car : 15534	nino SPA		
SITE SPE	CIFIC IN	PUT DA	ТА							L INPUT	S	
Highway Data					S	Site Cond	ditions	(Hard	= 10, Se	oft = 15)		
Average Daily Traffi	c (Adt):	36,749 ve	hicles						Autos:	15		
Peak Hour Perce	entage:	10.00%				Med	dium Tr	ucks (2	2 Axles):	15		
Peak Hour V	'olume:	3,675 vel	nicles			Hea	avy Tru	cks (3+	Axles):	15		
Vehicle	Speed:	45 mp	h		V	/ehicle N	liv					
Near/Far Lane Di	stance:	50 fee	t				cleType	9	Dav	Evening	Night	Daily
Site Data					+			Autos:	77.5%		9.6%	
Barrier I	loiaht.	0.0 fe	ot			Me	dium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-	Berm):	0.0				H	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to		50.0 fe			Ν	loise So	urce E	levatio	ns (in f	eet)		
Centerline Dist. to Ob		50.0 fe					Auto	S:	0.000	í		
Barrier Distance to Ob	server:	0.0 fe	et			Mediun	n Truck		2.297			
Observer Height (Abov		5.0 fe				Heav	y Truck	s:	8.004	Grade Ad	ljustment	: 0.0
Pad Ele		0.0 fe										
Road Ele		0.0 fe	et		L	ane Equ				feet)		
	Grade:	0.0%					Auto		3.589			
	ft View:	-90.0 de	·			Mediun			3.386			
Righ	t View:	90.0 de	egrees			Heav	y Truck	(S. 4	3.405			
FHWA Noise Model Cal	culations	s										
	EMEL	Traffic Fl		Distanc	-	Finite		Fre	snel	Barrier Att		m Atten
Autos:	68.46		3.70		0.79		-1.20		-4.65		000	0.00
Medium Trucks:	79.45		3.54		0.82	-	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25		7.49		0.82	-	-1.20		-5.43	0.	000	0.00
Unmitigated Noise Lev									-			
	Peak Hou		Day		EV	ening	Leq	Night		Ldn		NEL
Autos:	71		69			68.1			2.0	70.		71.
Medium Trucks:	65 66		64 65			57.7 55.9			5.1 7.2	64. 65	-	64.
Heavy Trucks: Vehicle Noise:											-	65.
	73		71	.9		68.7		64	4.0	72.	D	73.
Centerline Distance to	Noise Co	ontour (in	feet)	-	70 d	RA	65	dBA		50 dBA	55	dBA
			La		U U	74	05	16		344		742
						74		10		344	r	142
			CNE	1.		80		17	71	369	3	796

FHWA-RD-77-1	08 HIGHWAY NOI	SE PREDICTION MODEL (9/12/2021)
Scenario: EP Road Name: Ortega Hwy. Road Segment: w/o I-5 SB Ramp	s	Project Name: El Camino SPA Job Number: 15534
SITE SPECIFIC INPUT	DATA	NOISE MODEL INPUTS
Highway Data		Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 37,50	)6 vehicles	Autos: 15
Peak Hour Percentage: 10.00	0%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 3,75	1 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 4	5 mph	Vehicle Mix
Near/Far Lane Distance: 50	) feet	VehicleType Day Evening Night Da
Site Data		Autos: 77.5% 12.9% 9.6% 97.4
Barrier Height: 0	0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.8
	.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.7
	.0 feet	Naine Davies Eleventiana (in fact)
Centerline Dist. to Observer: 50	.0 feet	Noise Source Elevations (in 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 Adjustment: 0.0
Pad Elevation: 0	.0 feet	
Road Elevation: 0	.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0		Autos: 43.589
	.0 degrees	Medium Trucks: 43.386
Right View: 90	.0 degrees	Heavy Trucks: 43.405
FHWA Noise Model Calculations		l .
VehicleType REMEL Trafi	fic Flow Distance	e Finite Road Fresnel Barrier Atten Berm Att
Autos: 68.46		.79 -1.20 -4.65 0.000 0.
Medium Trucks: 79.45		.82 -1.20 -4.87 0.000 0.
Heavy Trucks: 84.25	-17.40	.82 -1.20 -5.43 0.000 0.
Unmitigated Noise Levels (without Te	opo and barrier at	enuation)
VehicleType Leq Peak Hour	Leq Day Leo	Evening Leq Night Ldn CNEL
Autos: 71.8	69.9	68.2 62.1 70.7
Medium Trucks: 65.6	64.1	57.8 56.2 64.7
Heavy Trucks: 66.5	65.0	56.0 57.3 65.6
Vehicle Noise: 73.7	71.9	68.8 64.1 72.7
Centerline Distance to Noise Contou		0 dBA 65 dBA 60 dBA 55 dBA
	Ldn:	75 162 349
	CNEL:	75 162 349 81 174 374
	UNEL.	01 1/4 3/4 0

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDICT	TION M	ODEL (	9/12/20	021)		
Scenario:									nino SPA		
Road Name:						Job N	umber:	15534			
Road Segment:	w/o I-5 SB F	Ramps									
	ECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cond	litions	(Hard =	10, Sc	oft = 15)		
Average Daily Tra	ffic (Adt):	41,774 vehicle	s					Autos:	15		
Peak Hour Pe	rcentage:	10.00%			Med	lium Tri	ucks (2	Axles):	15		
Peak Hour	r Volume:	4,177 vehicles	5		Hea	avy Tru	cks (3+ .	Axles):	15		
Vehici	le Speed:	45 mph		v	ehicle M	lix					
Near/Far Lane	Distance:	50 feet		E F		cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	
	r Height:	0.0 feet			Me	dium Ti	ucks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wall,		0.0			н	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. t	,	50.0 feet		-							
Centerline Dist. to (		50.0 feet		N	loise So				eet)		
Barrier Distance to (		0.0 feet				Auto		000			
Observer Height (Ab	ove Pad):	5.0 feet			Medium			297		. , ,	
	Elevation:	0.0 feet			Heavy	/ Truck	s: 8.	004	Grade Ad	justment.	0.0
Road I	Elevation:	0.0 feet		L	ane Equ	ivalent	Distan	ce (in i	feet)		
Roa	ad Grade:	0.0%				Auto	s: 43	589			
1	eft View:	-90.0 degree	s		Medium	n Truck	s: 43	386			
Ri	ght View:	90.0 degree	s		Heavy	Y Truck	s: 43	405			
FHWA Noise Model C	alculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite F	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	4.26		0.79		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-12.98		0.82		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-16.94		0.82		-1.20		-5.43	0.	000	0.00
Unmitigated Noise Le	evels (with	out Topo and	barri	er attenı	ation)						
	q Peak Hou			Leq Ev		Leq	Night		Ldn		VEL
Autos:	72	-	70.4		68.6		62.	-	71.	-	71.
Medium Trucks:	66		64.6		58.2		56.		65.		65
Heavy Trucks:	66		65.5		56.5		57.		66.		66.
Vehicle Noise:	74	.2	72.4		69.3		64.	6	73.	1	73.
Centerline Distance t	o Noise Co	ntour (in feet)									
			L	70 d		65	dBA		60 dBA		dBA
			Ldn:		81		174		375		808
		CI	VEL:		87		187		402		867

Monday, December 4, 2023

Barrier Height:         0.0 feet           Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist. to Deserver:         50.0 feet           Barrier Distance to Observer:         0.0 feet           Road Elevation:         0.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           Right View:         90.0 degrees           Heavy Trucks:         43.405           FHWA Noise Model Calculations         Finite Road           VehicleType         REMEL           Traffic Flow         Distance           Autos:         68.46         4.34           0.79         -1.20         -4.65         0.000           Medium Trucks:         73.4         0.5         68.7           Autos:         72.45         -16.8         0.82         -12.0           Junitigated Noise Levels (without Topo and barrier attenuation)         Uvenicitype         Leq Day         Leq Evening	FHWA	-RD-7	77-108 HIGH\	WAY	NOISE	E PREDIC		ODEL (9	9/12/2	021)		
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         42,531 vehicles         Autos::         15           Peak Hour Percentage:         10.00%         Medium Trucks (2 Akes):         15           Peak Hour Volume:         4,253 vehicles         Medium Trucks (2 Akes):         15           Vehicle Speed:         45 mph         Medium Trucks (2 Akes):         15           Site Data         Vehicle Type         Day         Evening         Night         Daily           Site Data         0.0 feet         Heavy Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Height:         0.0 feet         Heavy Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Dserver:         50.0 feet         Autos:         0.000         Medium Trucks:         2.297           Observer Height View:         90.0 feet         Autos:         0.000         Medium Trucks:         43.405           Road Grade:         0.0%         Eat View:         -90.0 degrees         Heavy Trucks:         43.405           FHWA Noise Model Calculations         Kehdel         A:34         0.79         -1.20         -4.65         0.000         0.0	Road Name: Ortega		amps									
Average Daily Traffic (Adt):         42,531 vehicles         Autos:         15           Peak Hour Percentage:         10,00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4,253 vehicles         Medium Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Heavy Trucks (3 + Axles):         15           Site Data         Autos:         75.%         12.9%         9.6%         97.42           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         50.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         0.74           Barrier Type (0-Wall, 1-Berm):         0.0         0         feet         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.74           Road Elevation:         0.0 feet         Autos:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Heavy Trucks:         43.369           Heavy Trucks:         79.45         -12.90         0.82         -1.20         -4.65         0.000         0.0 <th></th> <th>INP</th> <th>UT DATA</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>;</th> <th></th>		INP	UT DATA								;	
Peak Hour Percentage:         10.00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4.253 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Mix         Vehicle Mix           Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Autos:         77.5%         10.3%         1.84           Barrier Dist. to Barrier:         50.0 feet         Noise Source Elevations (in feet)         Noise Source Clevations (in feet)         Noise         Noise         Noise         0.0           Centerline Dist. to Barrier:         0.0 feet         Medium Trucks:         8.04         Grade Adjustment:         0.0           Road Grade:         0.0%         Lane Equivalent Distance (in feet)         Autos:         43.36           Read Elevation:         0.0 legrees         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Wabise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel	Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Peak Hour Volume:         4,253 vehicles Vehicle Speed:         Heavy Trucks (3 + Axles):         15           Vehicle Speed:         45 mph         Ste Data         Vehicle Type         Day         Evening         Night         Daily           Site Data         Vehicle Type         Day         Evening         Night         Daily           Barrier Height:         0.0 feet         Heavy Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wail, 1-Berm):         0.0         Feet         Medium Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Dbserver:         50.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Autos:         7.0000         Medium Trucks:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         43.405         1.20         -4.65         0.000         0.0           FHWA Noise Model Calculations         Vehicle Type         Left View:         90.0 degrees         Heavy Trucks:         43.405         1.20         -4.65         0.000         0.0           Medium Trucks:	Average Daily Traffic (Ad	t): 42	2,531 vehicle	s					Autos:	15		
Vehicle Speed: Near/Far Lane Distance:         45 mph 50 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Diserver:         50.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Autos:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Diserver:         0.0 feet         Autos:         0.00         Medium Trucks:         8.297         10.8%         0.74           Pad Elevation:         0.0 feet         Autos:         43.569         Medium Trucks:         43.369           Left View:         90.0 degrees         Heavy Trucks:         43.369         Medium Trucks:         43.400           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Medium Trucks:         43.400         0.00	Peak Hour Percentag	e: 10	0.00%			Me	dium Tri	ucks (2 A	xles).	15		
Near/Far Lane Distance:         50 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Bern):         0.0         Feet         Medium Trucks:         86.5%         2.7%         10.8%         0.7           Centerline Dist. to Darrier:         50.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in f	Peak Hour Volum	e: 4	,253 vehicles			He	avy Truc	cks (3+ A	xles).	15		
Near/Far Lane Distance:         50 feet         VehicleType         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.5%         97.42           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Diserver:         50.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Diserver:         50.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Diserver:         50.0 feet         Autos:         0.00         Medium Trucks:         2.297         10.8%         0.74           Observer Height (Above Pad):         5.0 feet         Autos:         0.00         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         43.589         43.40         1.20         46.5         0.000         0.0           Left View:         90.0 degrees         Right View:         90.0 degrees         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.4         4.34         0.79         -1.20         -4.65         0.000         0.0	Vehicle Spee	d:	45 mph		H	Vehicle	<i>Aix</i>					
Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         50.0 feet         Medium Trucks:         86.5%         2.7%         10.3%         1.84           Barrier Distance to Observer:         50.0 feet         Noise Source Elevations (in feet)         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         -90.0 degrees         Medium Trucks:         43.366           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten         Berrier Atten         Medium Trucks:         43.405         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -12.0         -4.65         0.000         0.0           Medium Trucks:         79.45         -16.86         0.82         -12.0         -5.43         0.000	Near/Far Lane Distanc	e:	50 feet		ŀ				Dav	Evenina	Night	Daily
Barrier Type (IV-Wall, 1-Berm):         0.0 feet         Heavy Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Diserver:         50.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)	Site Data									•	•	97.42%
Barrier Type (0-Wall, 1-Bern):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Desriver:         50.0 feet         Noise Source Elevations (in feet)         Noise Source (in feet)	Barrier Heigh	t.	0.0 feet			Me	edium Ti	rucks:	84.8%	6 4.9%	10.3%	1.84%
Centerline Dist. to Barrier:         50.0 feet           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 Grade:         0.0 feet           Road Grade:         0.0 %           Left View:         -90.0 degrees           PHWA Noise Model Calculations         Verkicle Type           Vehicle Type         REMEL         Traffic Flow           Vehicle Type         Resk         1.10           Medium Trucks:         71.20         -4.65         0.000           Medium Trucks:         71.20         -4.65         0.000         0.0           Medium Trucks:         71.20         -4.65         0.000         0.0           Medium Trucks:         73.45         -12.90         0.82         -12.0         -4.65         0.000         0.0           Medium Trucks:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         67.0         65.6         57.8         66.2         66           Vehicle Type         Leg Peak Hour         Leg Day         Leg Vening         <						ŀ	leavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dist. to Observer:         5.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         2.297           Pad Elevation:         0.0 feet         Let View:         90.0 feet           Road Grade:         0.0%         Let View:         90.0 degrees           FHWA Noise Model Calculations         Vehicle Type         RedMet         Traffic Flow           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten           Heavy Trucks:         84.25         -12.0         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -1.20         -5.43         0.000         0.0           Medium Trucks:         72.4         70.5         68.7         62.7         71.3         77           Medium Trucks:         62.2         64.7         58.3         56.8         65.2         66           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4		·			-	Noine Co	uree El	ovotiona	lin f	oot)		
Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment: 0.0           Pad Elevation:         0.0 feet         Lat View:         8.004         Grade Adjustment: 0.0           Road Grade:         0.0%         Lat Equivalent Distance (in feet)         Lat View:         4.005           Left View:         -90.0 degrees         Medium Trucks:         43.396         Heavy Trucks:         43.405           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berner Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -120         -4.67         0.000         0.0           Medium Trucks:         84.25         -16.86         0.82         -120         -4.67         0.000         0.0           Unittigated Noise Levals (without Topo and barrier attenuation)         Uvenicitype         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:	Centerline Dist. to Observe	er:	50.0 feet		+	Noise 30				eel)		
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Let View:         90.0 degrees         Autos:         43.589         Autos:         43.589           Lett View:         90.0 degrees         Medium Trucks:         43.386         Heavy Trucks:         43.405           FHWA Noise Model Calculations         90.0 degrees         Finite Road         Fressel         Barrier Atten         Berm Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -1.20         -5.43         0.000         0.0           Unnitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leg Deak Hour         Leg Evening         Leg Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         77           Medium Trucks:         67.0         65.6         57.8         65.2         66           Vehicle Type         Leg Deak Hour         Leg Deay         Leg Deak         65.6         65.6         65.6         65.6	Barrier Distance to Observe	er:	0.0 feet			Madius						
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Matter Distance (in feet)           Left View:         -90.0 degrees         Medium Trucks:         43.569           Right View:         -90.0 degrees         Medium Trucks:         43.386           PHWA Noise Model Calculations         Heavy Trucks:         43.405           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berner Atten           Vehicle Type         REMEL         Traffic Flow         Distance         1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -12.0         -4.67         0.000         0.0           Medium Trucks:         84.25         -16.66         0.82         -12.0         -5.43         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         7	Observer Height (Above Pag	1):	5.0 feet							Grade Adi	istment	0.0
Road Grade:         0.0%         Autos:         43.589           Left View:         -90.0 degrees         Medium Trucks:         43.386           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Medium Trucks:         79.45         -12.90         0.82         -1.20         -4.65         0.000         0.0           Heavy Trucks:         84.25         -16.86         0.82         -1.20         -4.67         0.000         0.0           Untitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leg Peak Hour         Leg Aby         Leg Evening         Leg Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           <	Pad Elevatio	n:	0.0 feet			neav	y muck	s. o.u	104	Oracic Haji	Journenie.	0.0
Left View:         -90.0 degrees         Medium Trucks:         43.386           Right View:         90.0 degrees         Heavy Trucks:         43.405           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berma Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -12.0         -4.67         0.000         0.0           Heavy Trucks:         84.25         -16.86         0.82         -12.0         -5.43         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         77           Medium Trucks:         67.0         65.6         56.8         65.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)	Road Elevatio	n:	0.0 feet			Lane Equ	ivalent	Distanc	e (in	feet)		
Right View:         90.0 degrees         Heavy Trucks:         43.405           FHWA Noise Model Calculations         Enter Name         Finite Road         Fresnel         Barrier Atten         Berm Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -112.90         0.82         -1.20         -5.43         0.000         0.0           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Evening         Leq Night         Ldn         CNEL           VehicleType         Leq Deak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         77           Medium Trucks:         66.2         64.7         58.3         56.6         65.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)         Enterine         56 dB	Road Grad	e:	0.0%				Auto	s: 43.5	589			
FHWA Noise Model Calculations         Finite Road         Freshel         Barrier Atten         Berm Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Freshel         Barrier Atten         Berm Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -1.20         -4.87         0.000         0.0           Heavy Trucks:         84.25         -16.86         0.82         -1.20         -5.43         0.000         0.0           Unnitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73 <t< td=""><td>Left Vie</td><td>W: -</td><td>-90.0 degree</td><td>s</td><td></td><td></td><td></td><td></td><td>386</td><td></td><td></td><td></td></t<>	Left Vie	W: -	-90.0 degree	s					386			
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -1.20         -4.67         0.000         0.0           Heavy Trucks:         84.25         -16.86         0.82         -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           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         77           Centerline Distance to Noise Contour (in feet)	Right Vie	N:	90.0 degree	s		Heav	y Truck	s: 43.4	105			
Autos:         68.46         4.34         0.79         -1.20         -4.65         0.000         0.0           Medium Trucks:         79.45         -12.90         0.82         -1.20         -4.65         0.000         0.0           Heavy Trucks:         79.45         -12.90         0.82         -1.20         -4.67         0.000         0.0           Unmitigated Noise Levels (without Top can ab harrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)	FHWA Noise Model Calculat	ions										
Medium Trucks:         79.45         -12.90         0.82         -1.20         -4.87         0.000         0.0           Heavy Trucks:         64.25         -16.86         0.82         -1.20         -5.43         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)         Use Evening         Leq Rolph         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Rolph         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         77           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.5         56.6         57.8         65.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)         Image: Contour (in feet)	VehicleType REMEL	7	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Atte	n Ben	n Atten
Heavy Trucks:         84.25         -16.86         0.82         -1.20         -5.43         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Matos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)		.46	4.34		0.7	79	-1.20		-4.65	0.0	00	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)												0.000
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)	Heavy Trucks: 84	.25	-16.86		0.8	32	-1.20		-5.43	0.0	00	0.000
Autos:         72.4         70.5         68.7         62.7         71.3         71           Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)				barrie								
Medium Trucks:         66.2         64.7         58.3         56.8         65.2         66           Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)					Leq E	•	Leq			-		
Heavy Trucks:         67.0         65.6         56.6         57.8         66.2         66           Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)												71.9
Vehicle Noise:         74.2         72.5         69.3         64.7         73.2         73           Centerline Distance to Noise Contour (in feet)												65.4
Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         81												66.3
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 82 176 379 81		=		2.5		69.3		64.7		73.2		73.7
Ldn: 82 176 379 81	Centerline Distance to Nois	e Con	tour (in feet)		70	-104	07	-10.4		CO -/D 4		-10.4
			,	L	70		65				55	
												818
UNEL. 00 105 401 01			CN	IEL:		88		189		407		877

	FHWA-RD	0-77-108 HIGH	IWAY N	OISE	PREDIC	TION M	ODEL (9/1	2/202	1)		
Road Nan	rio: BO ne: Ortega Hwy ent: w/o I-5 SB I						Name: El ( umber: 155		io SPA		
SITE	SPECIFIC IN	PUT DATA				N	IOISE MO	DEL	INPUT	5	
Highway Data				S	Site Con	ditions	(Hard = 10	, Soft	= 15)		
Average Daily	Traffic (Adt):	41,774 vehicle	es				Au	tos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tri	ucks (2 Axl	es):	15		
Peak H	our Volume:	4,177 vehicles	s		He	avy Tru	cks (3+ Axle	es):	15		
Ve	ehicle Speed:	45 mph		L.	/ehicle I	liv					
Near/Far La	ane Distance:	50 feet		-		cleType	Da	W F	vening	Night	Daily
Site Data					veni			.5%	12.9%	9.6%	
						, dium Ti		.8%	4.9%	10.3%	
	rrier Height:	0.0 feet				leavy Ti		.5%	2.7%	10.3%	
Barrier Type (0-V	. ,	0.0				icavy n	<i>ucho.</i> 00	.070	2.170	10.070	0.747
	ist. to Barrier:	50.0 feet		٨	loise So	urce El	evations (i	in feel	t)		
Centerline Dist.		50.0 feet				Auto	s: 0.000	)			
Barrier Distance		0.0 feet			Mediur	n Truck	s: 2.297	7			
Observer Height	, ,	5.0 feet			Heav	y Truck	s: 8.004	1 G	Grade Adj	iustment.	0.0
-	ad Elevation: ad Elevation:	0.0 feet			ano Equ	uvalon	Distance	(in for	o.fl		
	ad Elevation: Road Grade:	0.0 feet		-	ane Ly	Auto			ey		
	Left View:	0.0%			Madiu	n Truck					
		-90.0 degree				y Truck		-			
	Right View:	90.0 degree	es		Ticav	y much	5. 43.40;	5			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Ba	arrier Atte	en Ber	m Atten
Autos:	68.46	4.26		0.79	9	-1.20	-4.	65	0.0	000	0.000
											0.000
Medium Trucks:	79.45	-12.98		0.82	2	-1.20	-4.	87	0.0	000	0.000
Medium Trucks: Heavy Trucks:		-12.98 -16.94		0.82 0.82				87 43	0.0 0.0		
Heavy Trucks:	84.25	-16.94		0.82	2	-1.20					
Heavy Trucks: Unmitigated Nois VehicleType	84.25 <b>e Levels (with</b> Leq Peak Hou	-16.94 out Topo and r Leq Day	barrier	0.82	2 uation) rening	-1.20 -1.20	-5. Night	43	0.0	000 C/	0.000
Heavy Trucks: Unmitigated Nois VehicleType Autos:	84.25 e Levels (with Leq Peak Hou 72	-16.94 put Topo and r Leq Day .3	barrier / L 70.4	0.82 attenu	2 uation) rening 68.6	-1.20 -1.20	-5. Night 62.6	43	0.0 .dn 71.2	000 CI	0.000 VEL 71.8
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	84.25 e Levels (with Leq Peak Hou 72 66	-16.94 <b>Dut Topo and</b> r Leq Day .3 .1	barrier / L 70.4 64.6	0.82 attenu	2 vening 68.6 58.2	-1.20 -1.20	-5. Night 62.6 56.7	43	0.0 .dn 71.2 65.1	2	0.000 VEL 71.8 65.4
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	84.25 e Levels (with Leq Peak Hou 72 66 66	-16.94 <b>out Topo and</b> r Leq Day .3 .1 .9	barrier 70.4 64.6 65.5	0.82 attenu	2 vening 68.6 58.2 56.5	-1.20 -1.20	-5. Night 62.6 56.7 57.7	43	0.0 .dn 71.2 65.1 66.1	000 <i>CI</i> 2	0.000 VEL 71.8 65.4 66.2
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	84.25 e Levels (with Leq Peak Hou 72 66 66	-16.94 <b>out Topo and</b> r Leq Day .3 .1 .9	barrier / L 70.4 64.6	0.82 attenu	2 vening 68.6 58.2	-1.20 -1.20	-5. Night 62.6 56.7	43	0.0 .dn 71.2 65.1	000 <i>CI</i> 2	0.000 VEL 71.8 65.4 66.2
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	84.25 e Levels (with Leq Peak Hou 72 66 66 66	-16.94 out Topo and r Leq Day .3 .1 .9 .2	barrier 70.4 64.6 65.5 72.4	0.82 attenu Leq Ev	2 vening 68.6 58.2 56.5 69.3	-1.20 -1.20 Leq	-5. Night 62.6 56.7 57.7 64.6	43 L	0.0 .dn 71.2 65.1 66.1 73.1	000	0.000 VEL 71.8 65.4 66.2 73.6
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	84.25 e Levels (with Leq Peak Hou 72 66 66 66	-16.94 <b>Dut Topo and</b> r Leq Day 3 .1 .9 .2 Dutour (in feet	barrier 70.4 64.6 65.5 72.4	0.82 attenu	2 vening 68.6 58.2 56.5 69.3	-1.20 -1.20 Leq	-5. Night 62.6 56.7 57.7 64.6 dBA	43 L	0.0 .dn 71.2 65.1 66.1 73.1 dBA	000 <i>CI</i> 2 1 55	0.000 NEL 71.8 65.4 66.2 73.6 dBA
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	84.25 e Levels (with Leq Peak Hou 72 66 66 66	-16.94 <b>but Topo and</b> r Leq Day 3 .1 .9 .2 Intour (in feet,	barrier 70.4 64.6 65.5 72.4	0.82 attenu Leq Ev	2 vening 68.6 58.2 56.5 69.3	-1.20 -1.20 Leq	-5. Night 62.6 56.7 57.7 64.6	43 L	0.0 .dn 71.2 65.1 66.1 73.1	000 C/ 2 1 55	71.8 65.4 66.2 73.6

FHWA-R	D-77-108 HIGHWA		E PREDIC		ODEL (9	12/202	:1)	
Scenario: BOP Road Name: Ortega Hw Road Segment: w/o I-5 SB					Name: E umber: 1		no SPA	
SITE SPECIFIC II	NPUT DATA			N	OISE M	ODEL	INPUTS	6
Highway Data			Site Con	ditions	'Hard = 1	0, Sofi	t = 15)	
Average Daily Traffic (Adt):	42,531 vehicles				A	utos:	15	
Peak Hour Percentage:	10.00%		Me	dium Tru	icks (2 A	(les):	15	
Peak Hour Volume:	4,253 vehicles		He	avy Truc	ks (3+ A)	(les):	15	
Vehicle Speed:	45 mph		Vehicle I	Mix				
Near/Far Lane Distance:	50 feet			icleType	1	av E	venina	Night Daily
Site Data						7.5%	12.9%	9.6% 97.42
Barrier Height:	0.0 feet		Me	edium Tr	ucks: 8	4.8%	4.9%	10.3% 1.84
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	leavy Tr	ucks: 8	6.5%	2.7%	10.8% 0.74
Centerline Dist. to Barrier:	50.0 feet						0	
Centerline Dist. to Observer:	50.0 feet		Noise So				t)	
Barrier Distance to Observer:	0.0 feet			Autos				
Observer Height (Above Pad):	5.0 feet			m Trucks			Crada Adi	ustment: 0.0
Pad Elevation:	0.0 feet		Heav	y Trucks	. 8.0	J4 C	siaue Auj	usument. 0.0
Road Elevation:	0.0 feet		Lane Equ	uivalent	Distance	e (in fe	et)	
Road Grade:	0.0%			Autos	: 43.5	89		
Left View:	-90.0 degrees		Mediur	n Trucks	: 43.3	86		
Right View:	90.0 degrees		Heav	y Trucks	: 43.4	05		
FHWA Noise Model Calculation	is							
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	I B	arrier Atte	en Berm Atter
Autos: 68.46			79	-1.20		4.65	0.0	
Medium Trucks: 79.45			82	-1.20		4.87	0.0	
Heavy Trucks: 84.25	-16.86	0.	82	-1.20	-	5.43	0.0	00 0.0
Unmitigated Noise Levels (with		rier atte	nuation)					
VehicleType Leq Peak Ho			Evening	Leq	•	L	.dn	CNEL
	2.4 70.5	-	68.7		62.7		71.3	
	6.2 64.3		58.3		56.8		65.2	
	7.0 65.0	•	56.6		57.8		66.2	
Vehicle Noise: 74	4.2 72.5	5	69.3		64.7		73.2	73
Centerline Distance to Noise C	ontour (in feet)			05	0.4		-/0.4	55 JD 1
	I ala		dBA	65 0		60	dBA	55 dBA
	Ldn CNEL		82		176		379 407	81 87
	CNEL		88		189		407	87

	FHWA-RD	-77-108 HIGH	NAY N	NOISE F	REDICTI	ON MC	DDEL (	9/12/20	021)		
Scenario: Road Name:	EP (With Fo Ortega Hwy					roject N Job Nu			nino SPA		
Road Segment:	w/o I-5 SB F	Ramps									
SITE SP	ECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				Si	te Condi	tions (I	Hard =	10, So	oft = 15)		
Average Daily Tra	ffic (Adt):	37,506 vehicle	s					Autos:	15		
Peak Hour Pe	rcentage:	10.00%			Media	ım Truc	cks (2 /	Axles):	15		
Peak Hou	r Volume:	3,751 vehicles			Heav	y Truck	(3+ /	Axles):	15		
Vehici	le Speed:	45 mph		V	ehicle Mi	<i>,</i>					
Near/Far Lane	Distance:	50 feet		E F	Vehicl			Day	Evening	Night	Daily
Site Data							itos:	77.5%		9.6%	
Barria	r Height:	0.0 feet			Med	ium Tru	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall,	•	0.0			He	avy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. t	,	50.0 feet						- 6 *	-41		
Centerline Dist. to 0		50.0 feet		N	oise Sou				et)		
Barrier Distance to		0.0 feet				Autos:		000			
Observer Height (Ab	ove Pad):	5.0 feet			Medium			297	Out de Au		
Pad I	Elevation:	0.0 feet			Heavy	Trucks:	8.	004	Grade Ad	justinent.	0.0
Road I	Elevation:	0.0 feet		La	ane Equiv	alent l	Distan	ce (in f	feet)		
Roa	ad Grade:	0.0%				Autos:	43.	589			
I	Left View:	-90.0 degree	s		Medium	Trucks:	43.	386			
Ri	ight View:	90.0 degree	s		Heavy	Trucks:	43.	405			
FHWA Noise Model C											
	REMEL	Traffic Flow	Dist	ance	Finite R		Fresr		Barrier Att		m Atten
Autos:	68.46	3.79		0.79		1.20		-4.65		000	0.00
Medium Trucks:	79.45	-13.45		0.82		1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-17.40		0.82		1.20		-5.43	0.0	000	0.00
Unmitigated Noise Le											
	q Peak Hou			Leq Eve		Leq N	•		Ldn		VEL
Autos:	71.	-	69.9		68.2		62.1		70.		71.
Medium Trucks:	65.	-	64.1		57.8		56.2		64.		64.
Heavy Trucks:	66.		35.0		56.0		57.3		65.		65.
Vehicle Noise:	73.		71.9		68.8		64.1	1	72.	(	73.
Centerline Distance t	o Noise Co	ntour (in feet)		70 dF	24	65 d	DA.	6	0 dBA	FF	dBA
			dn:	10 01	5A 75	05 a	BA 162	-	<i>и ав</i> а 349		ава 75:
			IEL:		75 81		162		349		754 806

Monday, December 4, 2023

FHWA	-RD-77-1	08 HIGHW	AY NOIS	E PREDIC	TION MO	ODEL (9/12	2/2021)	
Scenario: EC (Wit Road Name: Ortega Road Segment: w/o I-5	Hwy.					Name: El C Imber: 155	amino SPA 34	
SITE SPECIFIC	INPUT	DATA					DEL INPUTS	1
Highway Data				Site Con	ditions (	Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt	): 41,77	4 vehicles				Auto	os: 15	
Peak Hour Percentage	e: 10.00	0%		Me	dium Tru	cks (2 Axle	s): 15	
Peak Hour Volum	e: 4,177	7 vehicles		He	avy Truc	ks (3+ Axle	s): 15	
Vehicle Speed	d: 45	5 mph		Vehicle I	Mix			
Near/Far Lane Distance	e: 50	) feet			icleType	Day	/ Evening	Night Dail
Site Data						utos: 77.	•	9.6% 97.42
Barrier Heigh	t: 0.	0 feet		Me	edium Tru	ucks: 84.	8% 4.9%	10.3% 1.84
Barrier Type (0-Wall, 1-Berm				F	leavy Tru	ucks: 86.	5% 2.7%	10.8% 0.74
Centerline Dist. to Barrie	·	0 feet		Noiso Sa		vations (ir	foot	
Centerline Dist. to Observe	er: 50.	.0 feet		NUISE 30	Autos		i ieetj	
Barrier Distance to Observe	er: 0.	.0 feet		Madiu	n Trucks	. 0.000		
Observer Height (Above Pad	<i>):</i> 5.	0 feet			v Trucks		Grade Adii	ustment: 0.0
Pad Elevatio	n: 0.	.0 feet						
Road Elevation	n: 0.	.0 feet		Lane Equ	uivalent	Distance (I	in feet)	
Road Grad		%			Autos			
Left View		0 degrees			n Trucks			
Right View	<i>v:</i> 90.	.0 degrees		Heav	y Trucks	43.405		
FHWA Noise Model Calculat	ions			1				
VehicleType REMEL	Traff	ic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atte
	.46	4.26		.79	-1.20	-4.6	65 0.00	0.0
	.45	-12.98		.82	-1.20	-4.8		
Heavy Trucks: 84	.25	-16.94	0	.82	-1.20	-5.4	13 0.00	00 0.0
Unmitigated Noise Levels (w	ithout To	opo and ba	arrier atte	enuation)				
VehicleType Leq Peak		Leq Day		Evening	Leq N	•	Ldn	CNEL
Autos:	72.3		).4	68.6		62.6	71.2	7
Medium Trucks:	66.1		1.6	58.2		56.7	65.1	
Heavy Trucks:	66.9		5.5	56.5		57.7	66.1	6
Vehicle Noise:	74.2	72	2.4	69.3		64.6	73.1	73
Centerline Distance to Noise	e Contour	r (in feet)				ġ.		
				0 dBA	65 d		60 dBA	55 dBA
		10	in:	81		174	375	8
		CNE		87		187	402	8

		0-77-108 HIGH									
Road Nar	rio: ECP (With me: Ortega Hwy ent: w/o I-5 SB I	<i>.</i>					Name: umber:		nino SPA		
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE		s	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)	-	
Average Daily	Traffic (Adt):	42.531 vehicle	es					Autos:	15		
• •	r Percentage:	10.00%			Me	dium Tri	ucks (2 )	Axles):	15		
Peak I	Hour Volume:	4,253 vehicle	s		He	avy Tru	cks (3+ )	Axles):	15		
Ve	ehicle Speed:	45 mph			Vehicle I	liv					
Near/Far La	ane Distance:	50 feet		- H		cleType		Day	Evening	Night	Daily
Site Data				-	VCIII		Autos:	77.5%	•		97.429
					M	, edium Ti		84.8%		10.3%	1.849
	arrier Height:	0.0 feet				leavy Ti		86.5%		10.8%	0.749
Barrier Type (0-V	. ,	0.0			'	icavy ii	acho.	00.07	2.170	10.070	0.747
	ist. to Barrier:	50.0 feet		1	Noise So	urce El	evation	s (in fe	eet)		
Centerline Dist.		50.0 feet				Auto	s: 0.	000			
Barrier Distance		0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height	, ,	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	iustment:	0.0
	Pad Elevation:	0.0 feet			Lane Equ	in colorad	Distan	aa (in	fa a tì		
Ro	ad Elevation:	0.0 feet		-	Lane Equ				eel)		
	Road Grade:	0.0%				Auto		589			
	Left View:	-90.0 degree				n Truck		386			
	Right View:	90.0 degre	es		Heav	y Truck	5. 43.	405			
FHWA Noise Mod	lel Calculation	s									
14.1.1.7			0.1								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Venicie I ype Autos:		Traffic Flow 4.34	Dista	nce 0.79		Road -1.20	Fresr	nel -4.65		en Ben 000	
	68.46		Dista		9		Fresr		0.0		0.00
Autos	68.46 79.45	4.34	Dista	0.79	9	-1.20	Fresr	-4.65	0.0 0.0	000	0.00
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	4.34 -12.90 -16.86		0.79 0.82 0.82	9 2 2	-1.20 -1.20	Fresr	-4.65 -4.87	0.0 0.0	000	0.00
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	4.34 -12.90 -16.86 Dut Topo and	barrier	0.79 0.82 0.82 atten	9 2 2	-1.20 -1.20 -1.20	Fresr	-4.65 -4.87	0.0 0.0	000 000 000	0.00 0.00 0.00
Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Nois</b>	68.46 79.45 84.25 <b>e Levels (with</b> Leq Peak Hou	4.34 -12.90 -16.86 <b>put Topo and</b> r Leq Day	barrier	0.79 0.82 0.82 atten	9 2 2 <i>uation)</i>	-1.20 -1.20 -1.20		-4.65 -4.87 -5.43	0.0 0.0 0.0	000 000 000 <i>CI</i>	0.00 0.00 0.00
Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Nois</b> VehicleType	68.46 79.45 84.25 <b>e Levels (with</b> Leq Peak Hou	4.34 -12.90 -16.86 out Topo and r Leq Day .4	barrier a	0.79 0.82 0.82 atten	9 2 2 <b>uation)</b> vening	-1.20 -1.20 -1.20	Night	-4.65 -4.87 -5.43	0.0 0.0 0.0	000 000 000 <i>CI</i> 3	0.00 0.00 0.00
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25 e Levels (with Leg Peak Hou 72 66 67	4.34 -12.90 -16.86 <b>out Topo and</b> r Leq Day .4 .2 .0	barrier 6 70.5 64.7 65.6	0.79 0.82 0.82 atten	9 2 2 <i>uation)</i> <i>vening</i> 68.7	-1.20 -1.20 -1.20	Night 62.7	-4.65 -4.87 -5.43 7 8	0.0 0.0 <i>Ldn</i> 71.3 65.2 66.4	2000 2000 2000 2000 2000 2000 2000 200	0.00 0.00 0.00 NEL 71. 65. 66.
Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Nois</b> VehicleType Autos: Medium Trucks:	68.46 79.45 84.25 e Levels (with Leg Peak Hou 72 66 67	4.34 -12.90 -16.86 <b>out Topo and</b> r Leq Day .4 .2 .0	<i>barrier</i> / L 70.5 64.7	0.79 0.82 0.82 atten	9 2 2 <i>uation)</i> <i>vening</i> 68.7 58.3	-1.20 -1.20 -1.20	Night 62.7 56.4	-4.65 -4.87 -5.43 7 8	0.0 0.0 0.0 <i>Ldn</i> 71.3 65.3	2000 2000 2000 2000 2000 2000 2000 200	0.00 0.00 0.00 NEL 71. 65. 66.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	68.46 79.45 84.25 <b>E Levels (with</b> Leg Peak Hou 72 66 67 74	4.34 -12.90 -16.86 <b>Dut Topo and</b> r Leq Day .4 .2 .2 .2	<i>barrier</i> 70.5 64.7 65.6 72.5	0.79 0.82 0.82 atten	9 2 2 <i>vening</i> 68.7 58.3 56.6	-1.20 -1.20 -1.20	Night 62.1 56.1 57.1	-4.65 -4.87 -5.43 7 8	0.0 0.0 <i>Ldn</i> 71.3 65.2 66.4	000 000 000 3 2 2 2	0.000 0.000 VEL 71.: 65.: 66.: 73.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	68.46 79.45 84.25 <b>E Levels (with</b> Leg Peak Hou 72 66 67 74	4.34 -12.90 -16.86 <b>but Topo and</b> r Leg Day .4 .2 .0 .2 <b>but Copo and</b> r Leg Day .4 .2 .0 .0	barrier ( 70.5 64.7 65.6 72.5	0.79 0.82 0.82 atten	9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-1.20 -1.20 -1.20 <i>Leq</i>	Night 62. 56. 57. 64.	-4.65 -4.87 -5.43 7 8 8 7	0.0 0.0 0.0 71.3 65.2 66.2 73.2	2000 2000 2000 2000 22 22 22 22 22 22 22	0.000 0.000 NEL 71.9 65.4 66.3 73.7
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25 <b>E Levels (with</b> Leg Peak Hou 72 66 67 74	4.34 -12.90 -16.86 <u>out Topo and</u> <u>r Leq Day</u> .4 .2 .0 .2 .2 .0 .2 .2	<i>barrier</i> 70.5 64.7 65.6 72.5	0.79 0.82 0.82 attent .eq Ev	9 2 2 <i>vening</i> 68.7 58.3 56.6 69.3	-1.20 -1.20 -1.20 <i>Leq</i>	Night 62. 56. 57. 64.	-4.65 -4.87 -5.43 7 8 3 7	0.0 0.0 0.0 71.3 65.2 66.2 73.2	2000 2000 2000 22 22 22 22 255	0.000 0.000 VEL 71.9 65.4 66.3 73.7

FHWA-	RD-77-108 HIGI	HWAY NO		CTION MO	ODEL (9/1	2/2021)	
Scenario: BO (With Road Name: Ortega H Road Segment: w/o I-5 S	wy.				Name: El Imber: 15	Camino SPA 534	
SITE SPECIFIC	INPUT DATA			N	OISE MO	DEL INPUT	s
Highway Data			Site Cor	ditions (	Hard = 10	), Soft = 15)	
Average Daily Traffic (Adt)	41,774 vehic	les			Au	tos: 15	
Peak Hour Percentage	10.00%		Me	edium Tru	cks (2 Axl	es): 15	
Peak Hour Volume	4,177 vehicle	es	He	avy Truc	ks (3+ Axl	es): 15	
Vehicle Speed	45 mph		Vehicle	Mix			
Near/Far Lane Distance	50 feet			icleType	Dá	av Evenina	Night Daily
Site Data						.5% 12.9%	9.6% 97.429
Barrier Height	0.0 feet		М	edium Tru	ucks: 84	.8% 4.9%	10.3% 1.849
Barrier Type (0-Wall, 1-Berm)				Heavy Tru	ucks: 86	6.5% 2.7%	10.8% 0.74%
Centerline Dist. to Barrier			Noise O			f 4)	
Centerline Dist. to Observer	50.0 feet		Noise S	Autos	vations (	,	
Barrier Distance to Observer	0.0 feet		Madiu	Autos m Trucks			
Observer Height (Above Pad)	5.0 feet			vy Trucks		-	justment: 0.0
Pad Elevation	0.0 feet		Tiea	y mucks	. 0.00	4 0/200 Auj	usunent. 0.0
Road Elevation	0.0 feet		Lane Eq	uivalent	Distance	(in feet)	
Road Grade	0.0%			Autos	: 43.58	9	
Left View	-90.0 degre	es		m Trucks		-	
Right View	90.0 degre	es	Hea	vy Trucks	: 43.40	5	
FHWA Noise Model Calculation	ons						
VehicleType REMEL	Traffic Flow	Distand		Road	Fresnel	Barrier Att	
Autos: 68.4			0.79	-1.20			00.00
Medium Trucks: 79.4			0.82	-1.20			0.00
Heavy Trucks: 84.3	25 -16.94	ļ.	0.82	-1.20	-5	.43 0.0	00.00
Unmitigated Noise Levels (wi		barrier at	tenuation)				
VehicleType Leq Peak H			q Evening	Leg N		Ldn	CNEL
	72.3	70.4	68.6		62.6	71.2	- · · ·
	66.1	64.6	58.2		56.7	65.1	
	66.9	65.5	56.5		57.7	66.1	
Vehicle Noise:	74.2	72.4	69.3		64.6	73.1	1 73.
Centerline Distance to Noise	Contour (in fee			05			55 10 4
		Ldn:	70 dBA	65 d		60 dBA	55 dBA
	~	Lan: NEL:	81		174 187	375 402	
	Ĺ	NNEL.	87		187	402	867

	FHWA-RD	0-77-108 HIGH	IWAY	NOISE F	REDICTION	MODEL	. (9/12/2	021)		
Road Nam	io: BOP (With ne: Ortega Hwy nt: w/o I-5 SB I	<i>,</i> <i>,</i>				ect Name Numbe		nino SPA		
SITE	SPECIFIC IN	IPUT DATA				NOISE		L INPUT	s	
Highway Data				Si	ite Conditio	s (Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	42,531 vehicle	es				Autos.	15		
• •	Percentage:	10.00%			Medium	Trucks (.	2 Axles).	15		
	lour Volume:	4.253 vehicle	s		Heavy 7	rucks (3	+ Axles).	15		
Ve	hicle Speed:	45 mph		14			,			
Near/Far La	ne Distance:	50 feet		V	ehicle Mix		0	<b>E</b> uranian	h li a la t	Deile
0.4- 0-4-					VehicleTy	pe Autos:	Day 77.5%	Evening 12.9%	Night 9.6%	Daily 97.429
Site Data					Madium	Trucks:				
	rrier Height:	0.0 feet				Trucks: Trucks:			10.3%	1.849
Barrier Type (0-W	. ,	0.0			Heavy	Trucks:	86.5%	2.7%	10.8%	0.74
Centerline Di		50.0 feet		N	oise Source	Elevatio	ons (in f	eet)		
Centerline Dist.		50.0 feet			AL	tos:	0.000			
Barrier Distance		0.0 feet			Medium Tru	cks:	2.297			
Observer Height	,	5.0 feet			Heavy Tru	cks:	8.004	Grade Ad	justment.	0.0
	ad Elevation:	0.0 feet		-						
	ad Elevation:	0.0 feet		La	ane Equivale			feet)		
	Road Grade:	0.0%					3.589			
	Left View:	-90.0 degree			Medium Tru		3.386			
	Right View:	90.0 degre	es		Heavy Tru	cks: 4	3.405			
FHWA Noise Mod	el Calculation:	s								
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	4.34		0.79	-1.2	0	-4.65	0.	000	0.00
Medium Trucks:	79.45	-12.90		0.82	-1.2	0	-4.87	0.	000	0.00
Heavy Trucks:	84.25	-16.86		0.82	-1.2	0	-5.43	0.	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er attenu	ation)					
VehicleType	Leq Peak Hou			Leq Eve	ening Le	eq Night		Ldn		VEL
Autos:	72		70.5		68.7		2.7	71.		71
Medium Trucks:	66		64.7		58.3		6.8	65.		65.
Heavy Trucks:	67	-	65.6		56.6		7.8	66.		66
Vehicle Noise:	74		72.5		69.3	6	4.7	73.	2	73
Centerline Distan	ce to Noise Co	ontour (in feet	)	=0.0						
			1.1.1	70 dE		5 dBA		50 dBA	1	dBA
			Ldn:		82	1	76	379	)	81
		-	NEL		88		89	407		87

Monday, December 4, 2023

Scenario: E Road Name: Ortega Hwy. Road Segment: at I-5 Fwy. Overpass	Project Name: El Camino SPA Job Number: 15534
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 39,479 vehicles	Autos: 15
Peak Hour Percentage: 10.00%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 3,948 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 72 feet	VehicleType Day Evening Night Da
Site Data	Autos: 77.5% 12.9% 9.6% 97.4
Barrier Height: 0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.8
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.7
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 Adjustment: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 35.057
Left View: -90.0 degrees	Medium Trucks: 34.804
Right View: 90.0 degrees	Heavy Trucks: 34.828
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance	Finite Road Fresnel Barrier Atten Berm Att
	21 -1.20 -4.65 0.000 0
	26 -1.20 -4.87 0.000 0
Heavy Trucks: 84.25 -17.18 2	25 -1.20 -5.43 0.000 0
Unmitigated Noise Levels (without Topo and barrier att	
	Evening Leq Night Ldn CNEL
Autos: 73.5 71.6	69.8 63.8 72.4
Medium Trucks: 67.3 65.8	59.4 57.9 66.3
Heavy Trucks: 68.1 66.7	57.7 58.9 67.3
Vehicle Noise: 75.3 73.6	70.4 65.8 74.3
Centerline Distance to Noise Contour (in feet)	
-	dBA 65 dBA 60 dBA 55 dBA
Ldn: CNEL:	97 209 449 104 224 482 1
CNEL:	104 224 482 1,

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC		IODEL (9/	12/20	21)		
	rio: EP ne: Ortega Hwy ent: at I-5 Fwy.						Name: El lumber: 15		ino SPA		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE M	DDE		s	
Highway Data				5	Site Con	ditions	(Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	39,972 vehicle	es				A	ıtos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 Ax	les):	15		
Peak I	lour Volume:	3,997 vehicle	s		He	avy Tru	cks (3+ Ax	les):	15		
Ve	ehicle Speed:	45 mph			/ehicle I	Niv					
Near/Far La	ane Distance:	72 feet		F		cleType		ay	Evening	Night	Daily
Site Data					10/1			a. <del>)</del> 7.5%	12.9%	9.6%	
Be	rrier Height	0.0 feet			Me	edium T		4.8%		10.3%	
ва Barrier Type (0-V	rrier Height:	0.0 Teet				leavy T		6.5%		10.8%	
	ist. to Barrier:	50.0 feet									
Centerline Dist.		50.0 feet		1	Voise So		levations	_	et)		
Barrier Distance		0.0 feet				Auto					
Observer Height		5.0 feet				n Truck			~		
•	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.00	14	Grade Adj	ustment	: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distance	(in f	eet)		
	Road Grade:	0.0%				Auto	s: 35.08	57			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 34.80	)4			
	Right View:	90.0 degree	es		Heav	y Truck	s: 34.82	28			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fresne		Barrier Atte	en Ber	m Atter
Autos:	68.46	4.07		2.2	1	-1.20	-4	1.65	0.0	000	0.00
Medium Trucks:	79.45	-13.17		2.26	6	-1.20	-4	1.87	0.0	000	0.00
Heavy Trucks:	84.25	-17.13		2.25	5	-1.20	-{	5.43	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atten	uation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:			71.6		69.9		63.8		72.4		73
Medium Trucks:			65.8		59.5		57.9		66.4		66
Heavy Trucks:			66.8		57.7		59.0		67.3		67
Vehicle Noise:			73.6		70.5		65.8		74.4	1	74
Centerline Distan	ce to Noise Co	ontour (in feet	)	70 -	10.4	05	-10.4		0 -10 4		-10.4
			1 -	70 a		65	dBA	6	0 dBA		dBA
			Ldn: NEL:		98 105		210 226		453		97
		C	VEL:		105		226		486		1,04

	FHWA-RD	)-77-108 HIGH	WAY NO			IODEL (9	/12/20	021)		
Scenari Road Nam Road Segmer	e: Ortega Hwy					Name: E lumber: 1		iino SPA		
	SPECIFIC IN	PUT DATA						L INPUTS	6	
Highway Data				Site Cor	nditions	(Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	43,617 vehicle	s				utos:	15		
Peak Hour	Percentage:	10.00%				ucks (2 A		15		
		4,362 vehicles	5	He	eavy Tru	cks (3+ A.	xles):	15		
	nicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	72 feet		Veh	nicleType		Dav	Evening	Night	Daily
Site Data						Autos: 7	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet		M	ledium T	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0			Heavy T	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	50.0 feet		Noine C	ouroo El	evations	lin fa	of)		
Centerline Dist. I	o Observer:	50.0 feet		NOISE 3	Auto			el)		
Barrier Distance t	o Observer:	0.0 feet		Madiu	Auto m Truck					
Observer Height ()	Above Pad):	5.0 feet			vv Truck			Grade Adji	ictment	0.0
Pa	d Elevation:	0.0 feet		nea	vy muck	s. o.u	04	Graue Auji	Jauneni	0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalen	Distance	e (in f	'eet)		
F	Road Grade:	0.0%			Auto	s: 35.0	57			
	Left View:	-90.0 degree	s	Mediu	m Truck	s: 34.8	04			
	Right View:	90.0 degree	s	Hea	vy Truck	s: 34.8	28			
FHWA Noise Mode	l Calculations	5								
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresne		Barrier Atte		m Atten
Autos:	68.46	4.45		2.21	-1.20		4.65	0.0		0.00
Medium Trucks:	79.45	-12.79		2.26	-1.20		4.87	0.0		0.00
Heavy Trucks:	84.25	-16.75		2.25	-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise			1	,						
	Leq Peak Hou			q Evening		Night		Ldn		VEL
Autos:	73		72.0	70.3		64.2		72.8		73.4
Medium Trucks:	67		66.2	59.8		58.3		66.8		67.
Heavy Trucks:	68		67.1	58.1		59.3		67.7		67.
Vehicle Noise:	75		74.0	70.9		66.2		74.7		75.2
Centerline Distanc	e to Noise Co	ontour (in feet)		70 dBA		-0.4		0 -10 4		-10.4
			1 .			dBA	6	0 dBA	55	dBA
			L ed en :					400		4 005
			Ldn: JEL:	103		223 239		480		1,035 1,110

	FHWA-RD	-77-108 HIGH	WAY	NOISE F	PREDIC	TION M	ODEL	(9/12/2	021)		
Scenar	io: ECP					Project	Name:	El Can	nino SPA		
Road Nam	e: Ortega Hwy	r.				Job Ni	Imber:	15534			
Road Segme	nt: at I-5 Fwy. (	Overpass									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cond	ditions (	Hard =	: 10, So	oft = 15)		
Average Daily	Traffic (Adt):	44,110 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	4,411 vehicles	s		Hea	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle N	liv					
Near/Far La	ne Distance:	72 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%		9.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	•	0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	50.0 feet		-							
Centerline Dist.		50.0 feet		N	oise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		.000			
Observer Height	Above Pad):	5.0 feet				n Trucks		.297	Over et a d et		
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8	.004	Grade Ad	justment.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Autos	: 35	.057			
	Left View:	-90.0 degree	es		Mediun	n Trucks	: 34	.804			
	Right View:	90.0 degree	es		Heav	y Trucks	: 34	.828			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	4.49		2.21		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-12.74		2.26		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-16.70		2.25		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve		Leq I			Ldn		VEL
Autos:	74		72.1		70.3		64.		72.9		73
Medium Trucks:	67		66.3		59.9		58.		66.		67.
Heavy Trucks:	68	-	67.2		58.1		59.		67.		67.
Vehicle Noise:	75		74.1		70.9		66.	2	74.	В	75.
Centerline Distand	ce to Noise Co	ntour (in feet)	)	=0.	-						
			L	70 di		65 0			60 dBA		dBA
			Ldn:		104		22		484		1,04
		CI	VEL:		112		24		519		1.11

Monday, December 4, 2023

D-77-108 HIGH	VAY NOI	SE PREDIO	CTION MO	ODEL (9/	12/20	21)		
						ino SPA		
NPUT DATA							S	
		Site Cor	nditions (	Hard = 1	0, Soi	ft = 15)		
45,274 vehicle	S					15		
10.00%								
		He	eavy Truc	ks (3+ Ax	(les):	15		
		Vehicle	Mix					
72 feet		Veh	icleType	D	)ay	Evening	Night	Daily
			A	utos: 7	7.5%	12.9%	9.6%	97.429
0.0 feet		M	ledium Tru	ucks: 8	4.8%	4.9%	10.3%	1.84%
0.0			Heavy Tri	ucks: 8	6.5%	2.7%	10.8%	0.74%
50.0 feet		Noico S	ourco Ela	vations	(in for	of)		
50.0 feet		NUISE 3				50		
0.0 feet		Modiu						
5.0 feet						Grade Adi	iustment	0.0
0.0 feet								
0.0 feet		Lane Eq				eet)		
0.0%								
90.0 degree	S	Hea	vy Trucks	: 34.82	28			
								m Atten
								0.00
								0.00
			-1.20	-{	5.43	0.0	000	0.00
				<b>J</b> .		-		VEL
								73. 67.1
								68.
	_							75.4
0.0		11.0		00.4		74.5		73.
antaria Carto a								
contour (in feet)		70 dBA	65 d	BA	60	) dBA	55	dBA
	.dn:	70 dBA 106	65 d	BA 229	60	0 dBA 492		<i>dBA</i> 1,061
	yy. Overpass NPUT DATA 45,274 vehicles 10,00% 4,527 vehicles 45 mph 72 feet 0.0 feet 0	overpass           NPUT DATA           45,274 vehicles           10.00%           4,527 vehicles           45,274 vehicles           45,277 vehicles           45,277 vehicles           45,277 vehicles           45,277 vehicles           45,277 vehicles           45,277 vehicles           0.0 feet           0.0 feet	y. Overpass NPUT DATA Site Cor 45,2774 vehicles 10.00% 4,527 vehicles 4,527 vehicles 4,527 vehicles 4,527 vehicles 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 1 Irafic Flow Distance Finite 5 4.61 2.21 5 -12.63 2.26 5 -12.63 2.25 hout Topo and barrier attenuation) yu Leg Day Leg Evening 4.1 72.2 70.4 5.3 66.4 60.3 1 Context State Sta	Project   Job NU           Overpass           NPUT DATA         Ni           Site Conditions ( 45,277 vehicles         Site Conditions ( Medium Tru 45,527 vehicles           45,527 vehicles         Medium Tru Heavy Truc 45,527 vehicles           0.0 feet         Vehicle Mix Vehicle Mix           0.0 feet         Noise Source Effe Medium Trucks           0.0 feet         Noise Source Surce Medium Trucks           0.0 feet         Medium Trucks           0.0 feet         Lane Equivalent           0.0%         Finite Road         Autos           30.0 degrees         Medium Trucks           90.0 degrees         Medium Trucks           17affic Flow         Distance         Finite Road           5         -12.63         2.26         -1.20           5         -12.63         2.26         -1.20           hout Topo and barrier attenuation)         Leq Evening         Leq N           4.1         72.2         70.4           7.9         66.4         60.0           8.7         67.3	Project Name: E           Py-opect Name: 13         Job Number: 13           Overpass         Site Conditions (Hard = 1           45.274 vehicles         Site Conditions (Hard = 1           10.00%         Medium Trucks (2 A)           45.274 vehicles         Medium Trucks (2 A)           45.274 vehicles         Medium Trucks (2 A)           45.277 vehicles         Medium Trucks (2 A)           45.877 vehicles         Medium Trucks (2 A)           45.977 vehicles         Autos: 7           0.0 feet         Medium Trucks: 8           0.0         Heavy Trucks: 80           0.0 feet         Autos: 35.0           0.0 feet         Lane Equivalent Distance           0.0 feet         Lane Equivalent Distance           0.0 degrees         Medium Trucks: 34.8           90.0 degrees         Heavy Trucks: 34.8           91.225         -12.0         -           5         -12.63         2.26         -12.0	Project Name: El Cami Job Number: 15534           Overpass           NPUT DATA         NOISE MODEL           Site Conditions (Hard = 10, Soi 45,277 vehicles         Autos:           45,277 vehicles         Medium Trucks (2 Axles):           45,577 vehicles         Heavy Trucks (3+ Axles):           45,577 vehicles         Medium Trucks: (2 Axles):           45,577 vehicles         Medium Trucks: (3 4.8ke):           0.0 feet         Noise Source Elevations (in fee 50.0 feet           0.0 feet         Moise Source Elevations (in fee 50.0 feet           0.0 feet         Autos:         2.297           0.0 feet         Autos:         3.004           0.0 feet         Autos:         3.004           0.0 feet         Autos:         3.4804           90.0 degrees         Medium Trucks:         3.4804           90.0 degrees         Finite Road         Fresnel         E           5         -12.0         -4.65         -3.4804           90.0 degrees         Lane Equivalent Distance         Inter Act         -4.67	Overpass         NPUT DATA         NOISE MODEL INPUT           45,274 vehicles         Site Conditions (Hard = 10, Soft = 15)           45,274 vehicles         Autos: 15           10.00%         Autos: 15           45,274 vehicles         Autos: 15           45,274 vehicles         Heavy Trucks (2 Axles): 15           45,274 vehicles         Heavy Trucks (2 Axles): 15           45,274 vehicles         Vehicle Mix           72 feet         Vehicle Mix           0.0 feet         Medium Trucks: 24 Axles): 15           50.0 feet         Medium Trucks: 84.84 4.9%           0.0 feet         Medium Trucks: 24.84 4.9%           0.0 feet         Medium Trucks: 2.297           50.0 feet         Moise Source Elevations (in feet)           0.0 feet         Medium Trucks: 2.297           90.0 degrees         Medium Trucks: 34.804           90.0 degrees         Medium Trucks: 34.828           1Traffice Flow         Distance         Finite Road           90.0 degrees         2.26         -1.20         -4.65         0.05           5         -12.63         2.26         -1.20         -4.65         0.05           5         -12.63         2.26         -1.20         -5.43         0.05	Project Name: El Camino SPA Job Number: 15534           Overpass         NOISE MODEL INPUTS           Site Conditions (Hard = 10, Soft = 15)         Autos: 15           45,274 vehicles         Autos: 15           10.00%         Medium Trucks (2 Axles): 15           45,274 vehicles         Heavy Trucks (3 + Axles): 15           45,277 vehicles         Heavy Trucks: (3 + Axles): 15           45,277 vehicles         Vehicle Mix           72 feet         Vehicle Mix           0.0 feet         Autos: 77.5% 12.9% 9.6%           0.0 feet         Medium Trucks: 24.8% 4.9% 10.3%           0.0 feet         Autos: 77.5% 10.8%           50.0 feet         Autos: 0.000           0.0 feet         Autos: 0.000           0.0 feet         Autos: 35.057           -90.0 degrees         Medium Trucks: 34.804           90.0 degrees         Medium Trucks: 34.828           17affic Flow         Distance         Finite Road           90.0 degrees         Medium Trucks: 34.828           17         Traffic Flow         Distance           17affic Flow         Distance         Finite Road           5         4.61         2.21         -1.20           5         -12.63         2.25         -1

		I LEBIO		IODEL (9	12/2	021)		
Scenario: BOP Road Name: Ortega Hwy. Road Segment: at I-5 Fwy. Overpass				Name: E lumber: 1		nino SPA		
SITE SPECIFIC INPUT DATA							S	
Highway Data	S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Adt): 45,767 vehicles				A	lutos:	15		
Peak Hour Percentage: 10.00%		Me	dium Tr	ucks (2 A	xles):	15		
Peak Hour Volume: 4,577 vehicles		He	avy Tru	cks (3+ A	xles):	15		
Vehicle Speed: 45 mph	V	ehicle I	Niv					
Near/Far Lane Distance: 72 feet	-		cleType		Day	Evening	Night	Daily
Site Data		10/11			77.5%	-	9.6%	
		Me	edium T		34.8%		10.3%	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0			leavy T		36.5%		10.8%	
Centerline Dist. to Barrier: 50.0 feet								
Centerline Dist. to Observer: 50.0 feet	N	oise So		levations	(in fe	eet)		
Barrier Distance to Observer: 0.0 feet			Auto					
Observer Height (Above Pad): 5,0 feet			n Truck					
Pad Elevation: 0.0 feet		Heav	y Truck	s: 8.0	04	Grade Adj	iustment	: 0.0
Road Elevation: 0.0 feet	Li	ane Equ	uivalen	t Distanc	e (in i	feet)		
Road Grade: 0.0%			Auto			,		
Left View: -90.0 degrees		Mediur	n Truck	s: 34.8	04			
Right View: 90.0 degrees		Heav	y Truck	s: 34.8	28			
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos: 68.46 4.65	2.21		-1.20		4.65	0.0	000	0.00
Medium Trucks: 79.45 -12.58	2.26		-1.20	-	4.87	0.0	000	0.00
Heavy Trucks: 84.25 -16.54	2.25		-1.20		5.43	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrier	attenu	ation)						
	Leq Eve		Leq	Night		Ldn		NEL
Autos: 74.1 72.2		70.5		64.4		73.0		73.
Medium Trucks: 67.9 66.4		60.1		58.5		67.0		67.
Heavy Trucks: 68.8 67.3		58.3		59.6		67.9		68.
Vehicle Noise: 76.0 74.2		71.1		66.4		74.9	)	75.
Centerline Distance to Noise Contour (in feet)	70 dl	вл I	65	dBA		60 dBA	FF	dBA
Ldn:	10 01	ва 107	00	ава 230		б <i>и ав</i> а 496		ава 1.068
CNEL:		115		230		490 532		1,000
UNLL.		115		2-71		002		1, 140

FHV	/A-RD-	77-108 HIGH	WAY	NOISE	PREDIC		IODEL (S	)/12/20	021)		
Scenario: EP (V Road Name: Orteg Road Segment: at I-5	a Hwy.	,					Name: E lumber: 1		nino SPA		
SITE SPECIF	IC INP	UT DATA							L INPUTS	5	
Highway Data				ŝ	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (A	dt): 3	9,972 vehicle	s					Autos:	15		
Peak Hour Percenta	ge: 1	0.00%					ucks (2 A		15		
Peak Hour Volu	ne: 3	8,997 vehicles	6		He	avy Tru	cks (3+ A	xles):	15		
Vehicle Spe		45 mph		1	Vehicle I	Mix					
Near/Far Lane Distar	ce:	72 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Heig	uht.	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Be		0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Bar	· ·	50.0 feet		- H	Naiaa Ce	Suree El	evations	lin fe	at l		
Centerline Dist. to Obser	/er:	50.0 feet		Ľ.	NUISe SC	Auto		000	el)		
Barrier Distance to Obser	/er:	0.0 feet			Modiu	m Truck		97			
Observer Height (Above P	ad):	5.0 feet				/v Truck		04	Grade Adj	ustmen	H 0.0
Pad Elevat	ion:	0.0 feet			Ticav	y muck	3. 0.0	104	Orade Auj	asunem	. 0.0
Road Elevat	ion:	0.0 feet		1	Lane Eq	uivalent	t Distanc	e (in i	feet)		
Road Gra	de:	0.0%				Auto					
Left Vi	ew:	-90.0 degree	s		Mediu	m Truck					
Right Vi	ew:	90.0 degree	s		Heav	/y Truck	s: 34.8	328			
FHWA Noise Model Calcul	ations										
VehicleType REME		Traffic Flow	Dis	stance		Road	Fresn		Barrier Atte		rm Atten
	8.46	4.07		2.2		-1.20		-4.65	0.0		0.00
	9.45	-13.17		2.2	-	-1.20		-4.87	0.0		0.00
Heavy Trucks: 8	34.25	-17.13		2.2	5	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels			-							-	
VehicleType Leq Pea				Leq E	vening		Night		Ldn		NEL
Autos:	73.5 67.3		71.6 65.8		69.9 59.5		63.8 57.9		72.4 66.4		73. 66.
Medium Trucks: Heavy Trucks:	67.3		65.8 66.8		59.5 57.7		57.9		66.4		67.
Vehicle Noise:	68.2 75.4	-	66.8 73.6		57.7		59.0 65.8		67.3		67. 74.
	-				70.5		8.60		74.4	•	74.
Centerline Distance to Noi	se Con	tour (in feet)	1	70 /	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	701	98 98	05	210		453		976
			VEL:		98 105		210		453		1.047
		CI	*		105		220		400		1,047

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (	9/12/20	021)		
Scenar	io: EC (With Fo	orster)				Project	Name:	El Can	nino SPA		
	e: Ortega Hwy					Job N	umber:	15534			
Road Segmer	nt: at I-5 Fwy. (	Overpass									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	43,617 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2	Axles):	15		
Peak H	our Volume:	4,362 vehicles	5		Hea	avy Truc	ks (3+ .	Axles):	15		
Ve	hicle Speed:	45 mph		1	/ehicle N	<i>lix</i>					
Near/Far La	ne Distance:	72 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%		9.6%	97.429
Bai	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	. ,	50.0 feet		-				- (	41		
Centerline Dist.	to Observer:	50.0 feet		'	loise So	Autos			eet)		
Barrier Distance	to Observer:	0.0 feet			Marthur	Autos n Trucks		000 297			
Observer Height (	Above Pad):	5.0 feet						297 004	Grade Ad		
Pa	ad Elevation:	0.0 feet			Heav	y Trucks	. 8.	004	Grade Ad	Justinent	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Autos	: 35	057			
	Left View:	-90.0 degree	es		Mediur	n Trucks	: 34	804			
	Right View:	90.0 degree	es		Heav	y Trucks	: 34	828			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi		Barrier Att	en Ber	m Atten
Autos:	68.46	4.45		2.2		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-12.79		2.26		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-16.75		2.25	5	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq	Vight		Ldn		VEL
Autos:	73		72.0		70.3		64.		72.		73.
Medium Trucks:	67		66.2		59.8		58.		66.		67.
Heavy Trucks:	68	-	67.1		58.1		59.		67.		67.
Vehicle Noise:	75	.8	74.0		70.9		66.	2	74.	7	75.
Centerline Distance	e to Noise Co	ntour (in feet,	)	70 -	0.4	65	0.4		0 -10 4		-0.4
			Ldn:	70 a		65 (			50 dBA		dBA
			Lan: NEL:		103		223		480		1,03
		CI	VEL.		111		239		515		1,110

Monday, December 4, 2023

FRWA-P	D-77-108 HIGHV	VAY NOIS		TION MO	DEL (9/12/	2021)		
Scenario: ECP (With Road Name: Ortega Hv Road Segment: at I-5 Fwy	vy.				ame: El Ca nber: 1553			
SITE SPECIFIC I	NPUT DATA					EL INPUTS	3	
Highway Data			Site Con	ditions (H	ard = 10, S	Soft = 15)		
Average Daily Traffic (Adt):	44,110 vehicles	s			Autos	s: 15		
Peak Hour Percentage:	10.00%		Me	dium Truci	ks (2 Axles	): 15		
Peak Hour Volume:	4,411 vehicles		He	avy Trucks	s (3+ Axles	): 15		
Vehicle Speed:	45 mph		Vehicle I	Mix				
Near/Far Lane Distance:	72 feet			icleType	Day	Evening	Night	Daily
Site Data					tos: 77.5	•	9.6%	97.42%
Barrier Height:	0.0 feet		M	edium Truc	ks: 84.8	% 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		1	leavy Truc	ks: 86.5	% 2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	50.0 feet		Noise Or			64		
Centerline Dist. to Observer:	50.0 feet		Noise Sc	Autos:	ations (in	reet)		
Barrier Distance to Observer:	0.0 feet			n Trucks:	0.000 2.297			
Observer Height (Above Pad):	5.0 feet				8.004	Grade Adji	uctmont	0.0
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Auji	usument.	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)		
Road Grade:	0.0%			Autos:	35.057			
Left View:	-90.0 degrees	s	Mediu	n Trucks:	34.804			
Right View:	90.0 degrees	s	Heav	y Trucks:	34.828			
FHWA Noise Model Calculatio	ns		1					
VehicleType REMEL	Traffic Flow	Distance			Fresnel	Barrier Atte	en Berr	m Atten
Autos: 68.4			.21	-1.20	-4.65			0.00
Medium Trucks: 79.4			.26	-1.20	-4.87			0.00
Heavy Trucks: 84.2	5 -16.70	2	.25	-1.20	-5.43	3 0.0	00	0.00
Unmitigated Noise Levels (wit								
VehicleType Leq Peak Ho		,	Evening	Leq Ni	-	Ldn		IEL
		2.1	70.3		64.2	72.9		73.
		6.3	59.9		58.3	66.8		67.
		7.2 4.1	58.1		59.4	67.8		67.9
		4.1	70.9		66.2	74.8		75.2
Centerline Distance to Noise C	Contour (in feet)	7	0 dBA	65 dB		60 dBA		dBA
	,	.dn:	<i>1</i> 0 ава 104	00 <i>d</i> B	225	60 dBA 484	55	ава 1.042
		an: IEL:	104		225	484 519		1,042
	CN	EL.	112		241	219		1,118

Scenario: BO (With Forster) Road Name: Ortega Hwy. Road Segment: at I-5 Fwy. Overpass	Project Name: El Camino SPA Job Number: 15534
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 45,274 vehicles	Autos: 15
Peak Hour Percentage: 10.00%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 4,527 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 72 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 77.5% 12.9% 9.6% 97.42%
Barrier Height: 0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%
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 Adjustment: 0.0
Pad Elevation: 0.0 feet	, , , , , , , , , , , , , , , , , , , ,
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 35.057
Left View: -90.0 degrees	Medium Trucks: 34.804
Right View: 90.0 degrees	Heavy Trucks: 34.828
FHWA Noise Model Calculations	1
VehicleType REMEL Traffic Flow Distance	Finite Road Fresnel Barrier Atten Berm Atten
	.21 -1.20 -4.65 0.000 0.000
	.26 -1.20 -4.87 0.000 0.000
Heavy Trucks: 84.25 -16.59 2	.25 -1.20 -5.43 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier atte	enuation)
	Evening Leq Night Ldn CNEL
Autos: 74.1 72.2	70.4 64.4 73.0 73.6
Medium Trucks: 67.9 66.4	60.0 58.5 66.9 67.2
Heavy Trucks: 68.7 67.3	58.3 59.5 67.9 68.0
Vehicle Noise: 75.9 74.2	71.0 66.4 74.9 75.4
Centerline Distance to Noise Contour (in feet)	
	0 dBA 65 dBA 60 dBA 55 dBA
Ldn:	106 229 492 1,061
CNEL:	114 245 528 1,138

	FHWA-RI	D-77-108 HIGH	WAY NO	ISE PRED	ICTION M	ODEL (9/'	12/2021)	
	o: BOP (With e: Ortega Hwy t: at I-5 Fwy.	y. ,				Name: El Imber: 15	Camino SPA 534	
SITE S	PECIFIC IN	IPUT DATA			N	DISE MO	DEL INPUT	s
Highway Data				Site Co			0, Soft = 15)	-
Average Daily Peak Hour Peak H	, ,	45,767 vehicle 10.00% 4,577 vehicle			ledium Tru leavy Truc	cks (2 Ax	,	
	nicle Speed:	45 mph		Vehicle	Mix			
Near/Far Lar	ne Distance:	72 feet			hicleType	D	ay Evening	Night Daily
Site Data						utos: 7	7.5% 12.9%	9.6% 97.42
Bar	rier Heiaht:	0.0 feet			Medium Tr	ucks: 84	4.8% 4.9%	10.3% 1.84
Barrier Type (0-W		0.0			Heavy Tr	ucks: 86	6.5% 2.7%	10.8% 0.74
Centerline Dis	. ,	50.0 feet		Malaa	Source Ele		(in f = - 4)	
Centerline Dist. I	o Observer:	50.0 feet		Noise	Autos	,	,	
Barrier Distance t	o Observer:	0.0 feet		Mod	Autos um Trucks			
Observer Height ()	Above Pad):	5.0 feet			ann Trucks avy Trucks			justment: 0.0
Pa	d Elevation:	0.0 feet		ne	avy mucks	. 0.00	4 Grade Au	jusiment. 0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent	Distance	(in feet)	
F	Road Grade:	0.0%			Autos	: 35.05	57	
	Left View:	-90.0 degree	es	Med	um Trucks	: 34.80	)4	
	Right View:	90.0 degree	es	He	avy Trucks	: 34.82	8	
FHWA Noise Mode	I Calculation	s		1				
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresnel	Barrier Att	en Berm Atter
Autos:	68.46	4.65		2.21	-1.20	-4	.65 0.	0.00
Medium Trucks:	79.45	-12.58		2.26	-1.20	-4	.87 0.	0.00
Heavy Trucks:	84.25	-16.54		2.25	-1.20	-5	5.43 0.0	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenuation	)			
VehicleType	Leq Peak Hou	ir Leq Day	/ Le	q Evening	Leq I	light	Ldn	CNEL
Autos:	74	.1	72.2	70	5	64.4	73.	0 73
Medium Trucks:	67	.9	66.4	60	1	58.5	67.	0 67
Heavy Trucks:	68	.8	67.3	58	3	59.6	67.	9 68
	76	.0	74.2	71	1	66.4	74.	9 75
Vehicle Noise:								
Vehicle Noise: Centerline Distanc	e to Noise Co	ontour (in feet,						
	e to Noise Co	ontour (in feet,		70 dBA	65 a	BA	60 dBA	55 dBA
	e to Noise Co			70 dBA 10 11	7	BA 230 247	60 dBA 496 532	5 1,06

FHWA-RD-77-108 HIGHWA	Y NOIS	E PREDIC		IODEL (	9/12/20	021)				
Scenario: E		Project Name: El Camino SPA								
Road Name: Camino Capistrano			Job N	lumber:	15534					
Road Segment: n/o Del Obispo St.										
SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS								
Highway Data		Site Con	ditions	(Hard =	10, So	oft = 15)				
Average Daily Traffic (Adt): 13,722 vehicles					Autos:	15				
Peak Hour Percentage: 10.00%		Me	dium Tr	rucks (2 A	Axles):	15				
Peak Hour Volume: 1,372 vehicles		He	avy Tru	cks (3+ A	Axles):	15				
Vehicle Speed: 40 mph		Vehicle I	Nix							
Near/Far Lane Distance: 12 feet		Vehi	cleType	9	Day	Evening	Night	Daily		
Site Data				Autos:	77.5%	12.9%	9.6%	97.429		
Barrier Height: 0.0 feet		Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849		
Barrier Type (0-Wall, 1-Berm): 0.0		F	leavy T	rucks:	86.5%	2.7%	10.8%	0.74		
Centerline Dist. to Barrier: 30.0 feet		Noise Or			- (in f.	- 41				
Centerline Dist. to Observer: 30.0 feet		Noise So	Auto			et)				
Barrier Distance to Observer: 0.0 feet		Madiu	Auto n Truck		000 297					
Observer Height (Above Pad): 5.0 feet			y Truck		297 D04	Grade Ad	ustment	0.0		
Pad Elevation: 0.0 feet		Ticav	y much		004	Orade Adj	usunen.	0.0		
Road Elevation: 0.0 feet		Lane Equ	uivalen	t Distand	ce (in f	feet)				
Road Grade: 0.0%			Auto		816					
Left View: -90.0 degrees			n Truck		518					
Right View: 90.0 degrees		Heav	y Truck	is: 29.	547					
FHWA Noise Model Calculations										
	Distance			Fresn		Barrier Atte		m Atten		
Autos: 66.51 -0.07	-	.26	-1.20		-4.49	0.0		0.00		
Medium Trucks: 77.72 -17.30		.33	-1.20		-4.86		00	0.00		
Heavy Trucks: 82.99 -21.26		.32	-1.20		-5.77	0.0	00	0.00		
Unmitigated Noise Levels (without Topo and ba					1					
VehicleType Leq Peak Hour Leq Day		Evening	Leq	Night		Ldn		VEL		
Autos: 68.5 66.	-	64.8		58.8		67.4		68.		
Medium Trucks:         62.5         61.           Heavy Trucks:         63.9         62.		54.7 53.4		53.1 54.7		61.6 63.0		61. 63.		
Vehicle Noise: 70.5 68.		53.4 65.5		54.7 61.0		69.5		63. 70		
	0	05.5		01.0	,	09.0	)	70.		
Centerline Distance to Noise Contour (in feet)	7.		67	dBA		0 dBA	57	dD A		
Ldı		0 dBA	65		-		55	dBA 27		
CNEL		28 30		60		129				
CNEL		30		64		138		298		

Monday, December 4, 2023

FHWA-F	D-77-108 HIGHWA	Y NOISE I	PREDICT	ION MOD	EL (9/12/2	021)	_	_
Scenario: EP Road Name: Camino C Road Segment: n/o Del Ol					me: El Car ber: 15534			
SITE SPECIFIC I	NPUT DATA					L INPUTS	;	
Highway Data		S	ite Cond	tions (Ha	rd = 10, S	oft = 15)		
Average Daily Traffic (Adt):	14,197 vehicles				Autos.			
Peak Hour Percentage:	10.00%				s (2 Axles)			
Peak Hour Volume:	1,420 vehicles		Hear	/y Trucks	(3+ Axles)	15		
Vehicle Speed:	40 mph	v	ehicle Mi	x				
Near/Far Lane Distance:	12 feet	-		n leType	Dav	Evening	Night	Daily
Site Data				Auto		•	9.6%	
Barrier Height:	0.0 feet		Med	lium Truck	(s: 84.8%	6 4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Berm):	0.0		He	avy Truck	(s: 86.5%	6 2.7%	10.8%	0.74
Centerline Dist. to Barrier:	30.0 feet				Al (in 4	41		
Centerline Dist. to Observer:	30.0 feet	N	oise sou	Autos:	tions (in f	eet)		
Barrier Distance to Observer:	0.0 feet				0.000			
Observer Height (Above Pad):	5.0 feet		Medium		2.297	Crada Adi	atmont	0.0
Pad Elevation:	0.0 feet		Heavy	Trucks:	8.004	Grade Adji	istment:	0.0
Road Elevation:	0.0 feet	L	ane Equi	valent Dis	stance (in	feet)		
Road Grade:	0.0%			Autos:	29.816			
Left View:	-90.0 degrees		Medium	Trucks:	29.518			
Right View:	90.0 degrees		Heavy	Trucks:	29.547			
FHWA Noise Model Calculatio	าร							
VehicleType REMEL		istance	Finite R		resnel	Barrier Atte	n Berr	n Atter
Autos: 66.5	0.08	3.26	i	-1.20	-4.49	0.0	00	0.00
Medium Trucks: 77.7		3.33		-1.20	-4.86	0.0		0.00
Heavy Trucks: 82.9	9 -21.11	3.32		-1.20	-5.77	0.0	00	0.0
Unmitigated Noise Levels (wit								
VehicleType Leq Peak Ho		Leq Ev	•	Leq Nigi		Ldn	CN	IEL
	8.7 66.8		65.0		58.9	67.6		68
	2.7 61.2		54.8		53.3	61.7		62
	4.0 62.6		53.5		54.8	63.2		63
	0.7 69.0		65.7		61.1	69.7		70
Centerline Distance to Noise C	ontour (in feet)	70.0						
	l da	70 d		65 dBA		60 dBA	55	dBA
	Ldn:		29 31		61 66	132 142		28 30
	CNEL:							

	FHWA-RI	0-77-108 HIGH	WAYN	OISE	PREDIC		IODEL (	9/12/2	021)				
Scenar					Project Name: El Camino SPA								
	ne: Camino Ca					Job N	lumber:	15534					
Road Segme	nt: n/o Del Obi	spo St.											
	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	16,584 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10.00%					ucks (2						
	lour Volume:	1,658 vehicles	5		He	avy Tru	cks (3+ .	Axles):	15				
	ehicle Speed:	40 mph		١	Vehicle I	Mix							
Near/Far La	ane Distance:	12 feet			Vehi	icleType		Day	Evening	Night	Daily		
Site Data							Autos:	77.5%	12.9%	9.6%	97.429		
Ba	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-V		0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%		
Centerline D	ist. to Barrier:	30.0 feet			Noise So		ovation	e (in fr	ootl				
Centerline Dist.	to Observer:	30.0 feet		-	10/36 30	Auto		000	eel)				
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297					
Observer Height	(Above Pad):	5.0 feet				v Truck		004	Grade Ad	iustment	0.0		
P	ad Elevation:	0.0 feet											
	ad Elevation:	0.0 feet		L	Lane Equ				feet)				
	Road Grade:	0.0%				Auto		.816					
	Left View:	-90.0 degree				m Truck		.518					
	Right View:	90.0 degree	es		Heav	ry Truck	s: 29	.547					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten		
Autos:	66.51	0.76		3.26	6	-1.20		-4.49	0.0	000	0.00		
Medium Trucks:		-16.48		3.33		-1.20		-4.86		000	0.00		
Heavy Trucks:	82.99	-20.44		3.32	2	-1.20		-5.77	0.0	000	0.00		
Unmitigated Nois	e Levels (with			r atten	uation)								
VehicleType	Leq Peak Hou			Leq Ev	vening	Leq	Night		Ldn		VEL		
Autos:			67.4		65.7		59.	-	68.2		68.		
Medium Trucks:			61.9		55.5		54.		62.4		62.		
Heavy Trucks:			63.3		54.2		55.		63.8		64.		
Vehicle Noise:	71	.4	69.6		66.3		61.	8	70.3	3	70.		
Centerline Distan	ce to Noise Co	ontour (in feet,	)	= 0									
				70 a		65	dBA		60 dBA		dBA		
			Ldn:		32		68		147		316		
		~	NEL:		34		73		157		338		

FHWA-RD-	77-108 HIGHWAY	NOISE	E PREDIC	TION M	ODEL (9/1	2/2021)		
Scenario: ECP Road Name: Camino Cap Road Segment: n/o Del Obis					Name: El Imber: 15	Camino SPA 534		
SITE SPECIFIC INF	PUT DATA			N	OISE MO	DEL INPUT	s	
Highway Data			Site Con	ditions (	Hard = 10	, Soft = 15)		
Average Daily Traffic (Adt):	7,059 vehicles				Au	tos: 15		
Peak Hour Percentage:	10.00%		Med	dium Tru	cks (2 Axl	es): 15		
Peak Hour Volume:	1,706 vehicles		Hea	avy Truc	ks (3+ Axl	es): 15		
Vehicle Speed:	40 mph	ł	Vehicle N	lix				
Near/Far Lane Distance:	12 feet	ŀ		cleType	Da	av Evening	Niaht	Daily
Site Data						.5% 12.9%	<b>.</b>	
Barrier Height:	0.0 feet		Me	dium Tr	ucks: 84	.8% 4.9%	10.39	6 1.849
Barrier Type (0-Wall, 1-Berm):	0.0		H	leavy Tr	ucks: 86	6.5% 2.7%	10.8%	6 0.749
Centerline Dist. to Barrier:	30.0 feet	-	N 0-			··· 66		
Centerline Dist. to Observer:	30.0 feet	-	Noise So	Autos	vations (i : 0.000	,		
Barrier Distance to Observer:	0.0 feet		Modium	Autos n Trucks				
Observer Height (Above Pad):	5.0 feet			y Trucks			liuctmor	+ 0.0
Pad Elevation:	0.0 feet		i icav	y mucks	. 0.004	4 Oldoc Ad	gusuner	12. 0.0
Road Elevation:	0.0 feet		Lane Equ	iivalent	Distance	(in feet)		
Road Grade:	0.0%			Autos	29.81	6		
Left View:	-90.0 degrees			n Trucks		-		
Right View:	90.0 degrees		Heav	y Trucks	29.54	7		
FHWA Noise Model Calculations								
VehicleType REMEL	Traffic Flow Dis	stance	Finite	Road	Fresnel	Barrier At	ten Be	erm Atter
Autos: 66.51	0.88	3.2		-1.20			.000	0.00
Medium Trucks: 77.72	-16.36	3.3		-1.20			.000	0.00
Heavy Trucks: 82.99	-20.31	3.3	32	-1.20	-5.	.77 0.	.000	0.00
Unmitigated Noise Levels (witho		er atter	nuation)					
VehicleType Leq Peak Hour		Leq E	vening	Leq I	•	Ldn		ONEL
Autos: 69.5			65.8		59.7	68		69
Medium Trucks: 63.5			55.6		54.1	62	-	62
Heavy Trucks: 64.8			54.3		55.6	64		64
Vehicle Noise: 71.5	69.8		66.5		61.9	70	.5	70
Centerline Distance to Noise Cor	ntour (in feet)		10.4				-	
	1 -1	70	dBA	65 a		60 dBA		5 dBA
	Ldn: CNEL:		32 34		69 74	15		32:
	UNEL:		34		74	16	U	34

	FHWA-RD	-77-108 HIGH	WAY	NOISE F	PREDICT		ODEL	(9/12/2)	021)				
Scenar	o: BO				Project Name: El Camino SPA								
Road Nam	e: Camino Ca	pistrano			Job Number: 15534								
Road Segmer	nt: n/o Del Obi	spo St.											
	SPECIFIC IN	PUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data				S	ite Conc	litions	(Hard =	: 10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	16,584 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10.00%			Mea	lium Tru	icks (2	Axles):	15				
Peak H	our Volume:	1,658 vehicles	5		Hea	ivy Truc	cks (3+	Axles):	15				
Ve	hicle Speed:	40 mph		V	ehicle M	liv							
Near/Far La	ne Distance:	12 feet		-		leType		Dav	Evening	Night	Daily		
Site Data							Autos:	77.5%		9.6%			
Ba	rier Height:	0.0 feet			Medium Trucks: 84,8% 4,9% 10,3%								
вал Barrier Type (0-W	•	0.0 reet		1	н	eavy Ti	ucks:	86.5%		10.8%	0.749		
Centerline Dis		30.0 feet											
Centerline Dist		30.0 feet		N	loise So				eet)				
Barrier Distance		0.0 feet				Auto:		.000					
Observer Height (		5.0 feet			Medium			.297					
	ad Elevation:	0.0 feet			Heavy	/ Truck:	s: 8	.004	Grade Ad	justment.	0.0		
	d Elevation:	0.0 feet		L	ane Equ	ivalent	Distan	ce (in i	feet)				
	Road Grade:	0.0%		F		Auto		.816					
,	Left View:	-90.0 degree	26		Medium			.518					
	Right View:	90.0 degree				/ Truck		.547					
FHWA Noise Mode	Calculations	6											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite F	Road	Fres	nel	Barrier Att	en Ber	m Atten		
Autos:	66.51	0.76		3.26		-1.20		-4.49	0.0	000	0.00		
Medium Trucks:	77.72	-16.48		3.33		-1.20		-4.86	0.0	000	0.00		
Heavy Trucks:	82.99	-20.44		3.32		-1.20		-5.77	0.0	000	0.00		
Unmitigated Noise			-										
VehicleType	Leq Peak Hou			Leq Eve		Leq	Night		Ldn		VEL		
Autos:	69		67.4		65.7		59.		68.3		68		
Medium Trucks:	63		61.9		55.5		54.		62.4		62		
Heavy Trucks:	64		63.3		54.2		55.	-	63.		64		
Vehicle Noise:	71	.4	69.6		66.3		61.	8	70.3	3	70		
Centerline Distance	e to Noise Co	ntour (in feet,	)	70 di	DA	65	dBA	4	0 dBA	55	dBA		
			Ldn:	70 al		00 (					-		
			VEL:		32 34		68 73		147 157		316 338		

Monday, December 4, 2023

FHW	A-RD-7	7-108 HIGH	NAY	NOISE	PREDIC		IODEL (S	)/12/2	021)				
Scenario: BOP Road Name: Camin Road Segment: n/o De					Project Name: El Camino SPA Job Number: 15534								
SITE SPECIFI	C INPI	UT DATA							L INPUTS	5			
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)				
Average Daily Traffic (A	·	7,059 vehicle	s					Autos:					
Peak Hour Percenta		0.00%					ucks (2 A	,					
Peak Hour Volun		706 vehicles			Hea	avy Tru	cks (3+ A	xles).	15				
Vehicle Spe		40 mph			Vehicle N	lix							
Near/Far Lane Distan	ce:	12 feet			Vehi	cleType		Day	Evening	Night	Daily		
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42		
Barrier Heig	ht:	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.84		
Barrier Type (0-Wall, 1-Ben		0.0			F	leavy T	rucks:	86.5%	6 2.7%	10.8%	0.74		
Centerline Dist. to Barr	er:	30.0 feet		-	Noise So	urco E	lovation	(in f	oof)				
Centerline Dist. to Observ	er:	30.0 feet		H	Noise 30	Auto		000	eeij				
Barrier Distance to Observ	er:	0.0 feet			Mediur								
Observer Height (Above Pa	d):	5.0 feet				v Truck		04	Grade Adj	ustmen	- 0.0		
Pad Elevati	on:	0.0 feet								aoumoni	. 0.0		
Road Elevati	on:	0.0 feet			Lane Equ				feet)				
Road Gra	de: (	0.0%				Auto		316					
Left Vie		-90.0 degree	s		Mediur								
Right Vie	W.	90.0 degree	s		Heav	y Truck	s: 29.5	547					
FHWA Noise Model Calcula	tions												
VehicleType REME	L T.	raffic Flow	Dis	stance	Finite		Fresn	-	Barrier Atte	en Be	rm Atte		
	6.51	0.88		3.2		-1.20		-4.49	0.0		0.0		
	7.72	-16.36		3.3		-1.20		-4.86		000	0.0		
Heavy Trucks: 8	2.99	-20.31		3.3	32	-1.20		-5.77	0.0	000	0.0		
Unmitigated Noise Levels (			barrie										
VehicleType Leq Peak		Leq Day		Leq E	vening	Leq	Night		Ldn	-	NEL		
Autos:	69.5		67.6		65.8		59.7		68.4		69		
Medium Trucks:	63.5		62.0		55.6		54.1		62.5		62		
Heavy Trucks:	64.8		33.4		54.3		55.6		64.0		64		
Vehicle Noise:	71.5		69.8		66.5		61.9		70.5	)	70		
Centerline Distance to Nois	e Cont	our (in feet)		70	-04		-10.4		0.404		-10.4		
			L	70	dBA	65	dBA	1	60 dBA		dBA		
			_dn: IEL		32 34		69 74		150 160		32 34		

	FHWA-RI	0-77-108 HIGH	WAY NO	SE PREDI		IODEL (9)	12/2	021)		
Scenari	io: EP (With F	orster)			Project	Name: E	I Can	nino SPA		
	e: Camino Ca				Job N	lumber: 1	5534			
Road Segmer	nt: n/o Del Obi	spo St.								
SITE	SPECIFIC IN	IPUT DATA						L INPUTS	;	
Highway Data				Site Co.	nditions	(Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,009 vehicle	es			A	utos:	15		
Peak Hour	Percentage:	10.00%				ucks (2 A)		15		
Peak H	our Volume:	1,401 vehicle	s	н	eavy Tru	cks (3+ A)	des):	15		
Ve	hicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ne Distance:	12 feet			hicleType	e L	Day	Evening	Night	Daily
Site Data							7.5%		9.6%	
Bar	rier Height:	0.0 feet		٨	1edium T	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			Heavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	30.0 feet		Noise C		levations	(in \$1	41		
Centerline Dist.	to Observer:	30.0 feet		Noise 3	Auto			el)		
Barrier Distance	to Observer:	0.0 feet		Mark		0.0				
Observer Height (	Above Pad):	5.0 feet			ım Truck vy Truck	•••		Grade Adj	ustmont.	0.0
Pa	ad Elevation:	0.0 feet		пеа	vy muck	S. 0.0	04	Grade Haji	astinoni.	0.0
Roa	ad Elevation:	0.0 feet		Lane Ed	quivalen	t Distance	e (in i	feet)		
F	Road Grade:	0.0%			Auto		16			
	Left View:	-90.0 degree	es	Media	ım Truck	s: 29.5	18			
	Right View:	90.0 degre	es	Hea	vy Truck	s: 29.5	47			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distand		e Road	Fresne		Barrier Atte	en Berr	m Atten
Autos:	66.51	0.02		3.26	-1.20		4.49	0.0		0.000
Medium Trucks:	77.72	-17.21		3.33	-1.20		4.86	0.0		0.000
Heavy Trucks:	82.99	-21.17		3.32	-1.20	-	5.77	0.0	00	0.00
		out Tono and	barrier at	tenuation)						
										IEL
VehicleType	Leq Peak Hou	ir Leq Day		g Evening		Night		Ldn		
VehicleType Autos:	Leq Peak Hou 68	Ir Leq Day	66.7	64.9	9	58.9		67.5		68.1
Autos: Medium Trucks:	Leq Peak Hou 68 62	Ir Leq Day 1.6 1.6	66.7 61.1	64.9 54.1	9 3	58.9 53.2		67.5 61.7		68.1 61.9
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 68 62 63	ir Leq Day 3.6 3.9	66.7 61.1 62.5	64. 54. 53.	9 3 5	58.9 53.2 54.7		67.5 61.7 63.1		68.1 61.9 63.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leg Peak Hou 68 62 63 70	<i>r Leq Day</i> 0.6 0.6 0.9	66.7 61.1 62.5 68.9	64.9 54.1	9 3 5	58.9 53.2		67.5 61.7		68.1 61.9 63.2
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leg Peak Hou 68 62 63 70	<i>r Leq Day</i> 0.6 0.6 0.9	66.7 61.1 62.5 68.9	64.3 54.3 53.3 65.0	, 3 5 6	58.9 53.2 54.7 61.1		67.5 61.7 63.1 69.6		68.1 61.9 63.2 70.1
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leg Peak Hou 68 62 63 70	Ir Leq Day .6 .6 .6 .6 ontour (in feet	66.7 61.1 62.5 68.9	64.3 54.3 53.3 65.0 70 dBA	5 5 65	58.9 53.2 54.7 61.1 dBA	6	67.5 61.7 63.1 69.6 60 dBA		68.1 61.9 63.2 70.1 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leg Peak Hou 68 62 63 70	Ir Leq Day .6 .9 .6 ontour (in feet	66.7 61.1 62.5 68.9	64.3 54.3 53.3 65.0	65	58.9 53.2 54.7 61.1	6	67.5 61.7 63.1 69.6		68.1 61.9 63.2 70.1

	FHWA-RI	D-77-108 HIGH	WAY NO	ISE PR	EDIC	TION M	ODEL (9	)/12/20	021)		
Scenario: Road Name: Road Segment:		pistrano					Name: E umber: 1		nino SPA		
	PECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data				Site	Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	16,584 vehicl	es					Autos:	15		
Peak Hour Pe	ercentage:	10.00%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hou	ir Volume:	1,658 vehicle	s		He	avy Truc	cks (3+ A	xles):	15		
Vehic	cle Speed:	40 mph		Vot	icle I	Mix					
Near/Far Lane	Distance:	12 feet		101		icleType		Dav	Evening	Night	Daily
Site Data								77.5%	•	9.6%	97.42
Barri	er Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wali		0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist.	. ,	30.0 feet		Noi		uree El	evations	lin fe	a fi		
Centerline Dist. to	Observer:	30.0 feet		NOI	se su	Auto:		000	el)		
Barrier Distance to	Observer:	0.0 feet			An diuu	n Truck					
Observer Height (At	ove Pad):	5.0 feet		~		y Trucks		.97 )04	Grade Adj	ustment	0.0
Pad	Elevation:	0.0 feet			Tieav	y mucks	5. 0.0	104	Orade Auj	usunent.	0.0
Road	Elevation:	0.0 feet		Lan	e Equ	uivalent	Distanc	e (in i	feet)		
Ro	ad Grade:	0.0%				Autos					
	Left View:	-90.0 degre		٨		n Trucks					
F	Right View:	90.0 degre	es		Heav	y Trucks	s: 29.5	547			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ce l	<i>=inite</i>	Road	Fresn	el	Barrier Atte	en Ben	m Atter
Autos:	66.51	0.76		3.26		-1.20		-4.49	0.0		0.00
Medium Trucks:	77.72			3.33		-1.20		-4.86	0.0		0.00
Heavy Trucks:	82.99	-20.44		3.32		-1.20		-5.77	0.0	00	0.00
Unmitigated Noise L	evels (with	out Topo and	barrier a	ttenuat	ion)						
	eq Peak Hou			q Even		Leq	Night		Ldn		IEL
Autos:	69		67.4		65.7		59.6		68.2		68
Medium Trucks:	63		61.9		55.5		54.0		62.4		62
Heavy Trucks:		.7	63.3		54.2		55.5		63.8		64
Vehicle Noise:	71	.4	69.6		66.3		61.8		70.3		70
Centerline Distance	to Noise Co	ontour (in feet								I	
				70 dBA		65 (	dBA	6	60 dBA	55	dBA
			Ldn:		32		68		147		31
			NEL		34		73		157		33

FHWA-RD-77-108 HIGHWAY	NOISI	E PREDIC	TION N	NODEL (	9/12/20	021)				
Scenario: ECP (With Forster) Road Name: Camino Capistrano Road Segment: n/o Del Obispo St.		Project Name: El Camino SPA Job Number: 15534								
SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS								
Highway Data		Site Con	ditions	(Hard =	10, Sc	oft = 15)				
Average Daily Traffic (Adt): 16.871 vehicles					Autos:	15				
Peak Hour Percentage: 10.00%		Me	dium Ti	rucks (2 )	Axles):	15				
Peak Hour Volume: 1,687 vehicles		He	avy Tru	icks (3+ )	Axles):	15				
Vehicle Speed: 40 mph		Vehicle I	<i>liv</i>							
Near/Far Lane Distance: 12 feet			cleType	•	Dav	Evening	Night	Daily		
Site Data				Autos:	77.5%	•	9.6%			
Barrier Height: 0.0 feet		M	edium 1		84.8%		10.3%	1.849		
Barrier Type (0-Wall, 1-Berm): 0.0			leavy 1		86.5%		10.8%	0.749		
Centerline Dist. to Barrier: 30.0 feet										
Centerline Dist. to Observer: 30.0 feet		Noise So				eet)				
Barrier Distance to Observer: 0.0 feet			Auto		000					
Observer Height (Above Pad): 5.0 feet			n Truck		297	0				
Pad Elevation: 0.0 feet		Heav	y Truck	(S.' 8.	004	Grade Adj	ustment.	0.0		
Road Elevation: 0.0 feet		Lane Eq	uivalen	t Distan	ce (in i	feet)				
Road Grade: 0.0%			Auto	os: 29.	816					
Left View: -90.0 degrees		Mediu	n Truck	(s: 29.	518					
Right View: 90.0 degrees		Heav	y Truck	(s: 29.	547					
FHWA Noise Model Calculations										
	stance	Finite		Fresr	-	Barrier Atte		m Atten		
Autos: 66.51 0.83	3.3		-1.20		-4.49		000	0.00		
Medium Trucks: 77.72 -16.41	3.		-1.20		-4.86		000	0.00		
Heavy Trucks: 82.99 -20.36	3.3		-1.20		-5.77	0.0	000	0.00		
Unmitigated Noise Levels (without Topo and barri					1					
VehicleType Leq Peak Hour Leq Day	Leq E	Evening	Leq	Night		Ldn		VEL		
Autos: 69.4 67.5 Medium Trucks: 63.4 61.9		65.7 55.6		59.7 54.0		68.3 62.5		68. 62.		
Medium Trucks: 63.4 61.9 Heavy Trucks: 64.8 63.3		55.6 54.3		54.0 55.5		62.5		62. 64.		
Vehicle Noise: 71.4 69.7		54.3		55.0 61.9		70.4		64. 70		
		00.4		01.3	,	70		70.		
Centerline Distance to Noise Contour (in feet)	70	dBA	65	dBA	6	0 dBA	55	dBA		
Ldn:	70	ава 32	00	<i>dBA</i> 69	-	о ава 148		ава 320		
CNEL:		32		69 74		148		320		
O, ILL.		54		14		.00		542		

Monday, December 4, 2023

FHWA-F	2D-77-108 HIGHW	AY NOISI	E PREDICTIO	N MODEL (9	/12/2021)		
Scenario: BO (With Road Name: Camino C Road Segment: n/o Del O	apistrano			iject Name: E bb Number: 1		PA	
SITE SPECIFIC I	NPUT DATA				ODEL INP		
Highway Data			Site Conditio	ons (Hard = 1	10, Soft = 15	)	
Average Daily Traffic (Adt):	16,584 vehicles			A	utos: 15		
Peak Hour Percentage:	10.00%			n Trucks (2 A	,		
Peak Hour Volume:	1,658 vehicles		Heavy	Trucks (3+ A	<i>xles):</i> 15		
Vehicle Speed:	40 mph		Vehicle Mix				-
Near/Far Lane Distance:	12 feet		VehicleT	ype L	Day Evenii	ng Nig	ht Daily
Site Data				Autos:	77.5% 12.9	9% 9	.6% 97.42
Barrier Height:	0.0 feet		Mediu	m Trucks: 8	34.8% 4.9	9% 10	.3% 1.84
Barrier Type (0-Wall, 1-Berm):	0.0		Heav	y Trucks: 8	36.5% 2.7	7% 10	.8% 0.74
Centerline Dist. to Barrier:	30.0 feet		Noise Sourc	e Elevetiene	(in fact)		
Centerline Dist. to Observer:	30.0 feet			utos: 0.0	, ,		
Barrier Distance to Observer:	0.0 feet		Medium Tr	0.0			
Observer Height (Above Pad):	5.0 feet		Heavy Tr			Adjustr	nent: 0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet		Lane Equiva		, ,		
Road Grade:	0.0%		-	lutos: 29.8			
Left View:	-90.0 degrees		Medium Tr				
Right View:	90.0 degrees		Heavy Tr	ucks: 29.5	47		
FHWA Noise Model Calculatio							
VehicleType REMEL	Traffic Flow	Distance	Finite Roa				Berm Atter
Autos: 66.5		3.			4.49	0.000	0.0
Medium Trucks: 77.7 Heavy Trucks: 82.9		3.			4.86	0.000	0.00
			-	.20 -	5.77	0.000	0.0
Unmitigated Noise Levels (wit VehicleType Leg Peak Ho				Leg Night	Ldn		CNEL
	i9.3 67		65.7	_eq nigin 59.6	-	68.2	68
		.9	55.5	54.0		62.4	62
	4.7 63		54.2	55.5		63.8	64
	1.4 69		66.3	61.8		70.3	70
Centerline Distance to Noise (	Contour (in feet)						
		70	dBA	65 dBA	60 dBA		55 dBA
							-
	La	in:	32	68		147	31

FHWA-RD	-77-108 HIGH	WAY NO	DISE PF	REDICTIO	MODEL (	9/12/2	021)		
: BOP (With F	orster)			Pro	ect Name:	El Car	nino SPA		
e: Camino Cap	pistrano			Jo	b Number:	15534			
t: n/o Del Obis	spo St.								
SPECIFIC IN	PUT DATA							s	
			Site	e Conditio	ns (Hard =	10, S	oft = 15)		
Traffic (Adt):	16,871 vehicle	es				Autos.	15		
Percentage:	10.00%			Medium	Trucks (2	Axles).	15		
our Volume:	1,687 vehicles	6		Heavy	Trucks (3+ .	Axles).	15		
nicle Speed:	40 mph		Vol	aiclo Mix					
ne Distance:	12 feet		ver		ne	Dav	Evenina	Niaht	Daily
				Veniere I					
			_	Mediur					
. ,				neav	y mucho.	00.07	0 2.170	10.070	0.14%
			No	ise Source	Elevation	s (in f	eet)		
				A	utos: 0.	000			
			/	Medium Tr	icks: 2.	297			
,				Heavy Tr	icks: 8.	004	Grade Adj	iustment	: 0.0
			1.01		ant Diatan	aa (in	faati		
			Ldi				ieel)		
	0								
Right View:	90.0 degree	2S		Heavy In	ICKS: 29	547			
I Calculations	;								
REMEL	Traffic Flow	Distar	ice	Finite Roa	d Fresi	nel	Barrier Atte	en Ber	m Atten
66.51	0.83		3.26	-1.	20	-4.49	0.0	000	0.000
77.72	-16.41		3.33	-1.	20	-4.86	0.0	000	0.000
82.99	-20.36		3.32	-1.	20	-5.77	0.0	000	0.000
				,					
			eq Ever	•					NEL
	-			65.7					68.9
				55.6					62.7
-	-			54.3		-			64.0
71.	4	69.7		66.4	61.	9	70.4	Ļ	70.9
e to Noise Co	ntour (in feet)								
e to Noise Co			70 dB/		65 dBA		60 dBA		dBA
e to Noise Co		Ldn: VEL:	70 dB/	32 34	65 dBA 69 74		60 dBA 148 159		dBA 320 342
	2: BOP (With first Cambro Captor Cambro Captor Cambro Captor Cambro Captor Cambro Captor Cambro Camb	2: BOP (With Forster) 2: Camino Capistrano 3: Del Obispo St. 3: Del Obispo St. 4: Del Obispo St. 5: Detel S	2: BOP (With Forster) 2: Camino Capistrano 3: Toro Del Obispo St. 3: Del Obispo St. 3	2: BOP (With Forster) 2: Camino Capistrano 3PECIFIC INPUT DATA Site Traffic (Adt): 16,871 vehicles Percentage: 10,00% 207 Volume: 1,687 vehicles percentage: 10,00% 207 Volume: 1,687 vehicles 208 Vehicles	DSP (With Forster)         Proj           2: Camino Capistrano         Joi           2: Camino Capistrano         Joi           SPECIFIC INPUT DATA         Site Conditio           Fraffic (Ad):         16,871 vehicles           Percentage:         10,00%           Medium         Heavy           vice Speed:         40 mph           vehicle Speed:         40 mph           vehicle Mix         Vehicle Mix           ve Distance:         12 feet           vehicle Speed:         30.0 feet           Above Pad):         5.0 feet           d Elevation:         0.0 feet           d Elevation:         0.0 feet           d Elevation:         0.0 feet           Left View:         90.0 degrees           Heavy Trc         C           I Caculations         Distance           REMEL         Traffic Flow         Distance           I Caculations         10.1 feet           Reduell         Traffic Flow         Distance           I Caculations         20.9 degrees         Heavy Trc           I Caculations         11 Reperime         11.1           Levels (without Topo and barrier attenuation)         12 Levels (without Topo and barrier attenua	Der With Forster)         Project Name: Job Number:           2: Camino Capistrano         Job Number:           2: Camino Capistrano         Job Number:           3PECIFIC INPUT DATA         NOISE I           SPECIFIC INPUT DATA         Site Conditions (Hard =           Traffic (Adt):         16,871 vehicles           Percentage:         10.00%           percentage:         10.00%           percentage:         10.00%           neb Distance:         12 feet           Vehicle Mix         Vehicle Mix           per Distance:         12 feet           Vehicle Mix         Medium Trucks: (2.)           Above Pad):         5.0 feet           d Elevation:         0.0 feet           REMEL         Traffic Flow           Distance         Finite Road           REREL         Traffic Flow           Distance         Finite Road           82.99         -20.36           82.99         -20.36           82.99	DSP (With Forster)         Project Name: El Car           2: Camino Capistrano         Job Number: 15534           2: Camino Capistrano         Job Number: 15534           SPECIFIC INPUT DATA         NOISE MODE           SPECIFIC INPUT DATA         Site Conditions (Hard = 10, S)           Percentage:         10.00%           Derecentage:         10.00%           Debistance:         12 feet           Vehicle Mix         4utos:           Observer:         30.0 feet           Above Pad):         5.0 feet           d Elevation:         0.0 feet           d Elevation:         0.0 feet           d Elevation:         0.0 degrees           Right View:         90.0 degrees           Reduit Tracks:         29.547           I Cacuators         Instance           REMEL         Traffic Flow         Distance      <	Del Contro Capistrano         Project Name: El Camino SPA Job Number: 15534           SPECIFIC INPUT DATA         NOISE MODEL INPUT: Site Conditions (Hard = 10, Soft = 15)           SPECIFIC INPUT DATA         NOISE MODEL INPUT: Site Conditions (Hard = 10, Soft = 15)           Precentage: 10,00%         Medium Trucks (2 Axles): 15           Davy Volume: ticle Speed: 40 mph         Medium Trucks (2 Axles): 15           Vehicle Mix         Noise Source Elevations (in feet)           Autos: 77.5% 12.9%         Medium Trucks: 2.297           rier Height: 0 Observer: 30.0 feet         Medium Trucks: 2.297           Above Pad): 0 Observer: 0.0 feet         Medium Trucks: 2.297           Heavy Trucks:         8.004         Grade Adj           Cell Elevation: 0.0 feet         Medium Trucks: 2.9518           Heavy Trucks:         29.547           ICalculations         Medium Trucks: 2.9547           ICalculations         Finite Road         Fresnel         Barrier Ath 0.00           REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Ath 0.01           Revels (without Topo and barrier attenuation)         Leq Peek Hou         Lan         4.49         0.02           Large Rev         Lag Peek Hou         Lan         5.5         6.5.7         5.7         0.03	Dep (With Forster)       Project Name: El Camino SPA         2: Camino Capistrano       Job Number: 15534         SPECIFIC INPUT DATA       NOISE MODEL INPUTS         Site Conditions (Hard = 10, Soft = 15)       Site Conditions (Hard = 10, Soft = 15)         Traffic (Adt):       16,871 vehicles         Percentage:       10,00%         Sur Volume:       1,887 vehicles         Percentage:       10,00%         Sur Volume:       1,887 vehicles         Percentage:       10,00%         Sur Volume:       1,887 vehicles         Percentage:       10,00%         Medium Trucks:       24,486):         Terr Height:       0.0 feet         Autos:       77.5%         Above Pad):       5.0 feet         d Elevation:       0.0 feet         REMEL       Traffic Flow         Distance       Finite Road         Fresnel       Barrier Atten         Ge:2.99       Leq Night         Left View:       90.0 degrees         Right Viewut       90.0 degrees

	FHWA-RD	-77-108 HIGH	WAY NO			ODEL (9/1	12/2021)		
Scenario Road Name Road Segmen	e: Del Obispo					Name: El umber: 15	Camino SPA 534		
	SPECIFIC IN	PUT DATA					DDEL INPUT	s	
Highway Data				Site Cor	ditions (	'Hard = 10	), Soft = 15)		
Average Daily T	Traffic (Adt):	23,538 vehicle	s			Au	<i>itos:</i> 15		
Peak Hour F	Percentage:	10.00%				icks (2 Axi			
Peak Ho	our Volume:	2,354 vehicles		He	eavy Truc	ks (3+ Axi	<i>les):</i> 15		
Veh	nicle Speed:	40 mph		Vehicle	Mix				-
Near/Far Lan	ne Distance:	50 feet		Veh	icleType	Di	ay Evening	Night	Daily
Site Data						utos: 77	7.5% 12.9%		
Barr	rier Height:	0.0 feet		М	edium Tr	ucks: 84	4.8% 4.9%	10.3%	1.84%
Barrier Type (0-Wa	•	0.0			Heavy Tr	ucks: 86	6.5% 2.7%	10.8%	0.74%
Centerline Dis	. ,	50.0 feet		Noine C	ouroo El	evations (	(in fact)		
Centerline Dist. to	o Observer:	50.0 feet		NOISe 3	Autos		,		
Barrier Distance to	o Observer:	0.0 feet		Madiu	m Trucks		-		
Observer Height (A	Above Pad):	5.0 feet			vv Trucks			djustment.	0.0
Pa	d Elevation:	0.0 feet		Tiea	y mucha	. 0.00	4 0/200 A	gasanon.	0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
R	Road Grade:	0.0%			Autos	43.58	9		
	Left View:	-90.0 degree	s	Mediu	m Trucks		-		
	Right View:	90.0 degree	s	Hea	vy Trucks	: 43.40	5		
FHWA Noise Mode	I Calculations	5							
VehicleType	REMEL	Traffic Flow	Distand	ce Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	66.51	2.28		0.79	-1.20			.000	0.00
Medium Trucks:	77.72	-14.96		0.82	-1.20			.000	0.00
Heavy Trucks:	82.99	-18.92		0.82	-1.20	-5	.43 0.	.000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier at	tenuation)					
	Leq Peak Hou			q Evening	Leq I	•	Ldn		VEL
Autos:	68		6.5	64.7		58.7	67		67.9
Medium Trucks:	62		60.9	54.5		53.0	61		61.3
Heavy Trucks:	63		52.3	53.2		54.5	62		63.0
Vehicle Noise:	70	.4	68.7	65.4		60.8	69	.4	69.8
Venicie Noise.				-		-		-	
	e to Noise Co	ntour (in feet)							
	e to Noise Co			70 dBA	65 0		60 dBA		dBA
Centerline Distance	e to Noise Co		Ldn: IEL:	70 dBA 45 49	65 c	IBA 98 105	60 dBA 21 22	1	dBA 454 486

	FHWA-RD	0-77-108 HIGH	WAY	NOISE F	REDIC		ODEL	(9/12/2	021)		
Scenar	io: EP					Project	Name:	El Can	nino SPA		
Road Nam	e: Del Obispo	St.				Job Ni	umber:	15534			
Road Segme	nt: e/o Camino	Capistrano									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Si	ite Conc	ditions (	Hard =	= 10, So	oft = 15)		
Average Daily	Traffic (Adt):	23,538 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	2,354 vehicles	5		Hea	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle N	liv					
Near/Far La	ne Distance:	50 feet				cleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%		9.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			н	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	50.0 feet							0		
Centerline Dist.		50.0 feet		N	oise So				eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height (		5.0 feet				n Trucks		.297			
	ad Elevation:	0.0 feet			Heavy	y Trucks	: 8	.004	Grade Ad	justment.	0.0
	ad Elevation:	0.0 feet		La	ane Equ	ivalent	Distar	ice (in	feet)		
	Road Grade:	0.0%				Autos	: 43	.589			
	Left View:	-90.0 degree	es		Mediun	n Trucks	: 43	.386			
	Right View:	90.0 degree	es		Heavy	y Trucks	: 43	.405			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite I	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	2.28		0.79		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-14.96		0.82		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-18.92		0.82		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq Eve		Leq I			Ldn		VEL
Autos:	68		66.5		64.7		58		67.3		67.
Medium Trucks:	62		60.9		54.5		53		61.4		61
Heavy Trucks:	63		62.3		53.2		54		62.		63
Vehicle Noise:	70		68.7		65.4		60	.8	69.4	4	69.
Centerline Distant	ce to Noise Co	ontour (in feet,	)	70 dE	-	65 (	ID A	,	50 dBA	57	dBA
			Ldn:	70 đE		00 (					-
			Lan: NEL:		45 49		9i 10		211		45
			vel.'					5	226		48

Monday, December 4, 2023

FHWA-R	D-77-108 HIGHWA	Y NOISE F	PREDIC	TION M	ODEL (S	)/12/2	021)		
Scenario: EC Road Name: Del Obisp Road Segment: e/o Camin					Name: E Imber: 1		nino SPA		
SITE SPECIFIC I	NPUT DATA			N	OISE N	IODE	L INPUTS	3	
Highway Data		S	ite Con	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	27,198 vehicles					Autos:	15		
Peak Hour Percentage:	10.00%		Med	dium Tru	cks (2 A	xles):	15		
Peak Hour Volume:	2,720 vehicles		Hea	avy Truc	ks (3+ A	xles):	15		
Vehicle Speed:	40 mph	V	ehicle N	Aix					
Near/Far Lane Distance:	50 feet	-		cleType		Day	Evening	Night	Daily
Site Data			1011			77.5%	÷	9.6%	97.42%
Barrier Height:	0.0 feet		Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	50.0 feet	-		-			0		
Centerline Dist. to Observer:	50.0 feet	N	oise So	urce Ele			eet)		
Barrier Distance to Observer:	0.0 feet			Autos		000			
Observer Height (Above Pad):	5.0 feet			n Trucks	-	297	Grade Adj	unternet	0.0
Pad Elevation:	0.0 feet		Heav	y Trucks	: 8.0	004	Grade Auj	usuneni.	0.0
Road Elevation:	0.0 feet	Li	ane Equ	ıivalent	Distanc	e (in i	feet)		
Road Grade:	0.0%			Autos	: 43.5	589			
Left View:	-90.0 degrees		Mediur	n Trucks	43.3	386			
Right View:	90.0 degrees		Heav	y Trucks	43.4	105			
FHWA Noise Model Calculation	ns	1							
VehicleType REMEL	Traffic Flow D	istance	Finite	Road	Fresn	el	Barrier Atte	en Berr	n Atten
Autos: 66.5		0.79		-1.20		-4.65	0.0		0.000
Medium Trucks: 77.72		0.82		-1.20		-4.87	0.0		0.000
Heavy Trucks: 82.99	9 -18.29	0.82		-1.20		-5.43	0.0	00	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho		Leq Eve		Leq I			Ldn		IEL
	9.0 67.1		65.3		59.3		67.9		68.5
	3.0 61.5		55.1		53.6		62.1		62.3
	4.3 62.9		53.9		55.1		63.5		63.6
Vehicle Noise: 7	1.0 69.3		66.0		61.5		70.0		70.4
Centerline Distance to Noise C	Contour (in feet)								
		70 dł		65 a		6	60 dBA	55	dBA
	Ldn:		50		108		232		500
	CNEL:		54		115		249		536

	FHWA-RI	D-77-108 HIGH	IWAY NO	ISE PREDI		ODEL (9/12	/2021)		
Road Nan	rio: ECP ne: Del Obispo ent: e/o Camino					Name: El Ca umber: 1553			
SITE	SPECIFIC IN	IPUT DATA			N	IOISE MOD	EL INPUTS	5	
Highway Data				Site Co.	nditions	(Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	27,198 vehicle	es			Auto	s: 15		
Peak Hour	Percentage:	10.00%		М	edium Tr	ucks (2 Axles	s): 15		
Peak I	lour Volume:	2,720 vehicle	s	Н	eavy Tru	cks (3+ Axles	s): 15		
Ve	ehicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ane Distance:	50 feet			hicleType	Day	Evening	Night	Daily
Site Data						Autos: 77.5	•	•	97.42%
					, ledium T			10.3%	1.84%
	rrier Height:	0.0 feet 0.0			Heavy T			10.8%	0.74%
Barrier Type (0-V	ist, to Barrier:	0.0 50.0 feet						10.070	0.7 17
Centerline Dist.		50.0 feet		Noise S	ource El	evations (in	feet)		
Barrier Distance		0.0 feet			Auto	0.000			
Observer Height		5.0 feet		Media	ım Truck	s: 2.297			
•	ad Elevation:	0.0 feet		Hea	vy Truck	s: 8.004	Grade Adj	ustment:	0.0
	ad Elevation:	0.0 feet		Lane E	nuivalen	Distance (i	n feet)		
	Road Grade:	0.0%			Auto				
	Left View:	-90.0 degree	29	Medi	ım Truck	s: 43.386			
	Right View:	90.0 degree		Hea	vy Truck				
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distand	ce Finite	e Road	Fresnel	Barrier Atte	n Bern	n Atten
Autos:	66.51	2.91		0.79	-1.20	-4.6	5 0.0	00	0.000
Medium Trucks:	77.72	-14.33		0.82	-1.20	-4.8	7 0.0	00	0.000
Mcalalli Hacks.									
Heavy Trucks:		-18.29		0.82	-1.20	-5.4	3 0.0	00	0.000
Heavy Trucks:	82.99	out Topo and	barrier at		-1.20	-5.4	3 0.0		
Heavy Trucks: Unmitigated Nois VehicleType	82.99 <b>e Levels (with</b> Leq Peak Hou	out Topo and Ir Leq Day	barrier at	t <b>tenuation)</b> q Evening	Leq	Night	Ldn	CN	EL
Heavy Trucks: Unmitigated Nois VehicleType Autos:	82.99 <b>e Levels (with</b> Leq Peak Hou 69	out Topo and Ir Leq Day	barrier at / Le 67.1	t <b>tenuation)</b> q Evening 65.3	Leq	Night 59.3	Ldn 67.9	CN	EL 68.5
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	82.99 e Levels (with Leq Peak Hou 69 63	out Topo and Ir Leq Day 0.0	barrier at / Le 67.1 61.5	tenuation) q Evening 65. 55.	Leq 3	Night 59.3 53.6	Ldn 67.9 62.1	CN	EL 68.5 62.3
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	82.99 e Levels (with Leg Peak Hou 69 63 64	out Topo and Ir Leq Day 0.0 0.0 0.3	barrier at / Le 67.1 61.5 62.9	t <b>tenuation)</b> q Evening 65. 55. 53.	<i>Leq</i>	Night 59.3 53.6 55.1	Ldn 67.9 62.1 63.5	CN	EL 68.5 62.3 63.6
Heavy Trucks: <u>Unmitigated Nois</u> <u>VehicleType</u> Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.99 e Levels (with Leg Peak Hou 69 63 64 71	out Topo and Ir Leq Day 0.0 0.0 0.0 1.3 1.0	barrier at 67.1 61.5 62.9 69.3	tenuation) q Evening 65. 55.	<i>Leq</i>	Night 59.3 53.6	Ldn 67.9 62.1	CN	EL 68.5 62.3 63.6
Heavy Trucks: <u>Unmitigated Nois</u> <u>VehicleType</u> Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.99 e Levels (with Leg Peak Hou 69 63 64 71	out Topo and Ir Leq Day 0.0 0.0 0.0 1.3 1.0	barrier at <u>Le</u> 67.1 61.5 62.9 69.3 )	ttenuation) q Evening 65. 55. 53. 66.	Leq 3 1 9	Night 59.3 53.6 55.1 61.5	Ldn 67.9 62.1 63.5 70.0	CN	EL 68.5 62.3 63.6 70.4
Heavy Trucks: <u>Unmitigated Nois</u> <u>VehicleType</u> Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.99 e Levels (with Leg Peak Hou 69 63 64 71	out Topo and Ir Leq Day 0.0 0.0 0.0 1.3 1.0	barrier at <u>Le</u> 67.1 61.5 62.9 69.3 )	ttenuation) q Evening 65. 55. 53. 66. 70 dBA	Leq 3 1 9 0 65	Night 59.3 53.6 55.1 61.5	Ldn 67.9 62.1 63.5 70.0 60 dBA	CN	EL 68.5 62.3 63.6 70.4
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	82.99 e Levels (with Leg Peak Hou 69 63 64 71	out Topo and Ir Leq Day 10 10 10 10 10 10 10 10 10 10	barrier at <u>Le</u> 67.1 61.5 62.9 69.3 )	ttenuation) q Evening 65. 55. 53. 66.	Leq 3 1 9 0 65	Night 59.3 53.6 55.1 61.5	Ldn 67.9 62.1 63.5 70.0	CN	68.5 62.3 63.6 70.4

FH\	NA-RD	-77-108 HIGH	WAY I	NOISE	PREDIC		ODEL (9	/12/20	)21)		
Scenario: BO Road Name: Del C Road Segment: e/o C							Name: E umber: 1		ino SPA		
SITE SPECIE	IC IN	PUT DATA							L INPUTS	3	
Highway Data				5	Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic ()	4 <i>dt):</i>	27,198 vehicle	es				A	utos:	15		
Peak Hour Percent	age:	10.00%			Me	dium Tri	icks (2 A	xles):	15		
Peak Hour Volu	ime:	2,720 vehicles	5		He	avy Truc	cks (3+ A	xles):	15		
Vehicle Sp	eed:	40 mph		1	Vehicle I	<i>lix</i>					
Near/Far Lane Dista	nce:	50 feet		F		cleType		Dav	Evenina	Niaht	Daily
Site Data								77.5%	12.9%	9.6%	
Barrier Hei	aht.	0.0 feet			Me	edium Ti	ucks:	34.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Be		0.0			F	leavy Ti	ucks:	36.5%	2.7%	10.8%	0.74
Centerline Dist. to Ba		50.0 feet						6 m # m	- 41		
Centerline Dist. to Obse	rver:	50.0 feet		'	Voise So	Auto:			et)		
Barrier Distance to Obse	rver:	0.0 feet				Auto: n Truck:					
Observer Height (Above F	Pad):	5.0 feet				n Truck y Truck			Grade Adj	unternent	
Pad Eleva	tion:	0.0 feet			neav	y muck	s. o.u	04	Graue Auj	usuneni	0.0
Road Eleva	tion:	0.0 feet		L	ane Equ	ivalent	Distanc	e (in f	eet)		
Road Gr	ade:	0.0%				Auto	s: 43.5	89			
Left V	liew:	-90.0 degree	es		Mediur	n Truck	s: 43.3	86			
Right V	liew:	90.0 degree	es		Heav	y Truck	s: 43.4	05			
FHWA Noise Model Calcu	lations	:									
VehicleType REM	EL	Traffic Flow	Dist	ance	Finite	Road	Fresne	el i	Barrier Atte	en Ber	m Atter
Autos:	66.51	2.91		0.79	-	-1.20		4.65	0.0		0.00
	77.72	-14.33		0.82	-	-1.20		4.87	0.0		0.00
Heavy Trucks:	82.99	-18.29		0.8	2	-1.20		5.43	0.0	00	0.00
Unmitigated Noise Levels			barrie	r atten	uation)						
VehicleType Leq Pea	ak Hour	r Leq Day	,	Leg Ev	/ening	Leq	Night		Ldn		VEL
Autos:	69.	-	67.1		65.3		59.3		67.9		68
Medium Trucks:	63.	-	61.5		55.1		53.6		62.1		62
Heavy Trucks:	64.		62.9		53.9		55.1		63.5		63
Vehicle Noise:	71.	0	69.3		66.0		61.5		70.0		70
Centerline Distance to No	ise Co	ntour (in feet)	)	70	04	05	dBA		0 dBA		-10.4
			Ldn	70 c		65		6		55	dBA
			Ldn: VEL:		50 54		108 115		232 249		50 53

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (	9/12/20	021)		
	o: BOP								nino SPA		
	e: Del Obispo					Job N	umber:	15534			
Road Segmer	nt: e/o Camino	Capistrano									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cond	ditions	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	27,198 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tru	icks (2 )	Axles):	15		
	our Volume:	2,720 vehicle	s		Hea	avy Truc	:ks (3+ )	Axles):	15		
	hicle Speed:	40 mph		V	ehicle N	lix					
Near/Far La	ne Distance:	50 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.429
Bai	rier Height:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	50.0 feet			oise So	uree El	wation	a lin fe	n of l		
Centerline Dist.	to Observer:	50.0 feet		N	use su	Autos		000	eel)		
Barrier Distance	to Observer:	0.0 feet			Madium	Autos n Trucks		000 297			
Observer Height (	Above Pad):	5.0 feet				y Trucks		297 004	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			neav.	y mucks	. O.	004	Orade Hu	Justinent.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Autos	: 43.	589			
	Left View:	-90.0 degree	es			n Trucks		386			
	Right View:	90.0 degree	es		Heav	y Trucks	: 43.	405			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresr		Barrier Att		m Atten
Autos:	66.51	2.91		0.79		-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-14.33		0.82		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-18.29		0.82		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq Eve		Leq			Ldn		VEL
Autos:	69		67.1		65.3		59.3		67.		68.
Medium Trucks:	63		61.5		55.1		53.0		62.		62.
Heavy Trucks:	64	-	62.9		53.9		55.		63.		63.
Vehicle Noise:	71		69.3		66.0		61.	5	70.	U	70.
Centerline Distance	e to Noise Co	ntour (in feet	)	70 d	24	65 (		6	50 dBA	55	dBA
			Ldn:	70 0	50	00 0	108		232 232		ивя 50
		0	NEL:		50 54		115		232		536
		0	VLL.		- 34		113		248		550

Monday, December 4, 2023

FHWA-	RD-77-108 I	HIGHWAY	NOISE	E PREDIC	TION MO	DDEL (9	/12/20	)21)		
Scenario: EP (With					Project I			ino SPA		
Road Name: Del Obis					Job Nu	mber: 1	5534			
Road Segment: e/o Cami	no Capistrar	10								
SITE SPECIFIC	INPUT DA	TA						L INPUT	5	
Highway Data				Site Con	ditions (	Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt)	23,726 v	ehicles					utos:	15		
Peak Hour Percentage	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak Hour Volume	2,373 ve	hicles		He	avy Truci	(3+ A)	xles):	15		
Vehicle Speed	40 m	bh	ŀ	Vehicle I	/ix					
Near/Far Lane Distance	50 fee	et	ŀ		cleType	Γ	Dav	Evening	Night	Daily
Site Data							7.5%	•	9.6%	
Barrier Height	0.0 fe	of		Me	edium Tru	icks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm)		,er		ŀ	leavy Tru	icks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier		et	-	Noise So	uree Ele	votiona	lin fa	of)		
Centerline Dist. to Observer	50.0 fe	et	ŀ	NOISE 30	Autos			eij		
Barrier Distance to Observer	0.0 fe	et		Madiu	n Trucks	0.0				
Observer Height (Above Pad)	5.0 fe	et			y Trucks			Grade Ad	iustment	· 0.0
Pad Elevation	0.0 fe	et		neav	y mucks.	0.0	04	Orade Auj	asuncin	. 0.0
Road Elevation	0.0 fe	et		Lane Equ	livalent	Distance	e (in f	eet)		
Road Grade	0.0%				Autos.	43.5	89			
Left View	-90.0 d	egrees		Mediur	n Trucks	43.3	86			
Right View	90.0 d	egrees		Heav	y Trucks	43.4	05			
FHWA Noise Model Calculation	ons									
VehicleType REMEL	Traffic F	low Di	stance	Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	rm Atten
Autos: 66.		2.31	0.7		-1.20		4.65		000	0.000
Medium Trucks: 77.3		4.93	0.8		-1.20		4.87		000	0.00
Heavy Trucks: 82.9	99 -1	8.88	0.8	32	-1.20	-	5.43	0.0	000	0.00
Unmitigated Noise Levels (wi	thout Topo	and barri	er atter	nuation)						
VehicleType Leq Peak H		ן Day	Leq E	vening	Leq N	<b>J</b>		Ldn		NEL
	68.4	66.5		64.7		58.7		67.3		67.9
	62.4	60.9		54.5		53.0		61.5	-	61.
	63.7	62.3		53.3		54.5		62.9	-	63.
Vehicle Noise:	70.4	68.7		65.4		60.9		69.4	1	69.9
	Contour (in	feet)			-					
Centerline Distance to Noise										dBA
Centerline Distance to Noise			70	dBA	65 d		6	0 dBA		
Centerline Distance to Noise		Ldn: CNEL:	70	dBA 46 49	65 d	98 105	6	212 227		457 489

	FHWA-RD	-77-108 HIGHW	AY NOIS	SE PRE	DICTION	IODEL (S	9/12/20	21)		
Scenario: Road Name: Road Segment:		St.				Name: E lumber: 1		ino SPA		
SITE SP	ECIFIC IN	PUT DATA							6	
Highway Data				Site C	conditions	(Hard =	10, So	ft = 15)		
Average Daily Tra	affic (Adt):	27,198 vehicles					Autos:	15		
Peak Hour Pe	rcentage:	10.00%			Medium Tr	ucks (2 A	xles):	15		
Peak Hou	r Volume:	2,720 vehicles			Heavy Tru	cks (3+ A	xles):	15		
Vehic	le Speed:	40 mph		Vohio	le Mix					
Near/Far Lane	Distance:	50 feet			ehicleType		Dav	Evening	Night	Daily
Site Data				,			77.5%	12.9%	9.6%	
		0.0 feet		-	, Medium T		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall,	er Height:	0.0 feet			Heavy T		86.5%		10.8%	0.74%
Centerline Dist.	,	50.0 feet								
Centerline Dist. to		50.0 feet		Noise	Source El			et)		
Barrier Distance to		0.0 feet			Auto		000			
Observer Height (Ab		5.0 feet			dium Truck		297			
• •	Elevation:	0.0 feet		н	eavy Truck	s: 8.0	004	Grade Adji	ustment.	0.0
Road	Elevation:	0.0 feet		Lane	Equivalen	t Distanc	e (in f	eet)		
Roa	ad Grade:	0.0%			Auto	s: 43.5	589			
	Left View:	-90.0 degrees		Me	dium Truck	s: 43.3	386			
R	ight View:	90.0 degrees		н	eavy Truck	s: 43.4	405			
FHWA Noise Model C	Calculations									
VehicleType	REMEL	Traffic Flow	Distance	e Fir	nite Road	Fresn	el I	Barrier Atte	en Ber	m Atten
Autos:	66.51	2.91	C	).79	-1.20		-4.65	0.0	00	0.000
Medium Trucks:	77.72	-14.33	C	.82	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-18.29	C	.82	-1.20		-5.43	0.0	00	0.000
Unmitigated Noise L										
	q Peak Hour			Evening		Night		Ldn		VEL
Autos:	69.				5.3	59.3		67.9		68.5
Medium Trucks:	63.				5.1	53.6		62.1		62.3
Heavy Trucks:	64.			-	3.9	55.1		63.5		63.6
Vehicle Noise:	71.	0 69	.3	6	6.0	61.5		70.0		70.4
Centerline Distance t	to Noise Col	ntour (in feet)								
				0 dBA		dBA	6	0 dBA	55	dBA
		La			50	108		232		500
		CNE	:L:		54	115		249		536

FH	WA-RD	-77-108 HIGH	WAY NO	DISE PRE	DICT	TION MC	DDEL (9	/12/20	21)		
Scenario: ECF Road Name: Del Road Segment: e/o (	Obispo	St.			F	Project N Job Nu			ino SPA		
SITE SPECI	FIC IN	PUT DATA				NC	DISE N	ODE	L INPUTS	3	
Highway Data				Site	Cond	litions (F	Hard =	10, So	ft = 15)		
Average Daily Traffic (	(Adt):	27,386 vehicle	es				A	utos:	15		
Peak Hour Percen	tage:	10.00%			Med	ium Truc	cks (2 A	xles):	15		
Peak Hour Vol	lume:	2,739 vehicle	6		Hea	vy Truck	(3+ A	xles):	15		
Vehicle Sp	peed:	40 mph		Vohi	cle M	iv					
Near/Far Lane Dista	ance:	50 feet				leType		Dav	Evenina	Niaht	Daily
Site Data					venie			77.5%	12.9%	9.6%	
Barrier He	iaht.	0.0 feet			Med	dium Tru	icks:	34.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-B	5	0.0			He	eavy Tru	icks:	36.5%	2.7%	10.8%	0.749
Centerline Dist. to Ba		50.0 feet		Maia				6	- 41		
Centerline Dist. to Obse		50.0 feet		NOIS	e Sou	Irce Ele			et)		
Barrier Distance to Obse	erver:	0.0 feet				Autos: Trucks:					
Observer Height (Above	Pad):	5.0 feet				Trucks: Trucks:			Grade Adj	uctmont	
Pad Eleva	ation:	0.0 feet			ieavy	TTUCKS.	0.0	04	Graue Auj	usuneni	. 0.0
Road Eleva	ation:	0.0 feet		Lane	Equi	ivalent l	Distanc	e (in f	eet)		
Road G	rade:	0.0%				Autos:	43.5	89			
Left	View:	-90.0 degree	es	Me	edium	Trucks:	43.3	86			
Right	View:	90.0 degree	es	ŀ	leavy	Trucks:	43.4	05			
FHWA Noise Model Calcu	ulations	:									
VehicleType REN	1EL	Traffic Flow	Distar	ice Fi	nite R	Road	Fresne	el I	Barrier Atte	en Ber	m Atten
Autos:	66.51	2.94		0.79		-1.20		4.65	0.0	00	0.00
Medium Trucks:	77.72	-14.30		0.82		-1.20		4.87	0.0		0.00
Heavy Trucks:	82.99	-18.26		0.82		-1.20		5.43	0.0	00	0.00
Unmitigated Noise Level	s (witho	out Topo and	barrier a	ttenuatio	on)						
VehicleType Leq Pe	ak Hou	r Leq Day	L	eq Evenir	g	Leq N	light		Ldn		NEL
Autos:	69.	-	67.1		65.4		59.3		67.9		68.
Medium Trucks:	63.	-	61.5		5.2		53.6		62.1		62.
Heavy Trucks:	64.		62.9		53.9		55.1		63.5		63.
Vehicle Noise:	71.	1	69.3	6	6.0		61.5		70.0	)	70.
Centerline Distance to No	oise Co	ntour (in feet,									
				70 dBA		65 di	BA	6	0 dBA	55	dBA
			Ldn: VEL:		50 54		108 116		233 250		503 538

	FHWA-RD	-77-108 HIGH	WAY N	IOISE P	REDICTION I	MODEL	(9/12/2	021)		
Road Nam	o: BO (With Fe e: Del Obispo nt: e/o Camino	St.				t Name. Number.		nino SPA		
SITE	SPECIFIC IN					NOISE	MODE		s	
Highway Data				Si	te Conditions				-	
Average Daily	Traffic (Adt):	27,198 vehicle	s				Autos:	15		
• •	Percentage:	10.00%			Medium T	rucks (2				
		2.720 vehicles	3		Heavy Tru					
Ve	hicle Speed:	40 mph		16	hicle Mix					
Near/Far La	ne Distance:	50 feet		Ve	VehicleTyp	-	Dav	Evening	Night	Daily
Site Data						e Autos:	77.5%	•	9.6%	
					Medium		84.8%		9.0%	1.849
	rier Height:	0.0 feet			Heavy				10.3%	
Barrier Type (0-W	. ,	0.0			Tieavy	TUCKS.	00.5%	2.170	10.0%	0.747
Centerline Dis		50.0 feet		No	oise Source E	levatio	ns (in fe	eet)		
Centerline Dist.		50.0 feet			Auto	os: 0	0.000			
Barrier Distance		0.0 feet			Medium Truc	ks: 2	.297			
Observer Height (	,	5.0 feet			Heavy Truc	ks: 8	.004	Grade Ad	iustment.	0.0
	d Elevation:	0.0 feet				4 Di-4-		( 4)		
	ad Elevation:	0.0 feet		La	ne Equivaler			reet)		
ŀ	Road Grade:	0.0%			Aute Medium Truc		8.589 8.386			
	Left View:	-90.0 degree			Heavy Truck		3.380 3.405			
	Right View:	90.0 degree	s		neavy muc	(5. 4)	0.405			
FHWA Noise Mode	l Calculation									
VehicleType	REMEL	Traffic Flow	Dista		Finite Road	Free		Barrier Att		m Atten
Autos:	66.51	2.91		0.79	-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-14.33		0.82	-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-18.29		0.82	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	attenua	ation)					
	Leq Peak Hou			Leq Eve		Night		Ldn		VEL
Autos:	69	-	67.1		65.3	59		67.9		68.
Medium Trucks:	63		61.5		55.1	53		62.1		62.
Heavy Trucks:	64		62.9		53.9	55		63.5		63.
Vehicle Noise:	71	.0	69.3		66.0	61	.5	70.0	)	70.
Centerline Distanc	e to Noise Co	ntour (in feet)								
				70 dE	BA 65	dBA	6	60 dBA	55	dBA
			Ldn:		50	10	8	232		500
			VEL:		54	11		249		536

Monday, December 4, 2023

FHWA-F	D-77-108 HIGHWA	Y NOISE	PREDIC	TION MO	DDEL (S	)/12/2	021)			
Scenario: BOP (Wit Road Name: Del Obisp Road Segment: e/o Camir	o St.				Name: E Imber: 1		nino SPA			
SITE SPECIFIC I	NPUT DATA						L INPU	TS		-
Highway Data			Site Con	ditions (	Hard =	10, So	oft = 15)			
Average Daily Traffic (Adt):	27,386 vehicles					Autos:	15			
Peak Hour Percentage:	10.00%		Me	dium Tru	cks (2 A	xles):	15			
Peak Hour Volume:	2,739 vehicles		He	avy Truc	ks (3+ A	xles):	15			
Vehicle Speed:	40 mph	-	Vehicle I	Nix						
Near/Far Lane Distance:	50 feet	-		cleType		Day	Evening	Nigh	t Da	aily
Site Data						77.5%				.429
Barrier Height:	0.0 feet		Me	edium Tru	icks:	84.8%	4.9%	10.3	3% 1.	.84%
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Tru	ucks:	86.5%	5 2.7%	10.8	3% 0.	.74%
Centerline Dist. to Barrier:	50.0 feet	-	Noise So	uree Ele	votions	link	nof)			
Centerline Dist. to Observer:	50.0 feet	- H	Noise 30	Autos		000	eel)			
Barrier Distance to Observer:	0.0 feet			n Trucks		297				
Observer Height (Above Pad):	5.0 feet			y Trucks	-	04	Grade A	diustm	ant: 0.0	<b>`</b>
Pad Elevation:	0.0 feet							ajasan	JIII. 0.0	·
Road Elevation:	0.0 feet	4	Lane Equ	ivalent	Distanc	e (in	feet)			
Road Grade:	0.0%			Autos		589				
Left View:	-90.0 degrees		Mediur	n Trucks	: 43.3	386				
Right View:	90.0 degrees		Heav	y Trucks	: 43.4	105				
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow L	Distance	Finite	Road	Fresn	e/	Barrier A	tten E	Berm At	tten
Autos: 66.5	1 2.94	0.7	'9	-1.20		-4.65	0	.000	C	0.00
Medium Trucks: 77.7	2 -14.30	0.8	32	-1.20		-4.87	0	.000	C	0.000
Heavy Trucks: 82.9	9 -18.26	0.8	32	-1.20		-5.43	0	.000	C	0.00
Unmitigated Noise Levels (wit	hout Topo and bar	rier atten	nuation)							
VehicleType Leq Peak Ho			vening	Leq N			Ldn		CNEL	
	9.0 67.		65.4		59.3		67			68.
	3.0 61.	-	55.2		53.6		62			62.3
	4.4 62.		53.9		55.1		63			63.
Vehicle Noise: 7	1.1 69.3	3	66.0		61.5		70	.0		70.
Centerline Distance to Noise (	Contour (in feet)					r				-
		70	dBA	65 d	BA	(	60 dBA		55 dBA	
										503
	Ldr CNEL		50 54		108 116		23 25	-		538

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC		ODEL (9/	12/20	21)		
	io: E ne: Del Obispo nt: e/o Alipaz S						Name: El umber: 15		ino SPA		
SITE	SPECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data				S	Site Con	ditions	(Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	30,588 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tri	ucks (2 Ax	les):	15		
Peak H	lour Volume:	3,059 vehicles	s		He	avy Tru	cks (3+ Ax	les):	15		
Ve	hicle Speed:	40 mph		1	/ehicle I	Mix					
Near/Far La	ne Distance:	50 feet		-		icleType		av	Evening	Night	Daily
Site Data					veni			ay 7.5%	12.9%	9.6%	
					Me	edium Ti		4.8%	4.9%	10.3%	
ва Barrier Type (0-И	rrier Height:	0.0 feet 0.0				leavy Ti		6.5%		10.8%	
Centerline Di	. ,	50.0 feet									
Centerline Dist.		50.0 feet		٨	Voise So		evations	(in fe	et)		
Barrier Distance		0.0 feet				Auto	0.00				
Observer Height		5.0 feet			Mediur	m Truck	s: 2.29				
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.00	)4	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distance	(in f	eet)		
	Road Grade:	0.0%				Auto			,		
	Left View:	-90.0 degree	26		Mediur	m Truck					
	Right View:	90.0 degree			Heav	y Truck	s: 43.4(	)5			
FHWA Noise Mod	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	1 1	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.42		0.79	9	-1.20	-4	1.65	0.0	100	0.000
Medium Trucks:	77.72	-13.82		0.82	2	-1.20	-4	1.87	0.0	00	0.000
Heavy Trucks:	82.99	-17.78		0.82	2	-1.20	-{	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:	69		67.6		65.9		59.8		68.4		69.0
Medium Trucks:	63		62.0		55.6		54.1		62.6		62.8
Heavy Trucks:	64	-	63.4		54.4		55.6		64.0		64.1
Vehicle Noise:	71		69.8		66.5		62.0		70.5	i	71.0
Centerline Distan	ce to Noise Co	ontour (in feet,	)	70 d	IR A	65	dBA	6	0 dBA	55	dBA
			Ldn:	70 0	ібя 54	05	117	0	251	55	ивя 541
			NEL:		58		125		269		579

FHWA-RD-77-108 HIGHWAY NO	SE PREDICTION MODEL (9/12/2021)
Scenario: EP Road Name: Del Obispo St. Road Segment: e/o Alipaz St.	Project Name: El Camino SPA Job Number: 15534
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 30,736 vehicles	Autos: 15
Peak Hour Percentage: 10.00%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 3,074 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 40 mph	Vehicle Mix
Near/Far Lane Distance: 50 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 77.5% 12.9% 9.6% 97.42%
Barrier Height: 0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%
Centerline Dist. to Barrier: 50.0 feet	Noine Onime Eleveting (in feet)
Centerline Dist. to Observer: 50.0 feet	Noise Source Elevations (in feet)
Barrier Distance to Observer: 0.0 feet	Medium Trucks: 2,297
Observer Height (Above Pad): 5.0 feet	Heavy Trucks: 8.004 Grade Adjustment: 0.0
Pad Elevation: 0.0 feet	Heavy Trucks. 8.004 Grade Adjustment. 0.0
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 43.589
Left View: -90.0 degrees	Medium Trucks: 43.386
Right View: 90.0 degrees	Heavy Trucks: 43.405
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distant	
Autos: 66.51 3.44	0.79 -1.20 -4.65 0.000 0.00
Medium Trucks: 77.72 -13.80	0.82 -1.20 -4.87 0.000 0.00
Heavy Trucks: 82.99 -17.76	0.82 -1.20 -5.43 0.000 0.00
Unmitigated Noise Levels (without Topo and barrier a	tenuation)
	q Evening Leq Night Ldn CNEL
Autos: 69.5 67.6	65.9 59.8 68.4 69.
Medium Trucks: 63.5 62.0	55.7 54.1 62.6 62.4
Heavy Trucks: 64.9 63.4	54.4 55.6 64.0 64.
Vehicle Noise: 71.6 69.8	66.5 62.0 70.5 71.0
Venicie Noise. 11:0 03:0	
Centerline Distance to Noise Contour (in feet)	
Centerline Distance to Noise Contour (in feet)	70 dBA 65 dBA 60 dBA 55 dBA
Centerline Distance to Noise Contour (in feet)	70 dBA 65 dBA 60 dBA 55 dBA 54 117 252 543 58 125 270 581

	FHWA-RD-7	7-108 HIGHWAY	Y NOISE	PREDIC		IODEL (	9/12/20	021)				
Scenario				Project Name: El Camino SPA Job Number: 15534								
Road Name. Road Segment	Del Obispo St e/o Alipaz St.				JOD N	iumper:	15534					
SITE S	PECIFIC INPU	JT DATA						L INPUT	s			
Highway Data				Site Con	ditions	(Hard =	10, So	oft = 15)				
Average Daily Ti	affic (Adt): 34	,799 vehicles					Autos:	15				
Peak Hour P	ercentage: 10	0.00%		Me	dium Tr	ucks (2 )	Axles):	15				
Peak Ho	ur Volume: 3,	480 vehicles		He	avy Tru	cks (3+ )	Axles):	15				
Vehi	cle Speed:	40 mph		Vehicle I	Nix							
Near/Far Lane	e Distance:	50 feet	F		cleType		Day	Evening	Night	Daily		
Site Data						Autos:	77.5%		9.6%			
Barri	er Height:	0.0 feet		Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849		
Barrier Type (0-Wa	•	0.0		ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.749		
Centerline Dist.	. ,	50.0 feet	-	Noise So			- ( - 6-	41				
Centerline Dist. to	Observer:	50.0 feet	Ľ.	Noise So				eet)				
Barrier Distance to	Observer:	0.0 feet			Auto n Truck		000 297					
Observer Height (A	bove Pad):	5.0 feet			n Truck v Truck		297 004	Grade Ad	ustmont	0.0		
Pad	Elevation:	0.0 feet		neav	у писк	s. o.	004	Graue Auj	usuneni	0.0		
Road	Elevation:	0.0 feet	1	Lane Equ	uivalen	t Distan	ce (in f	feet)				
R	oad Grade: 0	0.0%			Auto	s: 43.	589					
	Left View: -	90.0 degrees			n Truck		386					
,	Right View:	90.0 degrees		Heav	y Truck	s: 43.	405					
FHWA Noise Model									-			
VehicleType			istance	Finite		Fresr		Barrier Att		m Atten		
Autos:	66.51	3.98	0.7	-	-1.20		-4.65		000	0.00		
Medium Trucks: Heavy Trucks:	77.72 82.99	-13.26 -17.22	0.8 0.8		-1.20 -1.20		-4.87 -5.43		000 000	0.00		
					-1.20		-0.43	0.0	000	0.00		
Unmitigated Noise				<u> </u>			1					
	eq Peak Hour	Leq Day		vening	Leq	Night		Ldn		VEL		
Autos:	70.1	68.2		66.4		60.4		69.0		69.		
Medium Trucks:	64.1	62.6		56.2		54.		63.1		63.		
Heavy Trucks: Vehicle Noise:	65.4	64.0 70.4		54.9 67.1		56.3 62.5		64.5 71.1		64. 71.		
				67.1		62.3	>	71.1		71.		
Centerline Distance	to Noise Cont	our (in feet)	70	dBA	65	dBA	6	0 dBA	FF	dBA		
		Ldn:		зва 59	00	ава 127		о ава 274		ава 59(		
		CNEL:		59 63		127		274		590 631		
		CIVEL.		03		130		293		03		

Monday, December 4, 2023

FHWA-	RD-77-108 HIGH	WAY NO			DEL (9/1	2/2021)		
Scenario: ECP Road Name: Del Obis Road Segment: e/o Alipa					lame: El ( mber: 155	Camino SPA 534		
SITE SPECIFIC	INPUT DATA					DEL INPUTS	3	
Highway Data			Site Cor	ditions (F	Hard = 10,	Soft = 15)		
Average Daily Traffic (Adt)	: 34,947 vehicle	s			Aut	os: 15		
Peak Hour Percentage	: 10.00%				cks (2 Axle	.,		
Peak Hour Volume	3,495 vehicles	3	He	avy Truck	ks (3+ Axle	es): 15		
Vehicle Speed	40 mph		Vehicle	Mix				
Near/Far Lane Distance	50 feet			icleType	Da	y Evening	Night Da	aily
Site Data				AL	utos: 77	.5% 12.9%	9.6% 97.	.42
Barrier Height	: 0.0 feet		M	edium Tru	icks: 84	.8% 4.9%	10.3% 1.	.84
Barrier Type (0-Wall, 1-Berm)				Heavy Tru	<i>icks:</i> 86	.5% 2.7%	10.8% 0.	.74
Centerline Dist. to Barrier	50.0 feet		Noise S	urce Ele	vations (i	n foot)		
Centerline Dist. to Observer	50.0 feet		140136 34	Autos				
Barrier Distance to Observer	: 0.0 feet		Modiu	m Trucks:	0.000			
Observer Height (Above Pad)	: 5.0 feet			/v Trucks:			ustment: 0.0	)
Pad Elevation	0.0 feet							
Road Elevation	0.0 feet		Lane Eq	uivalent l	Distance (	,		
Road Grade				Autos:		9		
Left View				m Trucks:				
Right View	90.0 degree	es	Hear	/y Trucks:	43.405	5		
FHWA Noise Model Calculation	ons							
VehicleType REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	en Berm At	tter
Autos: 66.	51 3.99		0.79	-1.20	-4.	65 0.0	00 0	0.00
Medium Trucks: 77.3			0.82	-1.20	-4.			0.00
Heavy Trucks: 82.9	99 -17.20		0.82	-1.20	-5.	43 0.0	00 0	0.00
Unmitigated Noise Levels (wi	thout Topo and	barrier at	tenuation)					
VehicleType Leq Peak H			g Evening	Leq N	•	Ldn	CNEL	
		68.2	66.4		60.4	69.0		69
		62.6	56.2		54.7	63.1		63
		64.0	55.0		56.2	64.6		64
Vehicle Noise:	72.1	70.4	67.1		62.6	71.1		71
Centerline Distance to Noise	Contour (in feet)							
			70 dBA	65 d		60 dBA	55 dBA	
		Ldn:	59		127	274		59
		VEL:	63		136	294		633

	FHWA-RD	0-77-108 HIGH	WAY NO	DISE P	REDICT	ION MOI	DEL (9/12	2021)		
Scenar	io: BO				F	Project Na	ame: El C	amino SPA		
Road Nan	ne: Del Obispo	St.				Job Nun	nber: 1553	4		
Road Segme	nt: e/o Alipaz S	St.								
	SPECIFIC IN	PUT DATA						EL INPUT	s	
Highway Data				Sit	te Condi	tions (H	ard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	34,799 vehicle	es				Auto	s: 15		
Peak Hour	Percentage:	10.00%			Medi	um Trucl	s (2 Axles	s): 15		
Peak H	lour Volume:	3,480 vehicles	S		Heav	y Trucks	(3+ Axles	s): 15		
Ve	hicle Speed:	40 mph		Vo	hicle Mi	~				
Near/Far La	ne Distance:	50 feet			Vehicl		Day	Evening	Night	Daily
Site Data					Venier	Aut				97.42%
				-	Med	ium Truc			10.3%	
	rrier Height:	0.0 feet				avy Truc			10.3%	
Barrier Type (0-V	. ,	0.0			110	avy muc	na. 00.c	1/0 2.1/0	10.070	0.747
Centerline Di		50.0 feet		No	oise Sou	rce Elev	ations (in	feet)		
Centerline Dist.		50.0 feet				Autos:	0.000			
Barrier Distance		0.0 feet			Medium	Trucks:	2.297			
Observer Height	· ,	5.0 feet			Heavy	Trucks:	8.004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet								
	ad Elevation:	0.0 feet		La	ne Equi		istance (i	n feet)		
	Road Grade:	0.0%				Autos:	43.589			
	Left View:	-90.0 degree			Medium		43.386			
	Right View:	90.0 degree	es		Heavy	Trucks:	43.405			
FHWA Noise Mod	el Calculation:	s								
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite R		Fresnel	Barrier Att	en Ber	m Atten
Autos:	66.51	3.98				oad	11031101			
Autos.	16.00	0.90		0.79		oad -1.20	-4.6		000	0.000
Medium Trucks:		-13.26		0.79 0.82				5 0.0	000	
	77.72					-1.20	-4.6	5 0.0 7 0.0		0.000
Medium Trucks: Heavy Trucks: Unmitigated Nois	77.72 82.99 e Levels (with	-13.26 -17.22 out Topo and		0.82 0.82 ottenua	ation)	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4	5 0.0 7 0.0 3 0.0	000	0.000
Medium Trucks: Heavy Trucks: <b>Unmitigated Nois</b> VehicleType	77.72 82.99 e Levels (with Leg Peak Hou	-13.26 -17.22 <b>Dut Topo and</b> r Leq Day	/ Le	0.82 0.82	ation) ning	-1.20 -1.20	-4.6 -4.8 -5.4	5 0.1 7 0.1 3 0.1	000 000 C	0.000 0.000 NEL
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	77.72 82.99 e Levels (with Leq Peak Hou 70	-13.26 -17.22 out Topo and r Leq Day .1	/ Le	0.82 0.82	ning 66.4	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4 ght	5 0.0 7 0.0 3 0.0 <u>Ldn</u> 69.0	000 000 C.	0.000 0.000 NEL 69.6
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	77.72 82.99 e Levels (with Leq Peak Hou 70 64	-13.26 -17.22 out Topo and r Leq Day .1 .1	68.2 62.6	0.82 0.82	ation) ning 66.4 56.2	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4 9ht 60.4 54.7	5 0.0 7 0.1 3 0.1 <u>Ldn</u> 69.1 63.	000 000 C	0.000 0.000 NEL 69.6 63.4
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	77.72 82.99 e Levels (with Leq Peak Hou 70 64 65	-13.26 -17.22 out Topo and r Leq Day .1 .1 .4	68.2 62.6 64.0	0.82 0.82	ation) ning 66.4 56.2 54.9	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4 -5.4 60.4 54.7 56.2	5 0.1 7 0.1 3 0.1 <i>Ldn</i> 69.1 63. 64.1	000 000 C. D 1 5	0.000 0.000 NEL 69.6 63.4 64.7
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	77.72 82.99 e Levels (with Leq Peak Hou 70 64 65	-13.26 -17.22 out Topo and r Leq Day .1 .1 .4	68.2 62.6	0.82 0.82	ation) ning 66.4 56.2	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4 9ht 60.4 54.7	5 0.0 7 0.1 3 0.1 <u>Ldn</u> 69.1 63.	000 000 C. D 1 5	0.000 0.000 NEL 69.6 63.4 64.7
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	77.72 82.99 e Levels (with Leg Peak Hou 70 64 65 72	-13.26 -17.22 Dut Topo and r Leq Day .1 .1 .4 .1	68.2 62.6 64.0 70.4	0.82 0.82 attenua	ation) ning 66.4 56.2 54.9 67.1	-1.20 -1.20 -1.20 <i>Leq Nig</i>	-4.6 -4.8 -5.4 9ht 60.4 54.7 56.2 62.5	5 0.1 7 0.1 3 0.1 <u>Ldn</u> 69.1 63. 64.3 71.	000 000 000 0 1 5 1	0.000 0.000 NEL 69.6 63.4 64.7 71.5
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	77.72 82.99 e Levels (with Leg Peak Hou 70 64 65 72	-13.26 -17.22 Dut Topo and r Leq Day .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1	2 Le 68.2 62.6 64.0 70.4	0.82 0.82	ation) ning 66.4 56.2 54.9 67.1	-1.20 -1.20 -1.20	-4.6 -4.8 -5.4 60.4 54.7 56.2 62.5 A	5 0.0 7 0.0 3 0.0 69.0 63.0 64.0 71.0 60 dBA	000 000 000 0 0 1 5 1 5 5 5 5 5	0.000 0.000 NEL 69.6 63.4 64.7 71.5 dBA
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	77.72 82.99 e Levels (with Leg Peak Hou 70 64 65 72	-13.26 -17.22 Dut Topo and r Leq Day .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1	68.2 62.6 64.0 70.4	0.82 0.82 attenua	ation) ning 66.4 56.2 54.9 67.1	-1.20 -1.20 -1.20 <i>Leq Nig</i>	-4.6 -4.8 -5.4 9ht 60.4 54.7 56.2 62.5	5 0.1 7 0.1 3 0.1 <u>Ldn</u> 69.1 63. 64.3 71.	000 000 000 0 1 5 1 5 5 1 5 5 5 5 5	69.6 63.4 64.7 71.5

FHWA-RD-77-108 HIGHWAY	NOISE	PREDIC	TION MC	DEL (9	/12/20	21)		
Scenario: BOP Road Name: Del Obispo St. Road Segment: e/o Alipaz St.			Project I Job Nu	lame: E mber: 1		ino SPA		
SITE SPECIFIC INPUT DATA			N	DISE N	ODE	L INPUTS	6	
Highway Data		Site Cond	ditions (l	lard =	10, So	ft = 15)		
Average Daily Traffic (Adt): 34,947 vehicles				A	utos:	15		
Peak Hour Percentage: 10.00%		Med	dium True	cks (2 A	xles):	15		
Peak Hour Volume: 3,495 vehicles		Hea	avy Truck	(3+ A	xles):	15		
Vehicle Speed: 40 mph	ŀ	Vehicle N	liv					
Near/Far Lane Distance: 50 feet	ŀ		cleType		Dav	Evening	Night	Daily
Site Data		VCIII			77.5%	12.9%	9.6%	
Barrier Height: 0.0 feet		Ме	dium Tru	icks:	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0		h	leavy Tru	cks:	36.5%	2.7%	10.8%	
Centerline Dist. to Barrier: 50.0 feet								
Centerline Dist. to Observer: 50.0 feet	_	Noise So				et)		
Barrier Distance to Observer: 0.0 feet			Autos:					
Observer Height (Above Pad): 5.0 feet			n Trucks:					
Pad Elevation: 0.0 feet		Heav	y Trucks:	8.0	04	Grade Adj	ustment	: 0.0
Road Elevation: 0.0 feet	F	Lane Equ	ivalent l	Distanc	e (in f	eet)		
Road Grade: 0.0%	-		Autos			,		
Left View: -90.0 degrees		Mediun	n Trucks:					
Right View: 90.0 degrees			y Trucks					
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow Dis	stance	Finite	Road	Fresn	el I	Barrier Atte	en Ber	m Atten
Autos: 66.51 3.99	0.7	'9	-1.20		4.65	0.0	00	0.000
Medium Trucks: 77.72 -13.24	0.8	2					~~	0.000
	0.0	2	-1.20		4.87	0.0	00	0.000
Heavy Trucks: 82.99 -17.20	0.0		-1.20 -1.20		4.87 5.43	0.0		
Heavy Trucks: 82.99 -17.20	0.8	32						
Heavy Trucks: 82.99 -17.20 Unmitigated Noise Levels (without Topo and barrie VehicleType Leq Peak Hour Leq Day	0.8 er atter	32 nuation) Evening		light		0.0 Ldn	00 <i>CI</i>	0.000
Heavy Trucks:         82.99         -17.20           Unmitigated Noise Levels (without Topo and barrie VehicleType         Leq Peak Hour         Leq Day           Autos:         70.1         68.2	0.8 er atter	az nuation) Evening 66.4	-1.20	light 60.4		0.0 Ldn 69.0	00 CI	0.000 VEL 69.6
Heavy Trucks: 82.99 -17.20 Unmitigated Noise Levels (without Topo and barrie VehicleType Leg Peak Hour Leg Day Autos: 70.1 68.2 Medium Trucks: 64.1 62.6	0.8 er atter	32 Truation) Evening 66.4 56.2	-1.20	light 60.4 54.7		0.0 Ldn 69.0 63.1	00 CI	0.000 VEL 69.6 63.4
Heavy Trucks:         82.99         -17.20           Unmitigated Noise Levels (without Topo and barrie VehicleType         Leq Peak Hour         Leq Day           Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0	0.8 er atter	az nuation) ivening 66.4 56.2 55.0	-1.20	<i>ight</i> 60.4 54.7 56.2		0.0 Ldn 69.0 63.1 64.6	00 CI	0.000 NEL 69.6 63.4 64.7
Heavy Trucks:         82.99         -17.20           Unmitigated Noise Levels (without Topo and barrie VehicleType         Leq Peak Hour         Leq Day           Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0           Vehicle Noise:         72.1         70.4	0.8 er atter	32 Truation) Evening 66.4 56.2	-1.20	light 60.4 54.7		0.0 Ldn 69.0 63.1	00 CI	0.000 NEL 69.6 63.4 64.7
Heavy Trucks:         82.99         -17.20           Unmitigated Noise Levels (without Topo and barrie VehicleType         Leq Peak Hour         Leq Day           Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0           Vehicle Noise:         72.1         70.4	0.8 er atter Leq E	22 22 22 22 22 22 22 22 22 22	-1.20	ight 60.4 54.7 56.2 62.6	5.43	0.0 <i>Ldn</i> 69.0 63.1 64.6 71.1	00	0.000 NEL 69.6 63.4 64.7 71.5
Heavy Trucks:     82.99     -17.20       Unmitigated Noise Levels (without Topo and barrie VehicleType     Leg Peak Hour     Leg Day       Values:     70.1     68.2       Medium Trucks:     64.1     62.6       Heavy Trucks:     65.4     64.0       Vehicle Noise:     72.1     70.4       Centerline Distance to Noise Contour (In feet)     Leg	0.8 er atter Leq E	32 wening 66.4 56.2 55.0 67.1 dBA	-1.20	ight 60.4 54.7 56.2 62.6 BA	5.43	0.0 <i>Ldn</i> 69.0 63.1 64.6 71.1 0 dBA	00	0.000 NEL 69.6 63.4 64.7 71.5 dBA
Heavy Trucks:         82.99         -17.20           Unmitigated Noise Levels (without Topo and barrie VehicleType         Leq Peak Hour         Leq Day           Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0	0.8 er atter Leq E	22 22 22 22 22 22 22 22 22 22	-1.20	ight 60.4 54.7 56.2 62.6	5.43	0.0 <i>Ldn</i> 69.0 63.1 64.6 71.1	00	0.000 NEL 69.6 63.4 64.7 71.5

	FHWA-RD	0-77-108 HIGH	IWAY	' NOISE F	PREDICT	ION M	IODEL (	9/12/2	021)		
	o: EP (With Fo								nino SPA		
	e: Del Obispo					Job N	umber:	15534			
Road Segmer	nt: e/o Alipaz S	St.									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Condi	tions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	30,736 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Medi	um Tri	ucks (2	Axles):	15		
Peak H	our Volume:	3,074 vehicle	s		Heav	y Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle Mi	Y					
Near/Far La	ne Distance:	50 feet		-	Vehicl			Dav	Evening	Night	Daily
Site Data							Autos:	77.5%	•	9.6%	
Bai	rier Height:	0.0 feet			Med	ium Ti	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	•	0.0			He	avy Ti	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	. ,	50.0 feet									
Centerline Dist		50.0 feet		N	oise Sou				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (		5.0 feet			Medium			297	~ · · ·	. , ,	
	d Elevation:	0.0 feet			Heavy	Truck	s: 8	004	Grade Ad	justment.	0.0
Roa	d Elevation:	0.0 feet		L	ane Equi	valent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 43	.589			
	Left View:	-90.0 degree	es		Medium	Truck	s: 43	.386			
	Right View:	90.0 degree	es		Heavy	Truck	s: 43	.405			
FHWA Noise Mode	el Calculation:	s		1							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite R		Fres		Barrier Att	en Ber	m Atten
Autos:	66.51	3.44		0.79		-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-13.80		0.82		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-17.76		0.82		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise			barri	ier attenu	ation)						
	Leq Peak Hou			Leq Eve		Leq	Night		Ldn		VEL
Autos:	69		67.6		65.9		59.	-	68.4		69.
Medium Trucks:	63		62.0		55.7		54.		62.		62
Heavy Trucks:	64		63.4		54.4		55.	-	64.		64.
Vehicle Noise:	71	.6	69.8		66.5		62.	0	70.	5	71.
Centerline Distanc	e to Noise Co	ontour (in feet	)								
			L	70 di		65	dBA		60 dBA	_	dBA
			Ldn:		54		117		252		54
			NEL:		58		125		270		581

Monday, December 4, 2023

FHWA-	RD-77-108 HIGH	WAY NO	DISE F	PREDIC	TION M	ODEL (9	/12/2	021)		
Scenario: EC (With	Forster)				Project	Name: E	l Can	nino SPA		
Road Name: Del Obis	o St.				Job Ni	umber: 1	5534			
Road Segment: e/o Alipaz	: St.									
SITE SPECIFIC	NPUT DATA							L INPUTS	6	
Highway Data			Si	ite Con	ditions (	Hard = 1	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	34,799 vehicle	s				A	utos:	15		
Peak Hour Percentage:	10.00%			Mee	dium Tru	icks (2 A.	xles):	15		
Peak Hour Volume:	3,480 vehicles			Hea	avy Truc	ks (3+ A.	xles):	15		
Vehicle Speed:	40 mph		V	ehicle A	lix					
Near/Far Lane Distance:	50 feet		-		cleType	[	Dav	Evening	Night	Daily
Site Data							7.5%	÷	9.6%	
Barrier Height:	0.0 feet			Me	dium Tr	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm).				F	leavy Tr	ucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier.			-							
Centerline Dist. to Observer.			N	oise So		evations		eet)		
Barrier Distance to Observer.					Autos					
Observer Height (Above Pad).					n Trucks			~		
Pad Elevation				Heav	y Trucks	8.0	04	Grade Adj	ustment.	0.0
Road Elevation:			Lá	ane Equ	iivalent	Distance	e (in i	feet)		
Road Grade	0.0%				Autos	: 43.5	89			
Left View	-90.0 degree	s		Mediur	n Trucks	: 43.3	86			
Right View				Heav	y Trucks	43.4	05			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos: 66.5	1 3.98		0.79		-1.20	-	4.65	0.0	00	0.000
Medium Trucks: 77.7	2 -13.26		0.82		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks: 82.9	9 -17.22		0.82		-1.20	-	5.43	0.0	00	0.000
Unmitigated Noise Levels (wi		-								
VehicleType Leq Peak H			eq Eve		Leq I	•		Ldn		VEL
		58.2		66.4		60.4		69.0		69.6
		32.6		56.2		54.7		63.1		63.4
		54.0		54.9		56.2		64.5		64.
		70.4		67.1		62.5		71.1		71.5
Centerline Distance to Noise	Contour (in feet)		70 dF	24	65 0	ID A		50 dBA	66	dBA
		Ldn:	70 aE	5A 59	65 0	іва 127		274	55	ава 590
		Lan: IEL:		59 63		127		274		590 631
	Ch	IEL:		63		130		∠93		031

	FHWA-RD-	77-108 HIGH	NAY NO	ISE PRED		NODEL (9	9/12/20	021)		
	ECP (With F Del Obispo S e/o Alipaz St	St.				t Name: E Number: 1		nino SPA		
SITE SI	PECIFIC INF	PUT DATA				NOISE N	IODE	L INPUTS	5	
Highway Data				Site C	onditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt): 3	34,947 vehicle	s			A	Autos:	15		
Peak Hour Pe	ercentage:	10.00%		1	/ledium Ti	rucks (2 A	xles):	15		
Peak Hou	ır Volume: 🔅	3,495 vehicles		1	leavy Tru	icks (3+ A	xles):	15		
Vehi	cle Speed:	40 mph		Vehicl	e Mix					
Near/Far Lane	Distance:	50 feet			ehicleType	e	Dav	Evening	Night	Daily
Site Data							77.5%		9.6%	
Barri	er Heiaht:	0.0 feet			Medium 1	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wal		0.0			Heavy 1	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist.	. ,	50.0 feet		Noice	Course E	levations	lin fe	a of l		
Centerline Dist. to	Observer:	50.0 feet		Noise	Auto			eel)		
Barrier Distance to	Observer:	0.0 feet			ium Truck	0.0	000 297			
Observer Height (Al	bove Pad):	5.0 feet			avv Truck		04	Grade Adj	iustment	. 0 0
Pad	Elevation:	0.0 feet		пе	avy muci	IS. 0.U	704	Orade Auj	usunen	. 0.0
Road	Elevation:	0.0 feet		Lane E	quivalen	t Distanc	e (in i	feet)		
Ro	ad Grade:	0.0%			Auto	os: 43.5	589			
	Left View:	-90.0 degree	s		ium Truck		386			
F	Right View:	90.0 degree	s	He	avy Truck	(s: 43.4	105			
FHWA Noise Model	Calculations			-						
VehicleType	REMEL	Traffic Flow	Distan		te Road	Fresn	-	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.99		0.79	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-13.24		0.82	-1.20		-4.87	0.0		0.000
Heavy Trucks:	82.99	-17.20		0.82	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise L	evels (witho	ut Topo and I	barrier a	ttenuatior	l)					
	eq Peak Hour			q Evening	,	Night		Ldn		NEL
Autos:	70.1		68.2	66		60.4		69.0		69.6
Medium Trucks:	64.1		62.6	56		54.7		63.1		63.4
Heavy Trucks:	65.4		64.0	55		56.2		64.6		64.7
Vehicle Noise:	72.1		70.4	67	.1	62.6		71.1		71.5
Centerline Distance	to Noise Cor	ntour (in feet)								
				70 dBA	65	dBA	6	60 dBA	55	dBA
					1					
			Ldn: IEL:		9	127 136		274 294		591 633

FHWA-RD-77-108 HIGHWA	Y NOISE	E PREDIC	TION M	ODEL (9	/12/20	21)		
Scenario: BO (With Forster) Road Name: Del Obispo St. Road Segment: e/o Alipaz St.				Vame: E Imber: 1		ino SPA		
SITE SPECIFIC INPUT DATA						L INPUTS	5	
Highway Data		Site Con	ditions (	Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt): 34,799 vehicles				A	utos:	15		
Peak Hour Percentage: 10.00%		Med	dium Tru	cks (2 A	xles):	15		
Peak Hour Volume: 3,480 vehicles		Hea	avy Truc	ks (3+ A	xles):	15		
Vehicle Speed: 40 mph	ŀ	Vehicle N	lix					
Near/Far Lane Distance: 50 feet	-		cleType		Dav	Evening	Night	Daily
Site Data					77.5%	12.9%	9.6%	
Barrier Height: 0.0 feet		Me	dium Tr	ucks:	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0		F	leavy Tr	ucks:	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier: 50.0 feet	-	N 0-			(i f	- 41		
Centerline Dist. to Observer: 50.0 feet	-	Noise So				et)		
Barrier Distance to Observer: 0.0 feet			Autos					
Observer Height (Above Pad): 5.0 feet			n Trucks			Grade Adji	otmont	
Pad Elevation: 0.0 feet		Heav	y Trucks	: 8.0	04	Grade Adji	JSUITETIL	0.0
Road Elevation: 0.0 feet	ſ	Lane Equ	ıivalent	Distanc	e (in f	eet)		
Road Grade: 0.0%	ſ		Autos	: 43.5	89			
Left View: -90.0 degrees		Mediur	n Trucks	: 43.3	86			
Right View: 90.0 degrees		Heav	y Trucks	: 43.4	05			
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow D	istance	Finite	Road	Fresn	el I	Barrier Atte	n Ber	m Atten
Autos: 66.51 3.98	0.7	79	-1.20		4.65	0.0	00	0.000
Medium Trucks: 77.72 -13.26	0.8	32	-1.20		4.87	0.0	00	0.000
Heavy Trucks: 82.99 -17.22	0.8	32	-1.20		5.43	0.0	00	0.000
Unmitigated Noise Levels (without Topo and barr	ier atter	nuation)						
	Leg E	vening	Leq I	light		Ldn		VEL
VehicleType Leq Peak Hour Leq Day						69.0		69.6
Autos: 70.1 68.2		66.4		60.4				
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6		56.2		54.7		63.1		63.4
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0	1	56.2 54.9		54.7 56.2		63.1 64.5		63.4 64.7
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0           Vehicle Noise:         72.1         70.4	1	56.2		54.7		63.1		63.4 64.7
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0           Vehicle Noise:         72.1         70.4		56.2 54.9 67.1		54.7 56.2 62.5		63.1 64.5 71.1		63.4 64.7 71.5
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0           Vehicle Noise:         72.1         70.4           Centerline Distance to Noise Contour (in feet)         66.2	70	56.2 54.9 67.1 dBA	65 a	54.7 56.2 62.5	6	63.1 64.5 71.1 0 dBA		63.4 64.7 71.5 dBA
Autos:         70.1         68.2           Medium Trucks:         64.1         62.6           Heavy Trucks:         65.4         64.0	70	56.2 54.9 67.1	65 a	54.7 56.2 62.5	6	63.1 64.5 71.1		63.4 64.7 71.5

	FHWA-RD	-77-108 HIGH	WAY N	DISE P	REDICTION	MODEL	(9/12/2	021)		
Road Nam	o: BOP (With I e: Del Obispo nt: e/o Alipaz S	St.				ct Name Number		nino SPA		
SITE	SPECIFIC IN	PUT DATA				NOISE	MODE		s	
Highway Data				Si	te Condition	s (Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	34,947 vehicle	s				Autos:	15		
Peak Hour	Percentage:	10.00%			Medium	Trucks (2	Axles):	15		
Peak H	our Volume:	3,495 vehicles			Heavy T	rucks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		Va	hicle Mix					
Near/Far La	ne Distance:	50 feet		VC	VehicleTv	ne	Dav	Evening	Night	Dailv
Site Data					veniery	Autos:	77.5%	•	9.6%	
	wier Heinht:	0.0 feet			Medium	Trucks:			10.3%	1.84
	rier Height:	0.0 feet 0.0				Trucks:			10.8%	0.74
Barrier Type (0-W Centerline Dis	. ,	0.0 50.0 feet							10.070	0.7 1
Centerline Dist.		50.0 feet		No	oise Source	Elevatio	ns (in fe	eet)		
Barrier Distance		0.0 feet			Au	tos: (	0.000			
Observer Height (		5.0 feet			Medium Tru		2.297			
÷ (	ad Elevation:	0.0 feet			Heavy Tru	cks: I	8.004	Grade Ad	justment.	0.0
	d Elevation:	0.0 feet		La	ne Equivale	nt Dista	nce (in	feet)		
	Road Grade:	0.0%					3.589			
1	Left View:	-90.0 degree	e		Medium Tru		3.386			
	Right View:	90.0 degree			Heavy Tru		3.405			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite Road	Fre		Barrier Att	en Ber	m Atten
Autos:	66.51	3.99		0.79	-1.2		-4.65		000	0.00
Medium Trucks:	77.72	-13.24		0.82	-1.2		-4.87		000	0.00
Heavy Trucks:	82.99	-17.20		0.82	-1.2	0	-5.43	0.0	000	0.00
Unmitigated Noise					,				1	
	Leq Peak Hou			eq Eve		q Night		Ldn		VEL
Autos:	70.		58.2		66.4	60		69.		69
Medium Trucks:	64.		52.6		56.2	54		63.		63
Heavy Trucks:	65.		64.0		55.0		5.2	64.		64
Vehicle Noise:	72.		70.4		67.1	62	2.6	71.	1	71
Centerline Distanc	e to Noise Co	ntour (in feet)		70 dB		5 dBA		50 dBA	57	dBA
			dn:	/U dB		5 aBA 12	_	274 OU dBA		-
			Lan: IEL:		59 63	12		274		59
			ILL.			13	O	294		63

Monday, December 4, 2023

	FHWA-RD	0-77-108 HIGH\	VAY NO	ISE F	PREDIC	TION M	ODEL (9	)/12/2	021)			
Scenario: Road Name: Road Segment:	Del Obispo						Name: E umber: 1		nino SP/	4		
	PECIFIC IN	PUT DATA							L INPU			
Highway Data				S	ite Con	ditions (	Hard =	10, S	oft = 15)			
Average Daily Tr	, ,	33,448 vehicles	6					Autos:				
Peak Hour Pe		10.00%				dium Tru						
	ur Volume:	3,345 vehicles			Hea	avy Truc	ks (3+ A	xles).	15			
	cle Speed:	40 mph		V	ehicle A	lix						
Near/Far Lane	Distance:	50 feet			Vehi	cleType		Day	Evenin	g Ni	ght	Daily
Site Data						A	utos:	77.5%	6 12.9	%	9.6%	97.429
Barri	er Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9 <sup>6</sup>	% 1	0.3%	1.84%
Barrier Type (0-Wal	I, 1-Berm):	0.0			H	leavy Tr	ucks:	86.5%	6 2.7°	% 1	0.8%	0.74%
Centerline Dist.	to Barrier:	50.0 feet		N	oise So	urce Ele	vations	in f	oof)			
Centerline Dist. to	Observer:	50.0 feet			0136 00	Autos		000				
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks		297				
Observer Height (Al		5.0 feet				y Trucks		04	Grade	Adiust	ment:	0.0
	Elevation:	0.0 feet				·						
	Elevation:	0.0 feet		La	ane Equ	iivalent			feet)			
Ro	ad Grade:	0.0%				Autos						
	Left View: Right View:	-90.0 degree				n Trucks y Trucks						
	•	90.0 degree	5		i icav	y mucka	. 43.4	105				
FHWA Noise Model			<b>D</b> : (		<b>F</b> 14			. 1			_	
VehicleType Autos:	REMEL 66.51	Traffic Flow 3.80	Distand	ce 0.79	Finite	-1.20	Fresn	ei -4.65	Barrier	0.000	Berr	n Atten 0.00
Autos: Medium Trucks:	77.72	-13.43		0.79		-1.20		-4.05 -4.87		0.000		0.00
Heavy Trucks:	82.99	-13.43		0.82		-1.20		-4.07 -5.43		0.000		0.00
Unmitigated Noise L												
	ea Peak Hou				ening	Leg I	Viaht		Ldn		CN	EL
Autos:	69		8.0		66.2		60.2		6	8.8		69.
Medium Trucks:	63	.9 6	2.4		56.0		54.5		6	2.9		63.
Heavy Trucks:	65	.2 6	3.8		54.8		56.0		6	i4.4		64.
Vehicle Noise:	71	.9 7	0.2		66.9		62.4		7	0.9		71.
Centerline Distance	to Noise Co	ontour (in feet)										
				70 dE	BA	65 c	IBA		60 dBA		55 0	1BA
						00 0						
			.dn: EL:		57 61		124		2	67 85		574 615

	FHWA-RD	0-77-108 HIGH	WAY NC	ISE PREDI		MODEL (S	9/12/20	021)		
Scenario Road Name Road Segment	: Del Obispo					t Name: E lumber: 1		nino SPA		
SITE S	PECIFIC IN	PUT DATA						L INPUTS	3	
Highway Data				Site Co.	nditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	33,596 vehicle	es				Autos:	15		
Peak Hour F	Percentage:	10.00%		M	edium Tr	ucks (2 A	xles):	15		
Peak Ho	ur Volume:	3,360 vehicles	5	Н	eavy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	40 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	50 feet			hicleType		Day	Evening	Night	Daily
Site Data							77.5%	•	9.6%	
Barr	ier Height:	0.0 feet		٨	1edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist	. ,	50.0 feet		Noiso S	ourco E	levations	(in fe	of)		
Centerline Dist. to	o Observer:	50.0 feet		NOISE 3	Auto		000	el)		
Barrier Distance to	o Observer:	0.0 feet		Madi	Im Truck	0.0	297			
Observer Height (A	bove Pad):	5.0 feet			vv Truck		004	Grade Adj	ustment	· 0.0
Pad	d Elevation:	0.0 feet		Tiea	vy much		/04	0/000/10	aounom	. 0.0
Road	d Elevation:	0.0 feet		Lane Ec	quivalen	t Distanc	e (in f	feet)		
R	oad Grade:	0.0%			Auto		589			
	Left View:	-90.0 degree	es		ım Truck		386			
	Right View:	90.0 degree	es	Hea	vy Truck	(s: 43.4	105			
FHWA Noise Model	Calculation	S		-						
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	e Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.82		0.79	-1.20		-4.65	0.0		0.00
Medium Trucks:	77.72	-13.41		0.82	-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	82.99	-17.37		0.82	-1.20		-5.43	0.0	00	0.00
Unmitigated Noise				ttenuation)						
	.eq Peak Hou			eq Evening		Night		Ldn		NEL
Autos:	69		68.0	66.3	-	60.2		68.8		69.
Medium Trucks:	63		62.4	56.1		54.5		63.0		63.
Heavy Trucks:	65		63.8	54.8		56.0		64.4		64.
Vehicle Noise:	71	.9	70.2	66.9	9	62.4		70.9		71.4
Centerline Distance	e to Noise Co	ontour (in feet,								
Centerline Distance	e to Noise Co			70 dBA		dBA	6	i0 dBA	55	dBA
Centerline Distance	e to Noise Co		Ldn: VEL:	70 dBA 58 62		dBA 124 133	6	0 dBA 267 286	55	dBA 576 617

	FHWA-RD	-77-108 HIGH	WAY N	OISE I	PREDIC		IODEL (9	/12/20	021)		
Scenario: Road Name: Road Segment:	Del Obispo						Name: E lumber: 1		iino SPA		
	ECIFIC IN	PUT DATA							L INPUTS	6	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	ft = 15)		
Average Daily Tra	affic (Adt):	38,498 vehicle	s					Autos:	15		
Peak Hour Pe	•	10.00%					ucks (2 A		15		
Peak Hou		3,850 vehicles	5		He	avy Tru	cks (3+ A	xles):	15		
	le Speed:	40 mph		v	ehicle l	Nix					
Near/Far Lane	Distance:	50 feet			Veh	icleType	. 1	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barrie	er Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall		0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist.	to Barrier:	50.0 feet			laisa Sa		evations	(in fe	nof)		
Centerline Dist. to	Observer:	50.0 feet		-	0130 00	Auto					
Barrier Distance to	Observer:	0.0 feet			Mediu	n Truck					
Observer Height (Ab	ove Pad):	5.0 feet				v Truck			Grade Adj	ustment	0.0
Pad	Elevation:	0.0 feet									
Road	Elevation:	0.0 feet		L	ane Equ		t Distanc		'eet)		
	ad Grade:	0.0%				Auto					
	Left View:	-90.0 degree	:S			n Truck					
R	ight View:	90.0 degree	'S		Heav	y Truck	s: 43.4	105			
FHWA Noise Model (	Calculations	5									
	REMEL	Traffic Flow	Dista		Finite		Fresne		Barrier Atte		m Atten
Autos:	66.51	4.41		0.79		-1.20		4.65	0.0		0.00
Medium Trucks:	77.72	-12.82		0.82		-1.20		4.87	0.0		0.00
Heavy Trucks:	82.99	-16.78		0.82		-1.20		-5.43	0.0	00	0.00
Unmitigated Noise L											
	eq Peak Hou			.eq Ev		Leq	Night		Ldn		VEL
Autos:	70.	-	68.6		66.9		60.8		69.4		70.
Medium Trucks:	64.	-	63.0		56.6		55.1		63.6		63.
Heavy Trucks:	65.		64.4		55.4		56.6		65.0		65.
Vehicle Noise:	72.		70.8		67.5		63.0		71.5		72.
Centerline Distance	to Noise Co	ntour (in feet)		70 d		05	dBA		0 dBA		dBA
			Ldn:	70 a	BA 63	05	ава 136	e	0 dBA 293	55	ава 631
			Lan: IEL:		63		136 145		293		631
		CI	VLL.								

	FHWA-RD	-77-108 HIGH	WAY	NOISE I	PREDIC	TION M	ODEL	(9/12/2	021)		
	io: ECP	01							nino SPA		
	e: Del Obispo nt: w/o Camino					JOD IN	umper:	15534			
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	Hard =	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	38,646 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	3,865 vehicles	6		Hei	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		v	ehicle N	Nix					
Near/Far La	ne Distance:	50 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%		9.6%	97.429
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	50.0 feet		-							
Centerline Dist.		50.0 feet		N	oise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		.000			
Observer Height	Above Pad):	5.0 feet				n Trucks		.297	Grade Ad	iuotmont	0.0
P	ad Elevation:	0.0 feet			Heav	y Trucks	. 8	.004	Grade Ad	usimeni.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Autos	: 43	.589			
	Left View:	-90.0 degree	s			n Trucks		.386			
	Right View:	90.0 degree	es		Heav	y Trucks	: 43	.405			
FHWA Noise Mod	el Calculation:	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	4.43		0.79		-1.20		-4.65		000	0.00
Medium Trucks:	77.72	-12.81		0.82		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-16.76		0.82		-1.20		-5.43	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq Eve		Leq			Ldn		VEL
Autos:	70		68.6		66.9		60		69.4		70.
Medium Trucks:	64		63.0		56.7		55		63.		63.
Heavy Trucks:	65	-	64.4		55.4		56		65.		65.
Vehicle Noise:	72		70.8		67.5		63.	.0	71.	)	72.
Centerline Distant	ce to Noise Co	ntour (in feet)	1	70 d	RA	65 (	NR A		50 dBA	55	dBA
			Ldn:	70 01	63	001	13		293		63
			VEL:		68		14		293		67
		01			00		141		514		0//

Monday, December 4, 2023

FHWA-F	RD-77-108 HIGHWA	AY NOISE			0/12/20	21)		_	
Scenario: BO Road Name: Del Obisp Road Segment: w/o Camir		Project Name: El Camino SPA Job Number: 15534							
SITE SPECIFIC I	NPUT DATA			NOISE N			;		
Highway Data			Site Condit	ions (Hard =	10, Soi	ft = 15)			
Average Daily Traffic (Adt):	38,498 vehicles				Autos:	15			
Peak Hour Percentage:	10.00%		Mediu	m Trucks (2 A	xles):	15			
Peak Hour Volume:	3,850 vehicles		Heavy	/ Trucks (3+ A	xles):	15			
Vehicle Speed:	40 mph	-	Vehicle Mix						
Near/Far Lane Distance:	50 feet	-	Vehicle		Day	Evening	Night	Daily	
Site Data					77.5%	12.9%	9.6%		
Barrier Height:	0.0 feet		Media	um Trucks:	84.8%	4.9%	10.3%	1.84	
Barrier Type (0-Wall, 1-Berm):	0.0		Hea	vy Trucks:	86.5%	2.7%	10.8%	0.74	
Centerline Dist. to Barrier:	50.0 feet		Noico Sour	ce Elevations	(in for	of)			
Centerline Dist. to Observer:	50.0 feet	P		Autos: 0.0		50			
Barrier Distance to Observer:	0.0 feet		Medium 1	0.0					
Observer Height (Above Pad):	5.0 feet		Heavy 1			Grade Adji	ustment	0.0	
Pad Elevation:	0.0 feet								
Road Elevation:	0.0 feet	4		alent Distanc		eet)			
Road Grade:	0.0%			Autos: 43.5					
Left View:	-90.0 degrees		Medium 1						
Right View:	90.0 degrees		Heavy 1	rucks: 43.4	105				
FHWA Noise Model Calculatio	ns								
VehicleType REMEL		Distance	Finite Ro	ad Fresn	el E	Barrier Atte	n Ber	m Atte	
Autos: 66.5		0.7			-4.65	0.0		0.0	
Medium Trucks: 77.7		0.8			-4.87	0.0		0.0	
Heavy Trucks: 82.9	9 -16.78	0.8	- 2	1.20	-5.43	0.0	00	0.0	
Unmitigated Noise Levels (wit	hout Topo and bar	rrier atten	nuation)						
VehicleType Leq Peak Ho			vening	Leq Night		Ldn	-	VEL	
	0.5 68.	-	66.9	60.8		69.4		70	
	4.5 63.	-	56.6	55.1		63.6		63	
	5.8 64.4		55.4	56.6		65.0		65	
Vehicle Noise: 7	2.5 70.	8	67.5	63.0		71.5		72	
Centerline Distance to Noise C	Contour (in feet)								
			dBA	65 dBA	60	) dBA	55	dBA	
	Ldr	1:	63	136		293		63	
	CNEL		68	145		313		67	

	FHWA-RI	D-77-108 HIGH	IWATN	IOISE	PREDIC		IODEL (9	/12/2	021)			
Scenari	io: BOP					Project	Name: E	l Car	nino SPA			
Road Name: Del Obispo St.					Job Number: 15534							
Road Segmer	nt: w/o Camino	o Capistrano										
	SPECIFIC IN	IPUT DATA							L INPUT	5		
Highway Data				1	Site Cond	ditions	(Hard = :	10, So	oft = 15)			
Average Daily	Traffic (Adt):	38,646 vehicle	es				A	utos:	15			
Peak Hour	Percentage:	10.00%			Med	dium Tr	ucks (2 A	xles):	15			
Peak H	lour Volume:	3,865 vehicle	s		Hea	avy Tru	cks (3+ A	xles):	15			
Ve	hicle Speed:	40 mph			Vehicle N	<i>liv</i>						
Near/Far La	ne Distance:	50 feet		H		cleType		Day	Evening	Night	Daily	
Site Data					Vern			77.5%			97.429	
					Ma	, dium T		34.8%		10.3%		
	rrier Height:	0.0 feet				leavy T		36.5%		10.3%		
Barrier Type (0-W	. ,	0.0				icavy i	ucha. (	50.57	2.170	10.070	0.747	
Centerline Dis		50.0 feet		1	Noise So	urce El	evations	(in f	eet)			
Centerline Dist.		50.0 feet				Auto	s: 0.0	00				
Barrier Distance		0.0 feet			Mediun	n Truck	s: 2.2	97				
Observer Height (	,	5.0 feet			Heav	y Truck	s: 8.0	04	Grade Adj	iustment	: 0.0	
	ad Elevation:	0.0 feet		-								
	ad Elevation:	0.0 feet		-	Lane Equ				reet)			
1	Road Grade:	0.0%				Auto						
	Left View:	-90.0 degree				n Truck						
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.4	05				
FHWA Noise Mode	el Calculation	s										
FHWA Noise Mode VehicleType	REMEL	s Traffic Flow	Dista		Finite		Fresne		Barrier Atte	en Ber	m Atten	
VehicleType Autos:		-	Dista	ance 0.7		-1.20		el 4.65	Barrier Atte 0.0			
VehicleType	REMEL	Traffic Flow 4.43	Dista		9				0.0		0.00	
VehicleType Autos:	REMEL 66.51	Traffic Flow 4.43		0.79	9 2	-1.20	-	4.65	0.0	000	0.00	
VehicleType Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Noise</b>	REMEL 66.51 77.72 82.99 E Levels (with	Traffic Flow 4.43 -12.81 -16.76 out Topo and	barrier	0.79 0.82 0.82 <b>atten</b>	9 2 2 uation)	-1.20 -1.20 -1.20	-	4.65 4.87	0.0 0.0 0.0	000	0.00 0.00 0.00	
VehicleType Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Noise</b> VehicleType	REMEL 66.51 77.72 82.99 E Levels (with Leq Peak Hou	Traffic Flow           4.43           -12.81           -16.76           out Topo and           Ir         Leq Day	barrier	0.79 0.82 0.82 <b>atten</b>	9 2 2 <b>uation)</b> vening	-1.20 -1.20 -1.20	Night	4.65 4.87	0.0 0.0 0.0	000 000 000 C	0.00 0.00 0.00 NEL	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	REMEL 66.51 77.72 82.99 E Levels (with Leq Peak Hou 70	Traffic Flow           4.43           -12.81           -16.76           out Topo and           Ir         Leq Day           0.5	<i>barrier</i> / 1 68.6	0.79 0.82 0.82 <b>atten</b>	9 2 2 <i>vening</i> 66.9	-1.20 -1.20 -1.20	Night 60.8	4.65 4.87	0.0 0.0 0.0 <i>Ldn</i> 69.4	000 000 000 C.	0.00 0.00 0.00 NEL 70.	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	REMEL 66.51 77.72 82.99 2 Levels (with Leq Peak Hou 70 64	Traffic Flow           4.43           -12.81           -16.76           out Topo and           Ir         Leq Day           0.5           5	barrier / 1 68.6 63.0	0.79 0.82 0.82 <b>atten</b>	9 2 2 vening 66.9 56.7	-1.20 -1.20 -1.20	Night 60.8 55.1	4.65 4.87	0.0 0.0 0.0 <i>Ldn</i> 69.4 63.6	000 000 000 C	0.00 0.00 0.00 NEL 70. 63.	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 66.51 77.72 82.99 2 Levels (with Leg Peak Hou 70 64 65	Traffic Flow           4.43           -12.81           -16.76           out Topo and           r         Leq Day           0.5           6.5           6.8	barrier 68.6 63.0 64.4	0.79 0.82 0.82 <b>atten</b>	9 2 2 <i>wening</i> 66.9 56.7 55.4	-1.20 -1.20 -1.20	Night 60.8 55.1 56.6	4.65 4.87	0.0 0.0 0.0 <i>Ldn</i> 69.4 63.6 65.0	000 000 000 C.	0.00 0.00 0.00 NEL 70. 63. 65.	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	REMEL 66.51 77.72 82.99 2 Levels (with Leq Peak Hou 70 64	Traffic Flow           4.43           -12.81           -16.76           out Topo and           r         Leq Day           0.5           6.5           6.8	barrier / 1 68.6 63.0	0.79 0.82 0.82 <b>atten</b>	9 2 2 vening 66.9 56.7	-1.20 -1.20 -1.20	Night 60.8 55.1	4.65 4.87	0.0 0.0 0.0 <i>Ldn</i> 69.4 63.6	000 000 000 C.	0.00 0.00 0.00 NEL 70. 63. 65.	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hou 70 64 65 72	Traffic Flow           4.43           -12.81           -16.76           out Topo and           ur         Leq Day           1.5           5.8           2.6	barrier 68.6 63.0 64.4 70.8	0.79 0.82 0.83 <i>atten</i> Leq Ev	9 2 2 <i>vening</i> 66.9 56.7 55.4 67.5	-1.20 -1.20 -1.20 <i>Leq</i>	Night 60.8 55.1 56.6 63.0	4.65 4.87 5.43	0.0 0.0 0.0 69.4 63.6 65.0 71.5	000 000 000 C.	0.00 0.00 0.00 NEL 70. 63. 65. 72.	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unnitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hou 70 64 65 72	Traffic Flow           4.43           -12.81           -16.76           out Topo and           ir         Leq Day           5           8.8           2.6           ontour (in feet)	barrier / 1 68.6 63.0 64.4 70.8	0.79 0.82 0.82 <b>atten</b>	9 2 2 <b>wation)</b> vening 66.9 56.7 55.4 67.5	-1.20 -1.20 -1.20 <i>Leq</i>	Night 60.8 55.1 56.6 63.0 dBA	4.65 4.87 5.43	0.0 0.0 0.0 0.0 69.4 63.6 65.0 71.5	000 000 000 000 C. 4 5 5 5 5 5	0.00 0.00 0.00 NEL 70. 63. 65. 72. dBA	
VehicleType Autos: Medium Trucks: Heavy Trucks: Unnitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hou 70 64 65 72	Traffic Flow           4.43           -12.81           -16.76           out Topo and           r           Leq Day           5           5           6.8           2.6           ontour (in feet)	barrier 68.6 63.0 64.4 70.8	0.79 0.82 0.83 <i>atten</i> Leq Ev	9 2 2 <i>vening</i> 66.9 56.7 55.4 67.5	-1.20 -1.20 -1.20 <i>Leq</i>	Night 60.8 55.1 56.6 63.0	4.65 4.87 5.43	0.0 0.0 0.0 69.4 63.6 65.0 71.5	000 000 000 1 1 5 5 5 5 5 5 5	0.000 0.000 0.000 NEL 70.0 63.0 65. 72.0	

	FHWA-RD	0-77-108 HIGH	WAY NO	ISE PREDIO	CTION M	ODEL (9/	12/2021)		Í
Scenario: Road Name: Road Segment:		St.				Name: El umber: 15	Camino S 5534	SPA	
	ECIFIC IN	IPUT DATA					ODEL IN		
Highway Data				Site Cor	nditions	(Hard = 1	0, Soft = 1	15)	
Average Daily Tra	affic (Adt):	33,596 vehicle	s			A	utos: 1	5	
Peak Hour Pe	rcentage:	10.00%		Me	edium Tru	icks (2 Ax	(les): 1	5	
Peak Hou	r Volume:	3,360 vehicles	6	He	eavy Truc	:ks (3+ Ax	(les): 1	5	
Vehic	le Speed:	40 mph		Vehicle	Mix				
Near/Far Lane	Distance:	50 feet			nicleType	D	av Eve	ning N	light Daily
Site Data						utos: 7		2.9%	9.6% 97.42%
Barrie	r Heiaht:	0.0 feet		M	ledium Tr	ucks: 8	4.8% 4	<b>1.9%</b> 1	10.3% 1.84%
Barrier Type (0-Wall,		0.0			Heavy Tr	ucks: 8	6.5% 2	2.7% 1	10.8% 0.74%
Centerline Dist.		50.0 feet		Noico S	ourco El	evations	(in foot)		
Centerline Dist. to	Observer:	50.0 feet		110/30 0	Autos		. /		
Barrier Distance to	Observer:	0.0 feet		Mediu	im Trucks				
Observer Height (Ab	ove Pad):	5.0 feet			vy Trucks			de Adius	tment: 0.0
Pad	Elevation:	0.0 feet			· ·				
Road	Elevation:	0.0 feet		Lane Eq		Distance	. /		
	ad Grade:	0.0%			Autos				
	Left View:	-90.0 degree			im Trucks				
R	ight View:	90.0 degree	es	Hea	vy Trucks	3: 43.40	05		
FHWA Noise Model (	Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresne	l Barri	er Atten	Berm Atten
Autos:	66.51	3.82		0.79	-1.20	-4	4.65	0.000	0.00
Medium Trucks:	77.72	-13.41		0.82	-1.20		4.87	0.000	
Heavy Trucks:	82.99	-17.37		0.82	-1.20		5.43	0.000	0.00
Unmitigated Noise L			barrier a	tenuation)					
	q Peak Hou			q Evening		Night	Ldn		CNEL
Autos:	69		68.0	66.3		60.2		68.8	69.4
Medium Trucks:	63		62.4	56.1		54.5		63.0	63.
Heavy Trucks:	65		63.8	54.8		56.0		64.4	64.
Vehicle Noise:	71	.9	70.2	66.9	)	62.4		70.9	71.4
venicie noise.									-
	to Noise Co	ontour (in feet)			-				
Centerline Distance	to Noise Co			70 dBA		1BA	60 dB		55 dBA
	to Noise Co		Ldn:	70 dBA 58 62		1BA 124 133	60 dB	A 267 286	55 dBA 576 617

	FHWA-RI	D-77-108 HIGH	WAY	NOISE F	PREDICT	ION M	ODEL (	9/12/2	021)		
Road Nam	io: EC (With F ne: Del Obispo nt: w/o Camino	St.					Name: umber:		nino SPA		
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE	L INPUT	5	
Highway Data				Si	ite Condi	itions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	38,498 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%			Medi	um Tru	ucks (2 )	Axles):	15		
Peak H	lour Volume:	3,850 vehicle	s		Heav	vy Truc	cks (3+ )	Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle Mi	v					
Near/Far La	ne Distance:	50 feet		-		^ leType		Day	Evening	Night	Daily
Site Data					10/110		utos:	77.5%	•	9.6%	
	rrier Height:	0.0 feet			Med	ium Ti	ucks:	84.8%		10.3%	
Barrier Type (0-W		0.0 1001			He	avy Ti	ucks:	86.5%		10.8%	
Centerline Di		50.0 feet									
Centerline Dist.		50.0 feet		N	oise Sou				eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height		5.0 feet			Medium			297			
	ad Elevation:	0.0 feet			Heavy	Truck	s: 8.	004	Grade Ad	ustment.	0.0
	ad Elevation:	0.0 feet		La	ane Equi	valent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 43.	589			
	Left View:	-90.0 degree	es		Medium	Truck	s: 43.	386			
	Right View:	90.0 degree	es		Heavy	Truck	s: 43.	405			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite R	load	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	4.41		0.79		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-12.82		0.82		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-16.78		0.82		-1.20		-5.43	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er attenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	70	.5	68.6		66.9		60.	3	69.4	ļ.	70.
Medium Trucks:	64		63.0		56.6		55.		63.6		63.
Heavy Trucks:	65	-	64.4		55.4		56.0		65.0		65.
Vehicle Noise:	72	5	70.8		67.5		63.0	)	71.5	5	72.
Centerline Distan	ce to Noise Co	ontour (in feet	)								
			L	70 dE		65	dBA		60 dBA		dBA
			Ldn: NEL:		63		136		293 313		63 <sup>-</sup> 67!
					68		145				

Monday, December 4, 2023

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FHWA-R	D-77-108 HIGHWAY	Y NOISE	PREDIC		DEL (9/	12/202	21)	_	_
Scenario: ECP (With Road Name: Del Obisp Road Segment: w/o Camir	o St.			Project N Job Nu	lame: El mber: 15		no SPA		
SITE SPECIFIC I	NPUT DATA						INPUTS	6	
Highway Data			Site Cond	litions (F	lard = 10	), Sof	t = 15)		
Average Daily Traffic (Adt):	38,646 vehicles					itos:	15		
Peak Hour Percentage:	10.00%			lium Truc			15		
Peak Hour Volume:	3,865 vehicles		Hea	ivy Truck	s (3+ Ax	les):	15		
Vehicle Speed:	40 mph	ŀ	Vehicle N	lix					
Near/Far Lane Distance:	50 feet	ŀ	Vehic	cleType	D	ay I	Evening	Night	Daily
Site Data				AL	itos: 7	7.5%	12.9%	9.6%	97.42
Barrier Height:	0.0 feet		Me	dium Tru	cks: 84	4.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Berm):	0.0		н	eavy Tru	cks: 86	6.5%	2.7%	10.8%	0.74
Centerline Dist. to Barrier:	50.0 feet	ŀ	Noise So	uree Ele	untio no l	in for	.41		
Centerline Dist. to Observer:	50.0 feet	ł	Noise 30	Autos:	,		9		
Barrier Distance to Observer:	0.0 feet		Madium	n Trucks:	0.00				
Observer Height (Above Pad):	5.0 feet			/ Trucks: / Trucks:			Grade Adji	ustment	0.0
Pad Elevation:	0.0 feet							aounom	0.0
Road Elevation:	0.0 feet		Lane Equ	ivalent L	Distance	(in fe	et)		
Road Grade:	0.0%			Autos:		39			
Left View:	-90.0 degrees		Mediun	n Trucks:	43.38	36			
Right View:	90.0 degrees		Heavy	/ Trucks:	43.40	)5			
FHWA Noise Model Calculation									
VehicleType REMEL		istance	Finite I		Fresnel		arrier Atte		m Atte
Autos: 66.5		0.7		-1.20		1.65	0.0		0.0
Medium Trucks: 77.72		0.8		-1.20		1.87	0.0		0.0
Heavy Trucks: 82.99	-16.76	0.8	32	-1.20	-5	5.43	0.0	00	0.0
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho Autos: 7	ur Leq Day 0.5 68.6		vening 66.9	Leq N	ight 60.8	1	_dn 69.4		VEL
	0.5 68.6 4.5 63.0		56.7		60.8 55.1		69.4 63.6		70 63
	4.5 63.0 5.8 64.4		55.4		56.6		65.0		65
	2.6 70.8		55.4 67.5		50.0 63.0		71.5		72
			07.5		03.0		/ 1.5		12
Centerline Distance to Noise C	ontour (in feet)	70	dBA	65 dl	84	60	dBA	55	dBA
	Ldn:		63	55 01	136	00	293	55	63
	CNEL:		68		146		314		67
	ONLL.		00		. 40		014		07

	FHWA-RD-	77-108 HIGHWA	Y NOISE	E PREDIC		ODEL (9	/12/20	)21)		
Road Nam	io: BO (With Fo ne: Del Obispo S nt: w/o Camino	St.				Name: E umber: 1		ino SPA		
SITE	SPECIFIC IN	PUT DATA			N	OISE N	IODE	L INPUTS	5	
Highway Data				Site Con	ditions (	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	38,498 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		Me	dium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	3,850 vehicles		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph	-	Vehicle I	Nix					
Near/Far La	ne Distance:	50 feet	-		cleType		Day	Evening	Night	Dailv
Site Data				10.11			77.5%	12.9%	9.6%	
Bai	rrier Heiaht:	0.0 feet		Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0		ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	50.0 feet	-	Noise So	urco Ek	wation	(in fo	(of)		
Centerline Dist.	to Observer:	50.0 feet	-	140/36 30	Autos		000	eij		
Barrier Distance	to Observer:	0.0 feet		Madiu	n Trucks		97			
Observer Height (	Above Pad):	5.0 feet			y Trucks		04	Grade Adj	iustment	0.0
Pa	ad Elevation:	0.0 feet							aounom	0.0
Roa	ad Elevation:	0.0 feet		Lane Equ				ieet)		
1	Road Grade:	0.0%			Autos		589			
	Left View:	-90.0 degrees			n Trucks					
	Right View:	90.0 degrees		Heav	y Trucks	: 43.4	105			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	66.51	4.41	0.7		-1.20		-4.65	0.0		0.000
Medium Trucks:	77.72	-12.82	0.8		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-16.78	0.8	32	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (witho		ier atter	nuation)						
	Leq Peak Hour		,	vening	Leq I			Ldn		VEL
Autos:	70.5			66.9		60.8		69.4		70.0
Medium Trucks:	64.			56.6		55.1		63.6		63.8
Heavy Trucks:	65.0			55.4		56.6		65.0		65.1
Vehicle Noise:	72.5	5 70.8		67.5		63.0		71.5	<sup>b</sup>	72.0
Centerline Distance	ce to Noise Cor	ntour (in feet)								
				dBA	65 0		6	0 dBA		dBA
		Ldn:		63		136		293		631
		CNEL:		68		145		313		675

Monday, December 4, 2023

		0-77-108 HIGH		BAOL							
	io: BOP (With						Name: El		nino SPA		
	e: Del Obispo					Job N	umber: 15	5534			
Road Segme	nt: w/o Camino	o Capistrano									
	SPECIFIC IN	IPUT DATA							L INPUTS	6	
Highway Data				S	Site Con	ditions	(Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	38,646 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10.00%					ucks (2 Ax		15		
Peak H	lour Volume:	3,865 vehicle	5		He	avy Tru	cks (3+ Ax	(les):	15		
	hicle Speed:	40 mph		V	/ehicle I	<i>lix</i>					
Near/Far La	ne Distance:	50 feet		F	Vehi	cleType	D	ay	Evening	Night	Daily
Site Data							Autos: 7	7.5%	12.9%	9.6%	97.42
Bai	rrier Heiaht:	0.0 feet			Me	edium T	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	50.0 feet			loise So	urce Fl	evations	(in fe	ef)		
Centerline Dist.	to Observer:	50.0 feet		-	10/30 00	Auto					
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck					
Observer Height (	Above Pad):	5.0 feet				v Truck			Grade Adj	ustment	0.0
Pa	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ		Distance	· ·	'eet)		
1	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				n Truck					
	Right View:	90.0 degree	es		Heav	y Truck	s: 43.40	)5			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten
Autos:	66.51	4.43		0.79	-	-1.20	-4	4.65	0.0	00	0.00
Medium Trucks:	77.72	-12.81		0.82		-1.20		4.87	0.0		0.00
Heavy Trucks:	82.99	-16.76		0.82	2	-1.20	-4	5.43	0.0	00	0.00
Unmitigated Naia	e Levels (with	out Topo and	barrier a	atteni	uation)						
ommugated Noise	Leq Peak Hou			eq Ev	rening	Leq	Night		Ldn		NEL
VehicleType		5	68.6		66.9		60.8		69.4		70.
VehicleType Autos:	70				56.7		55.1		63.6		63.
VehicleType Autos: Medium Trucks:	64	.5	63.0				56.6		65.0		65.
VehicleType Autos: Medium Trucks: Heavy Trucks:	64 65	.5 .8	64.4		55.4						
VehicleType Autos: Medium Trucks:	64	.5 .8			55.4 67.5		63.0		71.5		72.
VehicleType Autos: Medium Trucks: Heavy Trucks:	64 65 72	.5 .8 .6	64.4 70.8		67.5		63.0		-		
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 65 72	.5 .8 .6 ontour (in feet,	64.4 70.8	70 d	67.5 IBA	65	63.0 dBA	e	0 dBA		dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 65 72	.5 .8 .6 ontour (in feet	64.4 70.8	70 d	67.5	65	63.0	6	-		72. <i>dBA</i> 632 677

Monday, December 4, 2023

APPENDIX 9.1:

**OPERATIONAL NOISE CALCULATIONS** 



## 15534 - El Camino SPA

CadnaA Noise Prediction Model: 15534-02.cna Date: 05.12.23 Analyst: B. Lawson

# Calculation Configuration

ParameterValueGeneral0.00Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition0.00Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line Sources0nProj. Line Sources0nRef. Time0.00Ref. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.20.0.0SereingIncl. Ground Att. over BarrierDest. within Area Src do not shieldOnSereing1.02.0.0.0Barrier Coefficients C1,2,33.020.0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wink Igseed for Dir. (#(Unit,SPEED))3.0Roads (TNM)ISRailways (FTA/FRA)ISAircraft (???)ISStrictly ac. to AzBIS	Configurat	tion
Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time.000Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTM.000DTM.000Model of TerrainTriangulationReflection2Search Radius Srcv100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)	Parameter	Value
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Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)Daytime Penalty (dB)0.00Recr. Time Penalty (dB)10.00DTMStandard Height (m)Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Min. Distance Source - Rcvr1000.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Incl. Ground Att. over BarrierLateral DiffractionSome ObjObstrier Coefficients C1,2,33.0 20.0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TIM)Railways (FTA/FRA)Aircraft (???)Incl. Ground Att. over Source	Min. Dist Src to Rcvr	0.00
Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Janier OsiLateral DiffractionSome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDartier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Janier Coefficients (??)	Partition	
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Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Rovr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionSome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)	Max. Length of Section (#(Unit,LEN))	999.99
Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Industriat (??)	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area SourcesOnRef. Time	Min. Length of Section (%)	0.00
Ref. Time0.00Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Rcvr1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)100Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TIM)Railways (FTA/FRA)Aircraft (???)10	Proj. Line Sources	On
Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Internation	Proj. Area Sources	On
Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionSorreeningIncl. Ground Att. over BarrierDost. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierMin. Distance Cit,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Internation	Ref. Time	
Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Interraft (???)	Daytime Penalty (dB)	0.00
DTM     0.00       Standard Height (m)     0.00       Model of Terrain     Triangulation       Reflection     2       max. Order of Reflection     2       Search Radius Src     100.00       Max. Distance Source - Revr     1000.00       Min. Distance Source - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Darrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: State Sta	Recr. Time Penalty (dB)	5.00
Standard Height (m)0.00Model of TerrainTriangulationReflection2max. Order of Reflection2Search Radius Src100.00Search Radius Rovr1000.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)I	Night-time Penalty (dB)	10.00
Model of Terrain     Triangulation       Reflection     2       max. Order of Reflection     2       Search Radius Src     100.00       Search Radius Rovr     1000.00       Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Darrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     1	DTM	
Reflection     0       max. Order of Reflection     2       Search Radius Src     100.00       Search Radius Rcvr     100.00       Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Source - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Barrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Standard Height (m)	0.00
max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rource - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)International Statement	Model of Terrain	Triangulation
Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rvcr - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)DzBarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Internet for Dir. (#Comparing the second seco	Reflection	
Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rvcr - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDzDz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Internet and the state of	max. Order of Reflection	2
Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     Industrial (ISO 9613)       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Darrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Intercent and the second secon	Search Radius Src	100.00
Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     Edited Source - Reflector       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     Edit Science Sci	Search Radius Rcvr	100.00
Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Max. Distance Source - Rcvr	1000.00 1000.00
Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Min. Distance Rvcr - Reflector	1.00 1.00
Lateral Diffraction         some Obj           Obst. within Area Src do not shield         On           Screening         Incl. Ground Att. over Barrier           Dz with limit (20/25)           Barrier Coefficients C1,2,3         3.0 20.0 0.0           Temperature (#(Unit,TEMP))         10           rel. Humidity (%)         70           Ground Absorption G         0.50           Wind Speed for Dir. (#(Unit,SPEED))         3.0           Roads (TNM)         Railways (FTA/FRA)           Aircraft (???)         Interval	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Comp	Industrial (ISO 9613)	
Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Direct (Comparison of Comparison of Compar	Lateral Diffraction	some Obj
Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Comparison	Obst. within Area Src do not shield	On
Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of the comparison o	Screening	Incl. Ground Att. over Barrier
Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

### **Receiver Noise Levels**

Neccivi		INC.	ISC L	.evei	3													
Name	М.	ID		Lev	el Lr			Limit.	Value			Lanc	Use	Height		C	oordinates	
			Day	Eve	Night	CNEL	Day	Eve	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	45.9	45.9	43.8	50.9	65.0	65.0	65.0	0.0				5.00	а	6131557.21	2128842.37	5.00
RECEIVERS		R2	49.8	49.8	47.4	54.6	65.0	65.0	65.0	0.0				5.00	а	6131607.10	2128159.46	5.00
RECEIVERS		R3	46.7	46.7	44.6	51.7	65.0	65.0	65.0	0.0				5.00	а	6131437.92	2127998.86	5.0
RECEIVERS		R4	51.3	51.3	48.6	55.9	65.0	65.0	65.0	0.0				5.00	а	6131283.09	2128117.24	5.00
RECEIVERS		R5	58.5	58.5	55.9	63.2	65.0	65.0	65.0	0.0				5.00	а	6131166.33	2128312.89	5.00
RECEIVERS		R6	53.9	53.9	51.3	58.6	65.0	65.0	65.0	0.0				5.00	а	6131017.39	2128290.85	5.00
RECEIVERS		R7	55.6	55.6	53.0	60.3	65.0	65.0	65.0	0.0				5.00	а	6131169.97	2128462.06	5.00
RECEIVERS		R8	47.3	47.3	45.0	52.2	65.0	65.0	65.0	0.0				5.00	а	6131163.07	2128714.35	5.0
RECEIVERS		R9	48.6	48.6	46.3	53.5	65.0	65.0	65.0	0.0				5.00	а	6131427.54	2128787.72	5.0

# Point Source(s)

Name	М.	ID	R	esult. PW	'L	Lw / Li			Op	erating Ti	me	Heigh	t	Co	oordinates		
			Day	Evening	Night	Туре	Value		norm.	Day	Special	Night			Х	Y	Z
			(dBA)	(dBA)	(dBA)				dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131555.99	2128510.78	40.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131548.22	2128555.28	40.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131539.43	2128604.95	40.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131607.21	2128595.12	40.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131603.07	2128543.90	40.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131593.76	2128482.32	40.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131530.11	2128465.25	40.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131491.82	2128501.99	40.00
POINTSOURCE		AC09	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131483.55	2128568.22	40.00
POINTSOURCE		AC10	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131321.07	2128280.53	30.00
POINTSOURCE		AC11	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131303.48	2128307.43	30.00

Name	M.	ID	R	esult. PW	Ľ		Lw	/ Li		Op	erating Ti	ime	Heigh	t	C	oordinates	
			Day	Evening	Night	Туре	Value		norm.	Day	Special	Night			Х	Y	Z
			(dBA)	(dBA)	(dBA)				dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC12	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131198.96	2128380.91	30.00
POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131169.47	2128345.21	30.00
POINTSOURCE		AC14	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131202.06	2128347.79	30.00
POINTSOURCE		AC15	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131165.33	2128378.84	30.00
POINTSOURCE		AC16	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131291.58	2128366.94	40.00
POINTSOURCE		AC17	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131325.73	2128361.76	40.00
POINTSOURCE		AC18	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131365.57	2128353.48	40.00
POINTSOURCE		AC19	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131403.86	2128345.21	40.00
POINTSOURCE		AC20	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131441.12	2128339.00	40.00
POINTSOURCE		AC21	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131277.61	2128215.85	40.00
POINTSOURCE		AC22	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131318.49	2128207.57	40.00
POINTSOURCE		AC23	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131356.77	2128200.33	40.00
POINTSOURCE		AC24	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131396.10	2128191.01	40.00
POINTSOURCE		AC25	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131430.25	2128195.15	40.00
POINTSOURCE		AC26	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131450.43	2128221.54	40.00
POINTSOURCE		AC27	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131469.06	2128246.38	40.00
POINTSOURCE		AC28	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131490.27	2128274.32	40.00
POINTSOURCE		AC29	88.9	88.9	88.9	Lw	88.9	500		468.00	117.00	252.00	5.00	g	6131509.42	2128300.19	40.00
POINTSOURCE		C01	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131226.38	2128328.13	5.00
POINTSOURCE		C02	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	a	6131227.94	2128356.59	5.00
POINTSOURCE	-	C02	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	a	6131450.95	2128330.39	5.00
POINTSOURCE	-	C03	81.1	81.1	81.1	LW	81.1	500		720.00	180.00	270.00	5.00	a	6131430.95	2128385.05	5.00
POINTSOURCE	-	C04 C05	81.1	81.1	81.1		81.1	500		720.00	180.00	270.00	5.00	-	6131414.21	2128395.91	5.00
POINTSOURCE	-	C05 C06	81.1	81.1	81.1	Lw Lw	81.1 81.1	500		720.00	180.00	270.00	5.00	a a	6131380.58	2128403.16	5.00
		C08	81.1								180.00		5.00	-			
POINTSOURCE			-	81.1	81.1	Lw	81.1	500		720.00		270.00		a	6131265.19	2128330.72	5.00
POINTSOURCE		C08	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	a	6131263.12 6131262.09	2128299.15	5.00
POINTSOURCE		C09	81.1	81.1	81.1	Lw	81.1	500			180.00	270.00	5.00	a		2128268.63	5.00
POINTSOURCE		C10	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131221.73	2128267.07	5.00
POINTSOURCE		C11	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131220.69	2128241.20	5.00
POINTSOURCE		C12	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131264.67	2128169.28	5.00
POINTSOURCE		C13	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131296.75	2128160.48	5.00
POINTSOURCE		C14	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131332.46	2128152.72	5.00
POINTSOURCE		C15	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131379.54	2128143.41	5.00
POINTSOURCE		C16	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131416.80	2128136.68	5.00
POINTSOURCE		C17	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131463.37	2128162.55	5.00
POINTSOURCE		C18	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131486.13	2128193.08	5.00
POINTSOURCE		C19	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131509.93	2128222.06	5.00
POINTSOURCE		C20	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131530.63	2128251.03	5.00
POINTSOURCE		C21	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131553.40	2128279.49	5.00
POINTSOURCE		C22	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131617.56	2128328.65	5.00
POINTSOURCE		C23	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131631.53	2128347.79	5.00
POINTSOURCE		C24	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131648.61	2128370.04	5.00
POINTSOURCE		C25	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131666.20	2128391.77	5.00
POINTSOURCE		C26	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131657.92	2128424.37	5.00
POINTSOURCE		C27	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131635.67	2128435.76	5.00
POINTSOURCE		C28	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131614.45	2128388.67	5.00
POINTSOURCE		C29	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131596.34	2128364.87	5.00
POINTSOURCE		C30	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131592.21		5.00
POINTSOURCE		C31	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131574.10	2128370.04	5.00
POINTSOURCE		C32	81.1	81.1	81.1	Lw	81.1	500		720.00		270.00	5.00	а	6131552.88		5.00
POINTSOURCE		C33	81.1	81.1	81.1	Lw	81.1	500		720.00	180.00	270.00	5.00	а	6131568.92	2128434.72	5.00
POINTSOURCE		001	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131467.50	2128475.08	5.00
POINTSOURCE		002	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131447.33	2128503.54	5.00
POINTSOURCE		O03	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131447.84	2128545.45	5.00
POINTSOURCE		004	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131448.88	2128577.01	5.00
POINTSOURCE		005	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131145.15	2128357.62	5.00
POINTSOURCE		006	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131141.52	2128338.48	5.00
POINTSOURCE		007	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131129.11	2128357.62	5.00
POINTSOURCE		008	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131136.35	2128377.80	5.00
POINTSOURCE		009	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131472.16	2128318.30	5.00
POINTSOURCE		010	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131476.82	2128332.27	5.00
POINTSOURCE		011	91.5	91.5	91.5	Lw	91.5	500		720.00	180.00	270.00	5.00	а	6131344.87	2128290.88	5.00
POINTSOURCE		012	91.5	91.5	91.5	Lw	91.5	500		720.00	-	270.00	5.00	а	6131347.98		5.00
POINTSOURCE		P01	86.4	86.4	86.4	Lw	86.4	500		720.00		0.00	5.00	а	6131370.75		5.00
POINTSOURCE		P02	86.4	86.4	86.4	Lw	86.4	500		720.00		0.00	5.00	а	6131402.31		5.00
POINTSOURCE		P03	86.4	86.4	86.4	Lw	86.4	500		720.00		0.00	5.00	a	6131414.73	2128274.32	5.00
POINTSOURCE		P04	86.4	86.4	86.4	Lw	86.4	500		720.00		0.00	5.00	a	6131362.98		5.00
	1	P05	86.4	86.4	86.4	Lw	86.4	500		720.00	180.00	0.00	5.00	a	6131385.23	2128255.69	5.00
POINTSOURCE	-	T01	89.0	89.0	89.0	Lw	89	500		720.00		270.00	5.00	a	6131223.28		5.00
POINTSOURCE								,	i i			2,0.00	5.00	u			1 5.00
POINTSOURCE						Lw	89	500			180.00	270.00	5.00	а	6131223 80		5.00
		T01 T02 T03	89.0 89.0	89.0 89.0	89.0 89.0	Lw Lw	89 89	500 500		720.00 720.00		270.00 270.00	5.00 5.00	a a	6131223.80 6131496.48	2128301.22	5.00 5.00

# Building(s)

Name	Sel.	м.	ID	RB	Residents	Absorption	Height			Coordinat	es	
							Begin		х	у	z	Ground
	-						(ft)		(ft)	(ft)	(ft)	(ft)
Verdugo Street 26762, 92675 San Juan Capistrano, (Regency Theatres)			building_00014	x	0		20.00	r	6130810.63	2128797.52	20.00	0.00
									6130902.15	2128806.29	20.00	0.00
									6130893.56	2128923.91	20.00	0.00
									6130892.85	2128932.58	20.00	0.00
									6130883.84	2128935.43	20.00	0.00
									6130865.19	2128933.86	20.00	0.00
									6130865.37	2128931.57	20.00	0.00
									6130860.18	2128931.13	20.00	0.00
										2128929.02	20.00	0.00
	_									2128928.57	20.00	0.00
	_									2128926.53	20.00	0.00
	_							_		2128923.55	20.00	0.00
	_							_		2128925.26	20.00	0.00
								_		2128924.76	20.00	0.00
	_							-		2128927.13	20.00	0.00
	+							+		2128926.75 2128928.71	20.00 20.00	0.00
										2128928.71	20.00	0.00
	-							-		2128924.18	20.00	0.00
Camino Capistrano 31786, 92675 San Juan Capistrano, (Swallow's Inn)	+		building_00024	x	0		20.00	r		2128950.54	20.00	0.00
	-			Ê			_0.00	•		2128950.54	20.00	0.00
	+							+		2128944.82	20.00	0.00
	+							+		2128881.80	20.00	0.00
								+		2128880.57	20.00	0.00
			building_00026	х	0		20.00	r		2128812.51	20.00	0.00
										2128812.69	20.00	0.00
									6131169.10	2128817.33	20.00	0.00
									6131170.41	2128797.05	20.00	0.00
									6131161.53	2128796.48	20.00	0.00
									6131166.51	2128718.46	20.00	0.00
									6131099.77	2128714.23	20.00	0.00
									6131095.42	2128782.56	20.00	0.00
									6131110.28	2128783.49	20.00	0.00
										2128789.79	20.00	0.00
	_									2128788.80	20.00	0.00
Camino Capistrano 31781, 92675 San Juan Capistrano			building_00027	х	0		20.00	r		2128923.91	20.00	0.00
	_							_		2128925.17	20.00	0.00
	_							_		2128937.80	20.00	0.00
	_									2128944.02	20.00	0.00
								_		2128925.67	20.00	0.00
	-							-		2128882.98 2128883.91	20.00	0.00
								_		2128884.75	20.00 20.00	0.00
	+							-		2128885.65	20.00	0.00
	-							+		2128885.83	20.00	0.00
	-							-		2128888.28	20.00	0.00
	+							-		2128890.00	20.00	0.00
	+							-		2128891.64	20.00	0.00
	-							+		2128891.04		0.00
	-							+		2128889.58	20.00	0.00
								+		2128888.35	20.00	0.00
								1		2128887.49	20.00	0.00
								1		2128886.93	20.00	0.00
									6130971.74	2128886.57	20.00	0.00
								T	6130971.70	2128883.58	20.00	0.00
									6130972.30	2128878.52	20.00	0.00
									6130915.68	2128873.43	20.00	0.00
										2128840.23	20.00	0.00
										2128843.99	20.00	0.00
								ſ		2128837.58		0.00
	_									2128839.53	20.00	0.00
	_									2128854.76	20.00	0.00
	_									2128856.15	20.00	0.00
	_									2128815.35	20.00	0.00
	-	-						+		2128807.58	20.00	0.00
		-	huildin - 000 to		-		20.00	-		2128806.29	20.00	0.00
	-	-	building_00048	х	0		20.00	r		2128756.58	20.00	0.00
	+	-						+		2128807.58	20.00	0.00
	-	-						+		2128815.35	20.00	0.00
	_		building_00051	~	0		20.00	-		2128764.39		
		1	⊔uuu∩g UUU51	х	0		20.00	r		2128627.49	20.00	0.00
	+	-					1	- I.	6121026 41			
	-							-	6131036.41		20.00	
									6131042.29	2128544.34	20.00	0.00
									6131042.29 6131002.71	2128544.34 2128541.60	20.00 20.00	0.00
									6131042.29 6131002.71 6131000.58	2128544.34	20.00	0.00

Name	Sel	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	x	у	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
	_		building_00052	x	0		20.00	6130991.68 6131030.31	2128643.53 2128646.21	20.00	0.00
									2128627.49	20.00	0.00
								6130993.01	2128624.78	20.00	0.00
			building_00053	х	0		20.00	-	2128670.78	20.00	0.00
	_								2128672.04	20.00	0.00
								-	2128694.49 2128697.58	20.00	0.00
									2128648.87	20.00	0.00
									2128647.11	20.00	0.00
									2128652.57	20.00	0.00
			building_00054	x	0		20.00		2128649.98 2128694.32	20.00	0.00
			building_00004	<u>^</u>			20.00		2128699.88	20.00	0.00
									2128693.58	20.00	0.00
	_								2128695.00	20.00	0.00
	_	-							2128670.78 2128649.98	20.00 20.00	0.00
									2128646.44	20.00	0.00
								6130881.63	2128639.49	20.00	0.00
									2128651.33	20.00	0.00
	_	-	building 00055	~	0		20.00	-	2128661.93 2128669.91	20.00	0.00
		-	Junuing_00055	x			20.00 1		2128669.91	20.00	0.00
									2128660.11	20.00	0.00
									2128661.93	20.00	0.00
	_	-		-					2128651.33 2128650.07	20.00	0.00
		-		-					2128650.07	20.00	0.00
									2128651.26	20.00	0.00
								6130851.13	2128654.32	20.00	0.00
	_		building_00056	х	0		20.00		2128648.91	20.00	0.00
	_							-	2128651.26 2128652.22	20.00	0.00
									2128650.07	20.00	0.00
									2128634.29	20.00	0.00
									2128630.99	20.00	0.00
	_		building_00057	х	0		20.00		2128692.01	20.00	0.00
								6130831.83	2128693.12 2128694.35	20.00	0.00
									2128669.91	20.00	0.00
									2128654.32	20.00	0.00
Comine Conjutane 24702 02075 Con June Conjutane	_		huilding 00025				12.42		2128651.97	20.00	0.00
Camino Capistrano 31792, 92675 San Juan Capistrano			building_00025	х	0		13.42		2128881.80 2128884.03	13.42 13.42	0.00
	-							-	2128885.04	13.42	0.00
									2128844.83	13.42	0.00
	_								2128845.21	13.42	0.00
	_								2128817.33 2128812.69	13.42 13.42	0.00
Camino Capistrano 31931, 92675 San Juan Capistrano			building 00040	x	0		13.68		2128060.32	13.68	0.00
									2128059.06	13.68	0.00
									2128020.82	13.68	0.00
El Camino Real 31806, 92675 San Juan Capistrano, (Blas Aguilar Adobe)	_	-	building_00032	x	0		13.88		2128022.08 2128838.71	13.68 13.88	0.00
er commo ricar 51600, 52075 San Judit Capistrano, (bias Aguildi AUODE)	-		Salialing_00032	^			13.00	-	2128837.94	13.88	0.00
									2128842.08	13.88	0.00
									2128832.41	13.88	0.00
	_	-		-					2128793.68	13.88	0.00
	-	-		-					2128803.35 2128807.17	13.88 13.88	0.00
									2128808.38	13.88	0.00
									2128825.13	13.88	0.00
Comine Conjetence 24764, 02675 Construct Constitu		-	huildin - 00010		-		14.27	-	2128824.72	13.88	0.00
Camino Capistrano 31761, 92675 San Juan Capistrano		-	building_00019	x	0		14.27		2129061.94 2128985.15	14.27 14.27	0.00
	-								2128985.15	14.27	0.00
								6131002.69	2128996.99	14.27	0.00
									2129097.47	14.27	0.00
		-							2129096.88 2129096.44	14.27 14.27	0.00
		1	1	-		+					0.00
								6130980.33	2129115.38	14.27	
								-	2129115.38 2129110.40	14.27	0.00
								6130918.43 6130918.80	2129110.40 2129105.96	14.27 14.27	0.00
								6130918.43 6130918.80 6130906.20	2129110.40	14.27	0.00

Image: Control of the second secon		x			Begin (ft) 15.03	6131328.11 6131323.85 6131303.19 6131301.51 6131265.99 6131267.66 6131254.04 6131230.33 6131230.57 6131195.13 6131077.27 6131069.85 6131067.80 6131076.48 6131085.68 6131085.62 6131085.62	у (ft) 2129063.32 2129057.73 2129058.29 2129061.12 2129043.24 2129047.58 2129047.58 2129101.67 2129101.67 2129101.97 2129104.43 2129107.78 2129115.96 2129108.05 2129018.19 2129017.27	z (ft) 14.27 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	Ground (ft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.
Image: Sector of the sector						6130867.10 (6131328.11 6131328.55 6131303.19 6131301.51 6131265.09 6131267.66 6131254.04 6131230.33 6131230.57 6131057.13 6131067.85 6131067.70 6131067.85 6131085.68 6131085.62 6131085.62	2129063.32 2129057.73 2129058.29 2129061.12 2129043.24 2129047.58 2129080.92 2129101.67 2129101.99 2129104.43 2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	14.27 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector						6131328.11 6131323.85 6131303.19 6131301.51 6131265.99 6131267.66 6131254.04 6131230.33 6131230.57 6131195.13 6131077.27 6131069.85 6131067.80 6131076.48 6131085.68 6131085.62 6131085.62	2129057.73 2129058.29 2129061.12 2129043.24 2129047.58 2129104.75 2129101.67 2129101.99 2129104.43 2129107.78 2129118.91 2129118.91 2129018.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector						6131323.85 6131303.19 6131301.51 6131265.99 6131267.66 6131254.04 6131230.33 6131205.75 6131057.27 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.62	2129058.29 2129061.12 2129043.24 2129047.58 2129080.92 2129101.67 2129101.99 2129104.43 2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector	uilding_00031	x				6131303.19 6131301.51 6131265.99 6131267.66 6131254.04 6131254.04 6131230.57 6131195.13 6131077.27 6131069.85 6131067.70 6131067.68 6131085.68 6131085.62 6131085.62	2129061.12 2129043.24 2129047.58 2129080.92 2129101.67 2129104.43 2129104.43 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector	uilding_00031	x				6131301.51 6131265.99 6131267.66 6131254.04 6131254.04 6131230.57 6131195.13 6131069.85 6131067.70 6131067.80 6131085.68 6131085.62 6131085.62	2129043.24 2129047.58 2129080.92 2129101.67 2129104.43 2129104.43 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector	uilding_00031	x				6131265.99 6131267.66 6131254.04 6131230.33 6131230.57 6131195.13 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.62	2129047.58 2129080.92 2129101.67 2129101.99 2129104.43 2129107.78 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Sector of the sector	uilding_00031	x				6131267.66 6131254.04 6131230.33 6131230.57 6131195.13 6131067.27 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.62	2129080.92 2129101.67 2129101.99 2129104.43 2129107.78 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Second Street	uilding_00031	x				6131254.04 6131230.33 6131230.57 6131195.13 6131077.27 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.28	2129101.67 2129101.99 2129104.43 2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Image: Second Street	uilding_00031	x				6131230.33 6131230.57 6131195.13 6131077.27 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.28	2129101.99 2129104.43 2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00
Image: Second Street	uilding_00031					6131230.57 6131195.13 6131077.27 6131069.85 6131067.70 6131067.48 6131085.68 6131085.62 6131085.62 6131085.28	2129104.43 2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00 0.00 0.00
Image: Second Street	uilding_00031	x				6131195.13 6131077.27 6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.28	2129107.78 2129118.91 2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03 15.03 15.03	0.00 0.00 0.00 0.00
Image: Second Street	uilding_00031	x				6131069.85 6131067.70 6131076.48 6131085.68 6131085.62 6131085.28	2129115.96 2129108.05 2129018.19 2129017.27	15.03 15.03 15.03	0.00 0.00 0.00
Image: Second Street	uilding_00031	x				6131067.70 6131076.48 6131085.68 6131085.62 6131085.28	2129108.05 2129018.19 2129017.27	15.03 15.03	0.00
Image: Second Street	uilding_00031	x				6131076.48 6131085.68 6131085.62 6131085.28	2129018.19 2129017.27	15.03	0.00
Image: Sector of the sector	uilding_00031	x				6131085.68 6131085.62 6131085.28	2129017.27		
Image: Sector of the sector	uilding_00031	x				6131085.62 6131085.28		45.00	
Image: Sector of the sector	uilding_00031	x				6131085.28	2129015 22	15.03	0.00
Image: Sector of the sector	uilding_00031	x					2123013.23	15.03	0.00
Image: Sector of the sector	uilding_00031	x				6131169 44	2129005.74	15.03	0.00
Image: Sector of the sector	uilding_00031	x				0101100.44	2128995.57	15.03	0.00
Image: Sector of the sector	uilding_00031	x				6131170.84	2129008.98	15.03	0.00
Image: Sector of the sector	uilding_00031	x				6131295.36	2128996.52	15.03	0.00
Image: Second Street	uilding_00031	x					2129001.58	15.03	0.00
Image: Sector of the sector	uilding_00031	x		I I		6131296.14	2129008.92	15.03	0.00
Image: Second Street	uilding_00031	x					2129006.31	15.03	0.00
Image: Second Street	uilding_00031	x					2129005.90	15.03	0.00
Image: Second Street			0		16.31	r 6131665.99	2128867.23	16.31	0.00
Image: Constraint of the second se							2128868.20	16.31	0.00
Image: Constraint of the second se						6131691.48	2128865.39	16.31	0.00
Image: Constraint of the second se						6131714.69	2128866.32	16.31	0.00
Image: Constraint of the second se						6131714.58	2128869.38	16.31	0.00
Image: Constraint of the second se						6131732.58	2128870.08	16.31	0.00
Image: Constraint of the second se						6131732.66	2128867.31	16.31	0.00
Image: Constraint of the second se						6131741.97	2128867.70	16.31	0.00
Image: Constraint of the second se						6131742.56	2128852.62	16.31	0.00
Image: Constraint of the second se						6131744.63	2128852.70	16.31	0.00
Image: Constraint of the second se						6131745.32	2128835.99	16.31	0.00
Image: Constraint of the second se						6131667.35	2128832.93	16.31	0.00
Image: Constraint of the sector of the se	uilding_00041	х	0		16.37	f 6130945.75	2127938.03	16.37	0.00
Image: Constraint of the sector of the se						6131022.37	2127936.19	16.37	0.00
Image: Constraint of the sector of the se						6131020.07	2127840.59	16.37	0.00
Image: Constraint of the sector of the se						6130943.41	2127842.43	16.37	0.00
Image: Constraint of the second se	uilding_00030	x	0		16.67	f 6131673.90	2128570.76	16.67	0.00
Image: Constraint of the second se						6131705.03	2128573.76	16.67	0.00
Image: Constraint of the second se						6131702.92	2128595.58	16.67	0.00
Image: Sector of the sector						6131795.14	2128604.49	16.67	0.00
Image: Second						6131797.88	2128576.58	16.67	0.00
Image: Constraint of the second se							2128577.09	16.67	0.00
Image: Constraint of the second se							2128510.95	16.67	0.00
Image: Constraint of the second se							2128508.01	16.67	0.00
Image: Constraint of the second sec							2128484.87	16.67	0.00
Image: Constraint of the second se						-	2128478.94	16.67	0.00
Image: Constraint of the second se							2128513.48	16.67	0.00
Image: Constraint of the second sec							2128509.81	16.67	0.00
Image: Constraint of the second se		_				-	2128514.73	16.67	0.00
Camino Capistrano 31866, 92675 San Juan Capistrano         bu           Image: Capistrano 31866, 92675 San Juan Capistrano         Image: Capistrano           Image: Capistr						-	2128513.07	16.67	0.00
Camino Capistrano 31866, 92675 San Juan Capistrano Capistrano 1 bu							2128559.13	16.67	0.00
Camino Capistrano 31866, 92675 San Juan Capistrano bu		_				-	2128560.88	16.67	0.00
	uilding_00070	x	0		16.93	-	2128554.53	16.93	0.00
						-	2128495.53	16.93	0.00
		_					2128497.01	16.93	0.00
		_					2128470.75	16.93	0.00
		_					2128469.36	16.93	0.00
		_				-	2128466.05	16.93	0.00
		_				-	2128463.84	16.93	0.00
		_					2128526.34	16.93	0.00
	1	_					2128526.04	16.93	0.00
Del Obiere Chart 20002, 02075 Carl In Carl II					47.6-		2128552.12	16.93	0.00
Del Obispo Street 31863, 92675 San Juan Capistrano bui	utilities operation	x	0		17.65	-	2128258.39	17.65	0.00
	uilding_00065	_					2128328.08	17.65	0.00
	uilding_00065	_				-	2128294.56	17.65	0.00
	uilding_00065	-+					2128303.59	17.65	0.00
	uilding_00065					-	2128278.11	17.65	0.00
	uilding_00065						2128249.48	17.65	0.00
	uilding_00065	_					2128252.15	17.65	0.00
	uilding_00065			L I			2128202.06	17.65	0.00
Camino Capistrano 31901, 92675 San Juan Capistrano bui		x	0		17.72	6130841.94	2128248.50 2128247.80	17.72 17.72	0.00

Name	Sel.	М.	ID	RB	Residents	Absorption	Height			Coordinat	es	
							Begin		х	у	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
									6131020.26	2128187.94	17.72	0.00
									6130979.01	2128188.09	17.72	0.00
									6130978.96	2128172.67	17.72	0.00
									6130841.65	2128173.22	17.72	0.00
Del Obispo Street 31865, 92675 San Juan Capistrano			building_00008	х	0		20.08	_		2128116.30	20.08	0.00
										2128078.21	20.08	0.00
								_		2128073.70	20.08	0.00
								_	6131638.63		20.08	0.00
										2128051.28	20.08	0.00
								-		2128060.02	20.08	0.00
								-		2128057.54	20.08	0.00
								-	6131561.57		20.08	0.00
								-	6131575.00		20.08	0.00
								_	6131580.39		20.08 20.08	0.00
									6131614.81	2128120.59	20.08	0.00
Verdugo Street 26701, 92675 San Juan Capistrano			building_00001	x	0		22.11	_		2128160.93	20.08	0.00
verdugo street 20701, 32075 San Juan Capistrano			building_00001	Ê	0		22.11			2128902.20	22.11	0.00
								_		2128912.45	22.11	0.00
								_		2128621.13	22.11	0.00
								_		2128630.99	22.11	0.00
								_	6130820.50		22.11	0.00
				-				_	6130820.21		22.11	0.00
								-		2128051.57	22.11	0.00
								_		2128903.70	22.11	0.00
								-		2128904.12	22.11	0.00
									6130715.81	2128903.32	22.11	0.00
								_		2128902.52	22.11	0.00
Ortega Highway 26801, 92675 San Juan Capistrano			building_00017	х	0		22.34	r	6131000.70	2129212.13	22.34	0.00
									6131002.25	2129229.76	22.34	0.00
									6131018.39	2129228.34	22.34	0.00
									6131019.86	2129244.91	22.34	0.00
									6131032.31	2129243.83	22.34	0.00
									6131032.06	2129241.00	22.34	0.00
								-		2129240.18	22.34	0.00
								-		2129239.19	22.34	0.00
								_		2129242.93	22.34	0.00
								_		2129239.15	22.34	0.00
								-		2129236.50	22.34	0.00
									6131118.50		22.34	0.00
								_		2129197.44	22.34	0.00
								-		2129199.50	22.34	0.00
								_		2129205.36 2129208.97	22.34 22.34	0.00
								_		2129208.97	22.34	0.00
								-		2129212.89	22.34	0.00
								_		2129212.89	22.34	0.00
								_		2129210.45	22.34	0.00
Del Obispo Street 31877, 92675 San Juan Capistrano			building_00068	x	0		23.72			2127915.80	23.72	0.00
,,,								_		2128001.65	23.72	0.00
								_		2127953.23	23.72	0.00
								_		2127918.14	23.72	0.00
								_		2127938.19	23.72	0.00
								_		2127915.18	23.72	0.00
								_		2127894.72	23.72	0.00
								_		2127940.08	23.72	0.00
								_		2127901.80	23.72	0.00
								_		2127832.13	23.72	0.00
Camino Capistrano 31892, 92675 San Juan Capistrano, (Ellies Table)			building_00059	х	0		24.31			2128325.06	24.31	0.00
								-		2128323.79	24.31	0.00
								_		2128322.34	24.31	0.00
		_								2128321.53	24.31	0.00
		-						_		2128322.55	24.31	0.00
		-						_		2128321.37	24.31	0.00
		-						_		2128282.94	24.31	0.00
	-	-								2128283.71	24.31	0.00
		-						_		2128278.36	24.31	0.00
		-						_		2128281.17	24.31	0.00
								_		2128321.60	24.31	0.00
									6121110 01	2128221 201	2/ 21	0.00
Camino Canistrano 31077, 02675 San Juan Canistrono, (Charol)			building 00011	~			21 61	_		2128321.28	24.31	
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011	x	0		24.61	r	6131131.29	2127953.28	24.61	0.00
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011	x	0		24.61	r	6131131.29 6131128.20	2127953.28 2127835.12	24.61 24.61	0.00
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011	x	0		24.61	r	6131131.29 6131128.20 6131201.53	2127953.28 2127835.12 2127833.22	24.61 24.61 24.61	0.00 0.00 0.00
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011		0		24.61	r	6131131.29 6131128.20 6131201.53 6131204.59	2127953.28 2127835.12	24.61 24.61	0.00
								r a	6131131.29 6131128.20 6131201.53 6131204.59 6131291.58	2127953.28 2127835.12 2127833.22 2127951.37	24.61 24.61 24.61 24.61	0.00 0.00 0.00 0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	х	у	Z	Ground
	-						(ft)	(ft)	(ft)	(ft)	(ft)
	-								2128281.04	25.00	0.00
	-								2128259.83 2128272.77	25.00 25.00	0.00
BUILDING			BUILDING00005	х	0		25.00 a	6131149.29		25.00	0.00
	1								2128397.98	25.00	0.00
								6131216.55	2128403.16	25.00	0.00
								6131230.52	2128388.15	25.00	0.00
									2128370.56	25.00	0.00
	-								2128336.93	25.00	0.00
Dol Obicno Street 21972, 02675 San Juan Canistrano	-		building_00071	v	0		25.95 r		2128332.79 2127922.97	25.00 25.95	0.00
Del Obispo Street 31873, 92675 San Juan Capistrano	-		building_00071	х	0		25.95 1		2127922.97	25.95	0.00
									2128031.11	25.95	0.00
								6131605.59	2127977.24	25.95	
Camino Capistrano 31871, 92675 San Juan Capistrano			building_00069	х	0		26.12 r	6131052.45	2128446.38	26.12	0.00
									2128331.77	26.12	0.00
									2128328.60	26.12	0.00
	-								2128351.91 2128346.57	26.12	0.00
	+								2128346.57	26.12 26.12	0.00
	-	+							2128403.28	26.12	0.00
		1							2128418.98	26.12	0.00
									2128415.75	26.12	0.00
									2128430.06	26.12	0.00
	-								2128432.25	26.12	0.00
Consider Consistence 02075 Construction Construction	-	_	huilds occar				26.45		2128437.32	26.12	0.00
Camino Capistrano , 92675 San Juan Capistrano	-	-	building_00072	х	0		26.12 r		2128483.95 2128485.56	26.12 26.12	0.00
	-	-							2128485.56	26.12	0.00
	+								2128517.55	26.12	0.00
	$\square$								2128512.63	26.12	0.00
								6131047.10	2128514.87	26.12	0.00
								6131050.68	2128457.21	26.12	0.00
									2128455.72	26.12	0.00
									2128449.20	26.12	0.00
	-								2128449.03	26.12	0.00
	-								2128447.43 2128446.14	26.12 26.12	0.00
	+								2128448.77	26.12	0.00
									2128448.38	26.12	0.00
								6130995.66	2128464.87	26.12	0.00
									2128463.26	26.12	0.00
El Camino Real 31776, 92675 San Juan Capistrano, (Camino Real Playhouse)			building_00033	х	0		27.79 r		2128940.34	27.79	
	-								2128909.59 2128875.42	27.79	
									2128875.42	27.79 27.79	0.00
	+								2128876.77	27.79	0.00
									2128869.57	27.79	
									2128877.09	27.79	
								6131382.76	2128883.33	27.79	0.00
						ļ Ţ			2128896.58	27.79	
BUILDING	-	-	BUILDING00001	х	0		35.00 a	6131586.51		35.00	
	-	+							2128626.69	35.00 35.00	
	-	+							2128448.69 2128464.21	35.00	
	-	+							2128404.21	35.00	
		1							2128451.28	35.00	
								6131488.72	2128462.66	35.00	
									2128517.51	35.00	
									2128523.20	35.00	
	-	-							2128593.57	35.00	
	-	-							2128591.50	35.00	
	+	+							2128624.10 2128631.86	35.00 35.00	
	-	-							2128631.80	35.00	
BUILDING			BUILDING00002	х	0		35.00 a	6131495.96		35.00	
									2128303.81	35.00	
									2128297.60	35.00	
									2128289.84	35.00	
	-								2128149.10	35.00	
	-	-							2128186.87	35.00	
	-	-							2128251.03 2128222.57	35.00 35.00	0.00
BUILDING	-	+	BUILDING00003	x	0		35.00 a	6131408.52		35.00	
	1	1							2128385.56	35.00	
		1							2128389.70	35.00	
		1							2128385.05	35.00	

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinate	es	
							Begin	x	У	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
								6131304.51	2128380.39	35.00	0.00
								6131306.58	2128392.81	35.00	0.00
								6131439.05	2128365.39	35.00	0.00
								6131437.49	2128360.73	35.00	0.00
								6131459.74	2128356.07	35.00	0.00
								6131449.91	2128313.12	35.00	0.00
								6131297.79	2128345.21	35.00	0.00
								6131299.34	2128351.41	35.00	0.00
Camino Capistrano 31952, 92675 San Juan Capistrano			building_00073	х	0		73.82 r	6131196.23	2128223.51	73.82	0.00
								6131194.83	2128137.50	73.82	0.00
								6131175.74	2128137.83	73.82	0.00
								6131175.54	2128125.24	73.82	0.00
								6131181.21	2128125.16	73.82	0.00
								6131180.74	2128096.82	73.82	0.00
								6131205.00	2128096.42	73.82	0.00
								6131204.79	2128085.18	73.82	0.00
								6131216.01	2128084.99	73.82	0.00
								6131216.18	2128095.43	73.82	0.00
								6131242.54	2128094.97	73.82	0.00
								6131243.06	2128126.26	73.82	0.00
								6131282.11	2128125.62	73.82	0.00
								6131280.84	2128050.16	73.82	0.00
								6131198.94	2128051.52	73.82	0.00
								6131198.70	2128036.24	73.82	0.00
								6131158.40	2128036.93	73.82	0.00
								6131158.44	2128039.95	73.82	0.00
								6131113.64	2128040.71	73.82	0.00
								6131114.97	2128119.11	73.82	0.00
								6131135.91	2128118.79	73.82	0.00
								6131137.68	2128224.48	73.82	0.00

APPENDIX 10.1:

**CONSTRUCTION NOISE CALCULATIONS** 



# 15534 - El Camino SPA

CadnaA Noise Prediction Model: 15534-02\_Construction.cna Date: 05.12.23 Analyst: B. Lawson

### **Calculation Configuration**

ParameterValueGeneral0.00Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition0.00Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time0.00Ref. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Rcivr1000.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10SoreningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.020.0.0Search Radius SC0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roud Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Rolad (T1MN)IndRailways (FTA/FRA)IndAircraft (???)IndStrietty acc. to AzBInd	Configurat	tion
Max. Error (dB)0.00Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)Daytime Penalty (dB)10.00DTM0.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Ind. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDaytime Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Aircraft (???)	Parameter	Value
Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnProj. Area SourcesOnRef. Time.0.00Daytime Penalty (dB)0.00Night-time Penalty (dB)10.00Night-time Penalty (dB)10.00DTM.000Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral DiffractionSome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDaytime Lumidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Aircraft (???)	General	
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Partition0.50Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnProj. Area SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Rer. Time Penalty (dB)10.00Diff0.00Rer. Time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Ror1000.00Min. Distance Source - Revr1000.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TNM)Railways (FTA/FRA)Aircraft (???)1	Max. Search Radius (#(Unit,LEN))	2000.01
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Night-time Penalty (dB)10.00DTM	Daytime Penalty (dB)	0.00
DTM     0.00       Standard Height (m)     0.00       Model of Terrain     Triangulation       Reflection     2       max. Order of Reflection     2       Search Radius Src     100.00       Max. Distance Source - Revr     1000.00       Min. Distance Source - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Darrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: State Sta	Recr. Time Penalty (dB)	5.00
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Model of Terrain     Triangulation       Reflection     2       max. Order of Reflection     2       Search Radius Src     100.00       Search Radius Rovr     1000.00       Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Darrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     1	DTM	
Reflection     0       max. Order of Reflection     2       Search Radius Src     100.00       Search Radius Rcvr     100.00       Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Source - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Barrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Standard Height (m)	0.00
max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rvr - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)International State Stat	Model of Terrain	Triangulation
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Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     Industrial (ISO 9613)       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Darrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Intercent and the second secon	Search Radius Src	100.00
Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of the	Search Radius Rcvr	100.00
Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Max. Distance Source - Rcvr	1000.00 1000.00
Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Min. Distance Rvcr - Reflector	1.00 1.00
Lateral Diffraction         some Obj           Obst. within Area Src do not shield         On           Screening         Incl. Ground Att. over Barrier           Dz with limit (20/25)           Barrier Coefficients C1,2,3         3.0 20.0 0.0           Temperature (#(Unit,TEMP))         10           rel. Humidity (%)         70           Ground Absorption G         0.50           Wind Speed for Dir. (#(Unit,SPEED))         3.0           Roads (TNM)         Railways (FTA/FRA)           Aircraft (???)         Interval	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Comp	Industrial (ISO 9613)	
Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Direct (Comparison of Comparison of Compar	Lateral Diffraction	some Obj
Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     2	Obst. within Area Src do not shield	On
Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Compar	Screening	Incl. Ground Att. over Barrier
Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

### **Receiver Noise Levels**

Neccivi			ISC L	.evei	3													
Name	М.	ID		Lev	el Lr			Limit.	Value			Lanc	Use	Height	:	C	oordinates	
			Day	Eve	Night	CNEL	Day	Eve	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	69.0	-38.0	-38.0	66.0	80.0	65.0	65.0	0.0				5.00	а	6131557.21	2128842.37	5.00
RECEIVERS		R2	74.1	-32.8	-32.8	71.1	80.0	65.0	65.0	0.0				5.00	а	6131607.10	2128159.46	5.00
RECEIVERS		R3	70.6	-36.4	-36.4	67.6	80.0	65.0	65.0	0.0				5.00	а	6131437.92	2127998.86	5.00
RECEIVERS		R4	76.2	-30.7	-30.7	73.2	80.0	65.0	65.0	0.0				5.00	а	6131283.09	2128117.24	5.00
RECEIVERS		R5	79.0	-28.0	-28.0	76.0	80.0	65.0	65.0	0.0				5.00	а	6131166.33	2128312.89	5.00
RECEIVERS		R6	69.8	-37.2	-37.2	66.8	80.0	65.0	65.0	0.0				5.00	а	6131017.39	2128290.85	5.00
RECEIVERS		R7	77.7	-29.3	-29.3	74.7	80.0	65.0	65.0	0.0				5.00	а	6131169.97	2128462.06	5.00
RECEIVERS		R8	69.6	-37.4	-37.4	66.6	80.0	65.0	65.0	0.0				5.00	а	6131163.07	2128714.35	5.00
RECEIVERS		R9	72.1	-34.9	-34.9	69.0	80.0	65.0	65.0	0.0				5.00	а	6131427.54	2128787.72	5.00

# Area Source(s)

Name	М.	ID	R	esult. PW	Ľ	Re	esult. PW	L''		Lw / Li		Ope	erating Ti	me	Height	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		$\square$
SITEBOUNDARY		CONSTRUCTION	122.6	15.6	15.6	78.9	-28.1	-28.1	PWL-Pt	115.6					8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)			(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION	8.00	а		6131287.72	2128728.28	8.00	0.00
					6131314.90	2128724.97	8.00	0.00
					6131330.23	2128723.58	8.00	0.00
					6131462.94	2128703.56	8.00	0.00
					6131470.68	2128711.47	8.00	0.00
					6131474.57	2128714.22	8.00	0.00

Name ID		He	ight		Coordinat	es	
		Begin	End	х	У	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6131478.86	2128716.27	8.00	0.00
				6131483.44	2128717.57	8.00	0.00
				6131488.18	2128718.09	8.00	0.00
				6131492.93	2128717.80	8.00	0.00
				6131516.06	2128709.18	8.00	0.00
				6131511.03	2128696.31	8.00	0.00
				6131516.70	2128676.20	8.00	0.00
				6131646.80	2128631.11	8.00	0.00
				6131625.32	2128460.79	8.00	0.00
				6131709.48	2128416.87	8.00	0.00
				6131627.10	2128310.46	8.00	0.00
				6131627.20	2128310.44	8.00	0.00
				6131636.19	2128301.83	8.00	0.00
				6131666.84	2128259.31	8.00	0.00
				6131657.52	2128245.93	8.00	0.00
				6131733.99	2128176.38	8.00	0.00
				6131765.60	2128185.48	8.00	0.00
				6131775.29	2128179.40	8.00	0.00
				6131734.35	2128122.10	8.00	0.00
				6131721.14	2128134.21	8.00	0.00
				6131710.27	2128142.64	8.00	0.00
				6131610.99	2128142.04	8.00	0.00
				6131578.18	2128213.20	8.00	0.00
				6131578.13	2128247.10	8.00	0.00
				6131455.98	2128247.20	8.00	0.00
				6131223.07 6131222.72	2128140.07	8.00	0.00
		_			2128175.82	8.00	0.00
				6131199.96	2128183.96	8.00	0.00
				6131207.51	2128315.60	8.00	0.00
				6131106.25	2128326.05	8.00	0.00
				6131106.40	2128325.83	8.00	0.00
				6131093.75	2128326.06	8.00	0.00
				6131095.38	2128371.13	8.00	0.00
				6131095.68	2128379.24	8.00	0.00
		_		6131092.97	2128462.17	8.00	0.00
				6131111.10	2128463.25	8.00	0.00
				6131127.16	2128448.63	8.00	0.00
				6131196.13	2128454.71	8.00	0.00
				6131194.09	2128475.81	8.00	0.00
				6131220.30	2128477.46	8.00	0.00
		+		6131242.30	2128487.50	8.00	0.00
				6131245.48	2128487.12	8.00	0.00
				6131259.16	2128486.57	8.00	0.00
				6131262.55	2128491.69	8.00	0.00
				6131271.17	2128569.89	8.00	0.00
				6131276.61	2128614.53	8.00	0.00
				6131279.14	2128645.17	8.00	0.00
		T	$  \top$	6131284.55	2128703.56	8.00	0.00

# Building(s)

Name	Sel.	М.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	х	У	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
Verdugo Street 26762, 92675 San Juan Capistrano, (Regency Theatres)			building_00014	х	0		20.00 ו	6130810.63	2128797.52	20.00	0.00
								6130902.15	2128806.29	20.00	0.00
								6130893.56	2128923.91	20.00	0.00
								6130892.85	2128932.58	20.00	0.00
								6130883.84	2128935.43	20.00	0.00
								6130865.19	2128933.86	20.00	0.00
								6130865.37	2128931.57	20.00	0.00
								6130860.18	2128931.13	20.00	0.00
								6130860.37	2128929.02	20.00	0.00
								6130855.48	2128928.57	20.00	0.00
								6130855.67	2128926.53	20.00	0.00
								6130820.72	2128923.55	20.00	0.00
								6130820.56	2128925.26	20.00	0.00
								6130814.79	2128924.76	20.00	0.00
								6130814.58	2128927.13	20.00	0.00
								6130810.31	2128926.75	20.00	0.00
								6130810.12	2128928.71	20.00	0.00
								6130761.03	2128924.18	20.00	0.00
								6130753.45	2128902.08	20.00	0.00
mino Capistrano 31786, 92675 San Juan Capistrano, (Swallow's Inn)			building_00024	х	0		20.00 ו	6131082.06	2128950.54	20.00	0.00
								6131133.26	2128944.82	20.00	0.00
								6131137.47	2128884.03	20.00	0.00
								6131092.35	2128881.80	20.00	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Т		Coordinat	es	
							Begin		х	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
				_				-		2128880.57	20.00	0.00
			building_00026	х	0		20.00	_		2128812.51	20.00	0.00
				_				+		2128812.69	20.00	0.00
				_						2128817.33 2128797.05	20.00	0.00
				_				-		2128797.03	20.00	0.00
								-		2128718.46	20.00	0.00
								_		2128714.23	20.00	0.00
								-		2128782.56	20.00	0.00
								-		2128783.49	20.00	0.00
								t	6131109.88	2128789.79	20.00	0.00
								T	6131094.17	2128788.80	20.00	0.00
Camino Capistrano 31781, 92675 San Juan Capistrano			building_00027	х	0		20.00	r	6130893.56	2128923.91	20.00	0.00
									6130908.21	2128925.17	20.00	0.00
									6130907.47	2128937.80	20.00	0.00
								_		2128944.02	20.00	0.00
								-		2128925.67	20.00	0.00
				_				_		2128882.98	20.00	0.00
								-		2128883.91	20.00	0.00
	-			_				-		2128884.75	20.00	0.00
	-	-						-		2128885.65	20.00	0.00
	-	-		_				+		2128886.84	20.00	0.00
	-							-		2128888.28 2128890.00	20.00	0.00
	-	-						-	6130981.70		20.00	0.00
								-		2128891.04	20.00	0.00
								-		2128891.29	20.00	0.00
								_		2128888.35	20.00	0.00
								-		2128887.49	20.00	0.00
								T	6130974.49	2128886.93	20.00	0.00
								T	6130971.74	2128886.57	20.00	0.00
									6130971.70	2128883.58	20.00	0.00
									6130972.30	2128878.52	20.00	0.00
									6130915.68	2128873.43	20.00	0.00
									6130918.77	2128840.23	20.00	0.00
								-		2128843.99	20.00	0.00
				_				-		2128837.58	20.00	0.00
								-		2128839.53	20.00	0.00
				_				-		2128854.76	20.00	0.00
				_				-		2128856.15	20.00	0.00
				_				_		2128815.35 2128807.58	20.00	0.00
				-				-		2128807.38	20.00	0.00
			building_00048	х	0		20.00	-		2128800.29	20.00	0.00
			bullung_00040	^			20.00	-		2128750.50	20.00	0.00
								-		2128815.35	20.00	0.00
								-		2128764.39	20.00	0.00
			building_00051	х	0		20.00			2128627.49	20.00	0.00
										2128627.79	20.00	0.00
									6131042.29	2128544.34	20.00	0.00
								_		2128541.60	20.00	0.00
								_		2128571.47	20.00	0.00
								_		2128571.19	20.00	0.00
				_				_		2128624.78	20.00	0.00
			building_00052	х	0		20.00	_		2128643.53	20.00	0.00
	-			_				-		2128646.21	20.00	0.00
	-	-		_				_		2128627.49	20.00	0.00
	-	-	huildin - coort				20.00	_		2128624.78	20.00	0.00
	-	-	building_00053	х	0		20.00			2128670.78	20.00	0.00
	-	-						_		2128672.04 2128694.49	20.00	0.00
	-	-						_		2128694.49	20.00	0.00
		-								2128697.58	20.00	0.00
								_		2128647.11	20.00	0.00
								_		2128652.57	20.00	0.00
										2128649.98	20.00	0.00
			building_00054	х	0		20.00	_		2128694.32	20.00	0.00
								T	6130950.16	2128699.88	20.00	0.00
								_		2128693.58	20.00	0.00
								_		2128695.00	20.00	0.00
								_		2128670.78	20.00	0.00
								_		2128649.98	20.00	0.00
										2128646.44	20.00	0.00
	<u> </u>							_		2128639.49	20.00	0.00
								_		2128651.33	20.00	0.00
	<u> </u>	-	1.11.11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.							2128661.93	20.00	0.00
	1	1	building_00055	х	0		20.00	r	ь130849.93	2128669.91	20.00	0.00

Image: stateImage: state </th <th>Name</th> <th>Sel.</th> <th>M.</th> <th>ID</th> <th>RB</th> <th>Residents</th> <th>Absorption</th> <th>Height</th> <th></th> <th>Coordinat</th> <th>es</th> <th></th>	Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
Image: state s						nesidents	/ losorprion		х			Ground
Image: state s		<u> </u>										
Image: state s									6130855.21	2128670.31	20.00	0.00
Image: state s									6130855.99	2128660.11	20.00	0.00
Image: Section of the section of th									6130879.89	2128661.93	20.00	0.00
Image: Section of the sectio									6130880.72	2128651.33	20.00	0.00
Image: Section of the section of t									6130864.09	2128650.07	20.00	0.00
Image: Section of the section of t									6130863.93	2128652.22	20.00	0.00
Image: Section of the sectio									6130851.36	2128651.26	20.00	0.00
Image: Control         Image: Contro									6130851.13	2128654.32	20.00	0.00
Image: Sector of the sector				building_00056	х	0		20.00 r	6130820.50	2128648.91	20.00	0.00
Image: Section of the sectio									6130851.36	2128651.26	20.00	0.00
Image: Section of the state of the									6130863.93	2128652.22	20.00	0.00
Image         Image <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6130864.09</td><td>2128650.07</td><td>20.00</td><td>0.00</td></th<>									6130864.09	2128650.07	20.00	0.00
builting_Q007         k         0         2.000         f. G198-121         2.2209-21         2.000         0.000         0.000           C         C         C         C         C         G198-121         2.2209-21         2.000         0.000         0.000           C         C         C         C         G198-131         2.2209-12         0.000         0.000           C         C         C         G198-131         2.2209-12         0.000         0.000           Camine Capitrano 3179, 27675 San Aan Capitrano         Duiling_D005         V         0         C         1010-13         2.2208-13         0.000         0.000           Camine Capitrano 3179, 27675 San Aan Capitrano         Duiling_D005         V         0         C         6         0.01111-14         2.2208-13         0.000         0.000           Camine Capitrano 3179, 27675 San Aan Capitrano         Duiling_D0024         V         0         C         6         0.01111-14         2.2208-13         0.010           Camine Capitrano 3130, 5275 San Aan Capitrano         Duiling_D0024         V         0         C         10         10.88         10.81011-14         2.2208-13         13.86         0.000           Camine Capitrano 31205, 52275 San Aan Cap									6130865.31	2128634.29	20.00	0.00
Image: Section of the sectio									6130821.88	2128630.99	20.00	0.00
Image: state				building_00057	х	0		20.00 r	6130817.12	2128692.01	20.00	0.00
Image: Section of the section of t									6130831.83	2128693.12	20.00	0.00
Image: Section of Section Capitrano     Image: Section Capitrano     Imag									6130848.04	2128694.35	20.00	0.00
Image: Select of the									6130849.93	2128669.91	20.00	0.00
Carmo Capitrano 3172, 22675 San Juan Capitrano         Soluting, 2002         Sol         Sol         Sol         Soluting, 2002         Soluting									6130851.13	2128654.32	20.00	0.00
Image:									6130820.21	2128651.97	20.00	0.00
Image:	Camino Capistrano 31792, 92675 San Juan Capistrano			building_00025	х	0		13.42 r	6131092.35	2128881.80	13.42	0.00
Image: Sector									6131137.47	2128884.03	13.42	0.00
i         i									6131157.18	2128885.04	13.42	0.00
Image:									6131159.19	2128844.83	13.42	0.00
camine Capitrano 1933, 9257 San Juan Capitrano       I <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6131166.73</td><td>2128845.21</td><td>13.42</td><td>0.00</td></t<>									6131166.73	2128845.21	13.42	0.00
Camine Capitrano 1931, 92575 San Juan Capitrano         I         I         Iuling, 0000         X         I <thi< th="">         I         I         I</thi<>									6131169.10	2128817.33	13.42	0.00
Image: Sector									6131095.83	2128812.69	13.42	0.00
Image:	Camino Capistrano 31931, 92675 San Juan Capistrano			building_00040	х	0		13.68 r	6130850.48	2128060.32	13.68	0.00
II clamino Real 31806, 92675 San Juan Capitarano, (Blas Agullar Adobe)       I       bullding, 00032       X       0       1388       f       1388       0.00         II Clamino Real 31806, 92675 San Juan Capitarano, (Blas Agullar Adobe)       I <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6131016.05</td><td>2128059.06</td><td>13.68</td><td>0.00</td></td<>									6131016.05	2128059.06	13.68	0.00
B1 cmmo Real 31806, 92675 San Juan Capistrano, [Bias Aguilar Adobe]       I									6131015.77	2128020.82	13.68	0.00
Image: Section of the section of th									6130850.18	2128022.08	13.68	0.00
Image: Sector	El Camino Real 31806, 92675 San Juan Capistrano, (Blas Aguilar Adobe)			building_00032	х	0		13.88 r	6131358.93	2128838.71	13.88	0.00
Image: Section of the section of th									6131364.77	2128837.94	13.88	0.00
Image: Section of the section of th									6131365.31	2128842.08	13.88	0.00
Image: Section of the section of th									6131440.09	2128832.41	13.88	0.00
Image: Section of the section of th									6131435.02	2128793.68	13.88	0.00
Image: Section of the section of t									6131360.52		13.88	0.00
Image:									6131361.00	2128807.17	13.88	0.00
Camino Capistrano 31761, 92675 San Juan Capistrano         David Juan Capistrano         David Juan Capistrano         David Juan Capistrano         No         No </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>6131351.81</td> <td>2128808.38</td> <td>13.88</td> <td>0.00</td>									6131351.81	2128808.38	13.88	0.00
Camino Capistrano 31761, 92675 San Juan Capistrano         David Juan Capistrano         David Juan Capistrano         David Juan Capistrano         No         No </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>6131353.99</td> <td>2128825.13</td> <td>13.88</td> <td>0.00</td>									6131353.99	2128825.13	13.88	0.00
Image: Section of the section of th									6131357.12	2128824.72	13.88	0.00
Image: Sector	Camino Capistrano 31761, 92675 San Juan Capistrano			building_00019	х	0		14.27 r	6130850.16	2129061.94	14.27	0.00
Image: Sector									6130856.43	2128985.15	14.27	0.00
Image: Section of the section of th									6130998.97	2128996.68	14.27	0.00
Image:									6131002.69	2128996.99	14.27	0.00
Image: Section of the section of th									6130994.48	2129097.47	14.27	0.00
Image: Section of the section of th		-									14.27	
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Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)       building_0007       x       0       15.03       r       6131328.11       2129057.73       15.03       0.00         Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)       building_0007       x       0       15.03       r       6131328.11       2129057.73       15.03       0.00         Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)       I       I       I       I       I       I       I       I       I       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		1				l						
Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)       i       building_00007       x       0       15.03       r       6131328.13       2129057.23       15.03       0.00         0		1										
0       0       6131323.85       2129058.29       15.03       0.00         6131303.19       2129061.12       15.03       0.00         6131303.19       2129047.58       15.03       0.00         6131265.99       2129047.58       15.03       0.00         6131265.99       2129047.58       15.03       0.00         6131265.99       2129047.58       15.03       0.00         6131267.66       2129080.92       15.03       0.00         6131267.61       212908.78       15.03       0.00         613123.03       2129101.97       15.03       0.00         613123.05       2129104.43       15.03       0.00         613123.05       2129104.43       15.03       0.00         613123.05       2129104.43       15.03       0.00         613120.57       2129104.43       15.03       0.00         6131069.85       212911.91       15.03       0.00         6131069.85       212911.91       15.03       0.00         6131069.85       212911.91       15.03       0.00         6131069.85       212911.91       15.03       0.00         6131069.85       212911.91       15.03       0.00     <	Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)	1		building 00007	х	0		15.03 r				
Image: Sector				<u></u>								
Image: Sector		1										
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Image: Sector		1										
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Image: Constraint of the system of the sy												
Image: Constraint of the system		-	-									
6131295.67         2129001.58         15.03         0.00		+	-									
		-	-		-						15.03	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	x	у	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
									2129006.31	15.03	0.00
Del Okiere Street 24774, 02675 See luce Conjetere (Teas Dell)	-		huilding 00024				46.24		2129005.90	15.03	0.00
Del Obispo Street 31771, 92675 San Juan Capistrano, (Taco Bell)	-		building_00031	х	0		16.31 r		2128867.23 2128868.20	16.31 16.31	0.00
	+			_					2128865.39	16.31	0.00
									2128866.32	16.31	0.00
									2128869.38	16.31	0.00
								6131732.58	2128870.08	16.31	0.00
								6131732.66	2128867.31	16.31	0.00
									2128867.70	16.31	0.00
									2128852.62	16.31	0.00
									2128852.70	16.31	0.00
									2128835.99	16.31	0.00
Comine Conistrone 21071, 0267E Con Juan Conistrone (Union Bonk)			huilding 00041		0		16.27 -		2128832.93	16.31 16.37	0.00
Camino Capistrano 31971, 92675 San Juan Capistrano, (Union Bank)		-	building_00041	х	0		16.37 r		2127938.03 2127936.19	16.37	0.00
	-								2127930.19	16.37	0.00
									2127842.43	16.37	0.00
Del Obispo Street 31791, 92675 San Juan Capistrano, (Marie Callender's)			building 00030	х	0		16.67 r		2128570.76	16.67	0.00
									2128573.76	16.67	0.00
		L							2128595.58	16.67	0.00
								6131795.14	2128604.49	16.67	0.00
								6131797.88		16.67	0.00
									2128577.09	16.67	0.00
	-								2128510.95	16.67	0.00
	-	-							2128508.01	16.67	0.00
	-	-							2128484.87	16.67	0.00
	-	-							2128478.94 2128513.48	16.67	0.00
	-	-							2128513.48	16.67 16.67	0.00
	-								2128509.81	16.67	0.00
									2128513.07	16.67	0.00
									2128559.13	16.67	0.00
									2128560.88	16.67	0.00
Camino Capistrano 31866, 92675 San Juan Capistrano			building_00070	х	0		16.93 r	6131173.58	2128554.53	16.93	0.00
								6131176.99	2128495.53	16.93	0.00
								6131202.44	2128497.01	16.93	0.00
									2128470.75	16.93	0.00
									2128469.36	16.93	0.00
	-								2128466.05	16.93	0.00
	-								2128463.84 2128526.34	16.93	0.00
	-								2128526.04	16.93 16.93	0.00
	-								2128520.04	16.93	0.00
Del Obispo Street 31863, 92675 San Juan Capistrano			building 00065	х	0		17.65 r		2128258.39	17.65	0.00
· · · · · · · · · · · · · · · · · · ·			0_0000						2128328.08	17.65	0.00
									2128294.56	17.65	0.00
								6131774.92	2128303.59	17.65	0.00
									2128278.11	17.65	0.00
									2128249.48	17.65	0.00
	-	_							2128252.15	17.65	0.00
	-	-							2128202.06	17.65	0.00
Camino Capistrano 31901, 92675 San Juan Capistrano	+	-	building_00039	х	0		17.72 r		2128248.50 2128247.80	17.72	0.00
	-	+							2128247.80	17.72 17.72	0.00
	+	-		$\vdash$					2128187.94	17.72	0.00
	-	-							2128188.03	17.72	0.00
	+	+							2128172.07	17.72	0.00
Del Obispo Street 31865, 92675 San Juan Capistrano	1	1	building_00008	х	0		20.08 r		2128116.30	20.08	0.00
									2128078.21	20.08	0.00
								6131649.88	2128073.70	20.08	0.00
									2128060.27	20.08	0.00
									2128051.28	20.08	0.00
	_	-							2128060.02	20.08	0.00
	-	-							2128057.54	20.08	0.00
	+	-							2128099.53	20.08	0.00
	-	-							2128115.87 2128122.45	20.08 20.08	0.00
	+	$\vdash$		$\vdash$					2128122.45	20.08	0.00
	+	$\vdash$		$\vdash$					2128120.59	20.08	0.00
Verdugo Street 26701, 92675 San Juan Capistrano	1	ŀ	building_00001	х	0		22.11 r		2128902.26	22.11	0.00
	1	1	0						2128912.45	22.11	0.00
	1	1					+		2128911.74	22.11	0.00
									2128621.13	22.11	0.00
								6130821.88	2128630.99	22.11	0.00
									2128648.91	22.11	0.00
	1	1						6130820.21	2128651.97	22.11	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	x	у	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
	_								2128757.22	22.11	0.00
	_								2128903.70 2128904.12	22.11 22.11	0.00
	-								2128904.12	22.11	0.00
									2128903.52	22.11	0.00
Ortega Highway 26801, 92675 San Juan Capistrano			building_00017	х	0		22.34 r		2129212.13	22.34	0.00
								6131002.25	2129229.76	22.34	0.00
								6131018.39	2129228.34	22.34	0.00
								6131019.86	2129244.91	22.34	0.00
									2129243.83	22.34	0.00
	_								2129241.00	22.34	0.00
									2129240.18	22.34	0.00
	_								2129239.19	22.34	0.00
	_								2129242.93 2129239.15	22.34 22.34	0.00
	-								2129239.15	22.34	0.00
	-								2129234.51	22.34	0.00
									2129197.44	22.34	0.00
									2129199.50	22.34	0.00
								6131092.16	2129205.36	22.34	0.00
								6131050.84	2129208.97	22.34	0.00
									2129211.77	22.34	0.00
	_								2129212.89	22.34	0.00
		-							2129214.52	22.34	0.00
	_	-							2129210.45	22.34	0.00
Del Obispo Street 31877, 92675 San Juan Capistrano	_	-	building_00068	х	0		23.72 r		2127915.80	23.72	0.00
		-							2128001.65 2127953.23	23.72 23.72	0.00
	_								2127933.23	23.72	0.00
									2127918.14	23.72	0.00
									2127915.18	23.72	0.00
									2127894.72	23.72	0.00
								6131517.59	2127940.08	23.72	0.00
								6131543.99	2127901.80	23.72	0.00
								6131440.63	2127832.13	23.72	0.00
Camino Capistrano 31892, 92675 San Juan Capistrano, (Ellies Table)			building_00059	х	0		24.31 r	6131119.19	2128325.06	24.31	0.00
	_								2128323.79	24.31	0.00
	_								2128322.34	24.31	0.00
	_								2128321.53	24.31	0.00
	_								2128322.55 2128321.37	24.31 24.31	0.00
									2128321.37	24.31	0.00
									2128283.71	24.31	0.00
									2128278.36	24.31	0.00
								6131111.59	2128281.17	24.31	0.00
								6131114.39	2128321.60	24.31	0.00
									2128321.28	24.31	0.00
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011	х	0		24.61 r	6131131.29	2127953.28	24.61	0.00
	_								2127835.12	24.61	0.00
	_								2127833.22	24.61	0.00
	_		L 111 00074				25.05		2127951.37	24.61	0.00
Del Obispo Street 31873, 92675 San Juan Capistrano		-	building_00071	x	0		25.95 r	6131563.67	2127922.97 2127976.83	25.95 25.95	0.00
		-		-	-				2127976.83	25.95	0.00
		1							2127977.24	25.95	0.00
Camino Capistrano 31871, 92675 San Juan Capistrano	-	1	building_00069	x	0		26.12 r		2128446.38	26.12	0.00
· · ·									2128331.77	26.12	0.00
								6131005.64	2128328.60	26.12	0.00
									2128351.91	26.12	0.00
									2128346.57	26.12	0.00
									2128403.28	26.12	0.00
	_	-		-					2128403.72	26.12	0.00
	_	-		-					2128418.98	26.12	0.00
		-		-					2128415.75 2128430.06	26.12 26.12	0.00
		-		-					2128430.06	26.12	0.00
	-	1							2128437.32	26.12	0.00
Camino Capistrano , 92675 San Juan Capistrano	-		building_00072	х	0		26.12 r		2128483.95	26.12	0.00
• • •									2128485.56	26.12	0.00
								6130992.70	2128516.48	26.12	0.00
									2128517.55	26.12	0.00
									2128512.63	26.12	0.00
	_								2128514.87	26.12	0.00
		-							2128457.21	26.12	0.00
	_	<u> </u>							2128455.72	26.12	0.00
		-							2128449.20	26.12	0.00
		1						0131023.71	2128449.03	26.12	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	x	у	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
								6131023.81	2128447.43	26.12	0.00
								6131003.00	2128446.14	26.12	0.00
								6131002.85	2128448.77	26.12	0.00
								6130996.69	2128448.38	26.12	0.00
								6130995.66	2128464.87	26.12	0.00
								6130969.72	2128463.26	26.12	0.00
El Camino Real 31776, 92675 San Juan Capistrano, (Camino Real Playhouse)			building_00033	х	0		27.79 r	6131392.01	2128940.34	27.79	0.00
								6131583.02	2128909.59	27.79	0.00
								6131577.47	2128875.42	27.79	0.00
								6131569.04	2128876.77	27.79	0.00
								6131564.12	2128846.41	27.79	0.00
								6131420.29	2128869.57	27.79	0.00
								6131421.52	2128877.09	27.79	0.00
								6131382.76	2128883.33	27.79	0.00
								6131384.92	2128896.58	27.79	0.00
Camino Capistrano 31952, 92675 San Juan Capistrano			building_00073	х	0		73.82 r	6131196.23	2128223.51	73.82	0.00
								6131194.83	2128137.50	73.82	0.00
								6131175.74	2128137.83	73.82	0.00
								6131175.54	2128125.24	73.82	0.00
								6131181.21	2128125.16	73.82	0.00
								6131180.74	2128096.82	73.82	0.00
								6131205.00	2128096.42	73.82	0.00
								6131204.79	2128085.18	73.82	0.00
								6131216.01	2128084.99	73.82	0.00
								6131216.18	2128095.43	73.82	0.00
								6131242.54	2128094.97	73.82	0.00
								6131243.06	2128126.26	73.82	0.00
								6131282.11	2128125.62	73.82	0.00
								6131280.84	2128050.16	73.82	0.00
								6131198.94	2128051.52	73.82	0.00
								6131198.70	2128036.24	73.82	0.00
								6131158.40	2128036.93	73.82	0.00
								6131158.44	2128039.95	73.82	0.00
								6131113.64	2128040.71	73.82	0.00
								6131114.97	2128119.11	73.82	0.00
								6131135.91	2128118.79	73.82	0.00
								6131137.68	2128224.48	73.82	0.00

APPENDIX 10.2:

MITIGATED CONSTRUCTION NOISE CALCULATIONS



# 15534 - El Camino SPA

CadnaA Noise Prediction Model: 15534-02\_ConstructionMitigated.cna Date: 02.10.24 Analyst: B. Lawson

### **Calculation Configuration**

ParameterValueGeneral	Configurat	tion
Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Rcvr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Dost. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierCound Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Min Speed for Dir. (#(Unit,SPEED))3.0Min Salways (FTA/FRA)Industrial ISCAircraft (???)Industrial ISC<	Parameter	Value
Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnProj. Line SourcesOnRef. Time	General	
Min. Dist Src to Rcvr0.00Partition0.50Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. Time5.00Daytime Penalty (dB)5.00Night-time Penalty (dB)1.00DTM5Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1.00Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)5.00Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Intel Stance Stance	Max. Error (dB)	0.00
PartitionIntermediationRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnDaytime Penalty (dB)0.00Ref. Time0.00Rer. Time Penalty (dB)10.00Difference0.00Rer. Time Penalty (dB)0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Min. Distance Source - Revr1000.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarvier Lumidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)IRailways (FTA/FRA)IAircraft (???)I	Max. Search Radius (#(Unit,LEN))	2000.01
Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)0.00Ref. Time Penalty (dB)10.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Min. Distance Source - Rcvr1000.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)Incl. Ground Att. over BarrierLateral Diffractionsome ObjObstreamingIncl. Ground Att. over BarrierDa with Imit (20/25)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)InclaffractionRailways (FTA/FRA)InclaffractionAircraft (???)Inclaffraction	Min. Dist Src to Rcvr	0.00
Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)0.00Ref. Time Penalty (dB)0.00Night-time Penalty (dB)0.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Sarch Radius Rovr100.00Min. Distance Source - Reflector1.001.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjLateral DiffractionSome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierTemperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Industrial (SC)Aircraft (???)Industria (SC)	Partition	
Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Ref. Time Penalty (dB)10.00Night-time Penalty (dB)10.00DTMStandard Height (m)Model of TerrainTriangulationReflection2Search Radius Src100.00Search Radius Rcvr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Aircraft (???)	Raster Factor	0.50
Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationRefiction2Search Radius Rcvr100.00Max. Order of Reflection2Search Radius Rcvr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10Industry (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Industri (??)	Max. Length of Section (#(Unit,LEN))	999.99
Proj. Line SourcesOnProj. Area SourcesOnRef. TimeOnDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMOnStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Industri (??)	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area SourcesOnRef. Time	Min. Length of Section (%)	0.00
Ref. TimeImage: Constant of the system of the s	Proj. Line Sources	On
Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMInternationStandard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Max. Order of Reflection2Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)InternationLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)InternationRailways (FTA/FRA)InternationAircraft (???)Internation	Proj. Area Sources	On
Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM	Ref. Time	
Night-time Penalty (dB)10.00DTM	Daytime Penalty (dB)	0.00
DTMDTMStandard Height (m)0.00Model of TerrainTriangulationReflection2max. Order of Reflection2Search Radius Src100.00Search Radius Rovr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Industria (??)	Recr. Time Penalty (dB)	5.00
Standard Height (m)0.00Model of TerrainTriangulationReflection2max. Order of Reflection2Search Radius Src100.00Search Radius Rovr100.00Max. Distance Source - Revr1000.00 1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjDost. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Railways (FTA/FRA)Internet Standard St	Night-time Penalty (dB)	10.00
Model of Terrain     Triangulation       Reflection     2       max. Order of Reflection     2       Search Radius Src     100.00       Search Radius Rxvr     100.00       Max. Distance Source - Rxvr     1000.00 1000.00       Min. Distance Source - Reflector     1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     1       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)     Darrier Coefficients C1,2,3       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Intercent (#Complexite)	DTM	
ReflectionCmax. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDrawith limit (20/25)DescriptionBarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Radas (TNM)International Astronaution (PTA)Railways (FTA/FRA)Internationaution (PTA)Aircraft (???)Internationaution (PTA)	Standard Height (m)	0.00
max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rource - Reflector0.01 .00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Railways (FTA/FRA)Industrial (SCO Scole)Aircraft (???)Industrial (SCO Scole)	Model of Terrain	Triangulation
Search Radius Src 100.00 Search Radius Rcvr 1000.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) UC 100 Screening IC	Reflection	
Search Radius Rcvr     100.00       Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     Industrial (ISO 9613)       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Darrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Raalways (FTA/FRA)     Industrial Call	max. Order of Reflection	2
Max. Distance Source - Rcvr     1000.00 1000.00       Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Darrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit, TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Intercent (#Comparison Comparison Compa	Search Radius Src	100.00
Min. Distance Rvcr - Reflector     1.00 1.00       Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dir With Imit (20/25)     Dz with Iimit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: March Sch Sch Sch Sch Sch Sch Sch Sch Sch S	Search Radius Rcvr	100.00
Min. Distance Source - Reflector     0.10       Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Interfactor       Aircraft (???)     Interfactor	Max. Distance Source - Rcvr	1000.00 1000.00
Industrial (ISO 9613)     some Obj       Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Min. Distance Rvcr - Reflector	1.00 1.00
Lateral Diffraction     some Obj       Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Railways (FTA/FRA)     Aircraft (???)	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield     On       Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Intercent of the state of the	Industrial (ISO 9613)	
Screening     Incl. Ground Att. over Barrier       Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Image: Comparison of Compa	Lateral Diffraction	some Obj
Dz with limit (20/25)       Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Comparison o	Obst. within Area Src do not shield	On
Barrier Coefficients C1,2,3     3.0 20.0 0.0       Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TMM)     Railways (FTA/FRA)       Aircraft (???)     Image: Comparison of Compar	Screening	Incl. Ground Att. over Barrier
Temperature (#(Unit,TEMP))     10       rel. Humidity (%)     70       Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G     0.50       Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED))     3.0       Roads (TNM)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

### **Receiver Noise Levels**

Neccivi			ISC L	.evei	3													
Name	М.	ID		Lev	el Lr			Limit.	Value			Land	d Use	Height	1	C	oordinates	
			Day	Eve	Night	CNEL	Day	Eve	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	64.2	-42.8	-42.8	61.2	80.0	65.0	65.0	0.0				5.00	a	6131557.21	2128842.37	5.00
RECEIVERS		R2	69.1	-37.9	-37.9	66.1	80.0	65.0	65.0	0.0				5.00	a	6131607.10	2128159.46	5.00
RECEIVERS		R3	65.7	-41.2	-41.2	62.7	80.0	65.0	65.0	0.0				5.00	а	6131437.92	2127998.86	5.00
RECEIVERS		R4	68.6	-38.4	-38.4	65.5	80.0	65.0	65.0	0.0				5.00	a	6131283.09	2128117.24	5.00
RECEIVERS		R5	71.7	-35.3	-35.3	68.7	80.0	65.0	65.0	0.0				5.00	a	6131166.33	2128312.89	5.00
RECEIVERS		R6	64.9	-42.1	-42.1	61.9	80.0	65.0	65.0	0.0				5.00	a	6131017.39	2128290.85	5.00
RECEIVERS		R7	70.8	-36.2	-36.2	67.8	80.0	65.0	65.0	0.0				5.00	a	6131169.97	2128462.06	5.00
RECEIVERS		R8	64.8	-42.2	-42.2	61.8	80.0	65.0	65.0	0.0				5.00	а	6131163.07	2128714.35	5.00
RECEIVERS		R9	67.2	-39.8	-39.8	64.1	80.0	65.0	65.0	0.0				5.00	a	6131427.54	2128787.72	5.00

## Area Source(s)

Name	M.	ID	R	esult. PW	Ľ	Re	esult. PW	L"		Lw / Li		Ope	erating Ti	me	Height	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	Π
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		Π
SITEBOUNDARY		CONSTRUCTION	122.6	15.6	15.6	78.9	-28.1	-28.1	PWL-Pt	115.6					8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION	8.00	а		6131287.72	2128728.28	8.00	0.00
					6131314.90	2128724.97	8.00	0.00
					6131330.23	2128723.58	8.00	0.00
					6131462.94	2128703.56	8.00	0.00
					6131470.68	2128711.47	8.00	0.00
					6131474.57	2128714.22	8.00	0.00

Name	ID	He	ight		Coordinat	es	
		Begin	End	x	У	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6131478.86	2128716.27	8.00	0.00
				6131483.44	2128717.57	8.00	0.00
				6131488.18	2128718.09	8.00	0.00
				6131492.93	2128717.80	8.00	0.00
				6131516.06	2128709.18	8.00	0.00
				6131511.03	2128696.31	8.00	0.00
				6131516.70	2128676.20	8.00	0.0
				6131646.80	2128631.11	8.00	0.0
				6131625.32	2128460.79	8.00	0.0
				6131709.48	2128416.87	8.00	0.0
				6131627.10	2128310.46	8.00	0.0
				6131627.20		8.00	0.0
				6131636.19	2128301.83	8.00	0.0
				6131666.84	2128259.31	8.00	0.0
				6131657.52	2128245.93	8.00	0.0
				6131733.99	2128245.33	8.00	0.0
				6131765.60	2128185.48	8.00	0.0
				6131775.29	2128179.40	8.00	0.0
				6131734.35	212817 5.40	8.00	0.0
				6131734.33	2128122.10	8.00	0.0
		_		6131710.27	2128142.64	8.00	0.0
				6131610.99	2128218.20	8.00	0.0
				6131578.18	2128247.16	8.00	0.0
				6131578.13	2128247.20	8.00	0.0
				6131455.98	2128089.42	8.00	0.0
				6131223.07	2128140.07	8.00	0.0
				6131222.72	2128175.82	8.00	0.0
				6131199.96	2128183.96	8.00	0.0
				6131207.51	2128315.60	8.00	0.0
				6131106.25	2128326.05	8.00	0.0
				6131106.40	2128325.83	8.00	0.0
				6131093.75	2128326.06	8.00	0.0
				6131095.38	2128371.13	8.00	0.0
				6131095.68	2128379.24	8.00	0.0
				6131092.97	2128462.17	8.00	0.0
				6131111.10	2128463.25	8.00	0.0
				6131127.16	2128448.63	8.00	0.0
				6131196.13	2128454.71	8.00	0.0
				6131194.09	2128475.81	8.00	0.0
				6131220.30	2128477.46	8.00	0.0
				6131242.30	2128487.50	8.00	0.00
				6131245.48	2128487.12	8.00	0.00
				6131259.16	2128486.57	8.00	0.0
				6131262.55	2128491.69	8.00	0.0
				6131271.17	2128569.89	8.00	0.0
		+ +		6131276.61	2128505.65	8.00	0.0
			+ +	6131279.14	2128645.17	8.00	0.0
				6131284.55	2128043.17	8.00	0.0

### Barrier(s)

Name	Sel.	M.	ID	Abso	rption	Z-Ext.	Canti	lever	н	leig	t		Coordinate	25	
				left	right		horz.	vert.	Begin		End	x	У	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERLINE			BARRIERLINE00001						8.00	а		6131330.38	2128724.57	8.00	0.0
												6131462.58	2128704.63	8.00	0.0
												6131469.96	2128712.17	8.00	0.0
												6131470.10	2128712.29	8.00	0.0
												6131473.99	2128715.03	8.00	0.0
												6131474.14	2128715.12	8.00	0.0
												6131478.43	2128717.17	8.00	0.0
												6131478.59	2128717.23	8.00	0.0
												6131483.17	2128718.53	8.00	0.0
												6131483.33	2128718.56	8.00	0.0
												6131488.07	2128719.08	8.00	0.0
												6131488.24	2128719.08	8.00	0.0
												6131492.99	2128718.80	8.00	0.0
												6131493.14	2128718.78	8.00	0.0
												6131493.28	2128718.74	8.00	0.0
												6131516.41	2128710.11	8.00	0.0
												6131516.55	2128710.05	8.00	0.0
												6131516.68	2128709.96	8.00	0.0
												6131516.80	2128709.85	8.00	0.0
												6131516.89	2128709.72	8.00	0.0
												6131516.97	2128709.59	8.00	0.0
												6131517.02	2128709.44	8.00	0.0
												6131517.05	2128709.28	8.00	0.0

Name	Sel.	M.	ID	Abso left	rption	Z-Ext.	Cant horz.	ilever vert.		ight End		Coordinate	es z	Ground
	-	-		lett	right	(ft)	(ft)	(ft)	Begin (ft)	(ft)	x (ft)	у (ft)	(ft)	(ft)
						(11)	(11)	(11)	(11)	(11)		2128709.12	8.00	0.0
	-										6131517.03		8.00	0.0
											6131516.99		8.00	0.0
	-											2128696.26	8.00	0.0
												2128676.98	8.00	0.0
											-	2128632.05	8.00	0.0
												2128631.98	8.00	0.0
											6131647.42		8.00	0.0
											6131647.55		8.00	0.0
												2128631.63	8.00	0.0
												2128631.48	8.00	0.0
											6131647.78	2128631.32	8.00	0.0
											6131647.80		8.00	0.0
											6131647.79		8.00	0.0
												2128461.36	8.00	0.0
											6131709.94		8.00	0.0
											6131710.08		8.00	0.0
											6131710.20		8.00	0.0
												2128417.44	8.00	0.0
											6131710.38		8.00	0.0
											6131710.44	2128417.16	8.00	0.0
				1							6131710.47	2128417.00	8.00	0.0
	1			1							6131710.48		8.00	0.0
				1							6131710.47	2128416.69	8.00	0.0
	-			1							6131710.42	2128416.53	8.00	0.0
	1			1							6131710.36		8.00	0.0
											6131710.27		8.00	0.0
												2128310.60	8.00	0.0
											6131636.88		8.00	0.0
												2128302.48	8.00	0.0
											6131637.00		8.00	0.0
												2128259.90	8.00	0.0
											6131667.73		8.00	0.0
											6131667.79		8.00	0.0
											6131667.83		8.00	0.0
	-			+							6131667.84	2128259.32	8.00	0.0
											6131667.83	2128259.17	8.00	0.0
											6131667.80	2128259.02	8.00	0.0
											6131667.74		8.00	0.0
											6131667.66		8.00	0.0
												2128246.08	8.00	0.0
	-			-								2128177.50	8.00	0.0
												2128186.44	8.00	0.0
											6131765.49		8.00	0.0
	-			-								2128186.48	8.00	0.0
											6131765.82	2128186.45	8.00	0.0
	-			+								2128186.40	8.00	0.0
				-								2128186.33	8.00	0.0
												2128180.25	8.00	0.0
	-			-								2128180.15	8.00	0.0
	-			-						+ +		2128180.13	8.00	0.0
	-			+								2128180.03	8.00	0.0
	+			+						+ +		2128179.90	8.00	0.0
	1			-						+ +		2128179.59	8.00	0.0
	-			-						+ +		2128179.33	8.00	0.0
	-			+								2128179.43	8.00	0.0
	-			-						+ +		2128179.11	8.00	0.0
	-			+						+ +	-	2128179.11	8.00	0.0
				1								2128178.82	8.00	0.0
												2128178.82	8.00	0.0
	-			-						+ +		2128121.31	8.00	0.0
	1			1								2128121.28	8.00	0.0
				1								2128121.19	8.00	0.0
	+			-								2128121.13	8.00	0.0
												2128121.10	8.00	0.0
	+			1								2128121.10	8.00	0.0
	-			-						+ +		2128121.10	8.00	0.0
	-			-						+ +		2128121.13	8.00	0.0
	+			+								2128121.18	8.00	0.0
	-			-						+ +	-	2128121.26	8.00	0.0
	-	-		-						+ +				0.0
	-									+ +		2128133.45	8.00	0.0
	-			+						+ +		2128141.85		0.0
	-									+ +		2128217.41	8.00	
	-			+						+ +		2128217.42	8.00	0.0
	1	-		-				l		+		2128217.45	8.00	0.0
											6131578.27		8.00	

Name	Sel.	М.	ID	Abso	rption	Z-Ext.	Cant	ilever	H	eight		Coordinat	es	
				left	right		horz.	vert.	Begin	End	х	У	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
												2128088.69	8.00	0.0
												2128088.59	8.00	0.0
	_											2128088.51	8.00	0.0
		-										2128088.46	8.00	0.0
											6131456.09		8.00	0.0
	-											2128088.42	8.00	0.0
		-										2128088.44	8.00	0.0
		<u> </u>										2128139.09	8.00	0.0
												2128139.14	8.00	0.0
		-									6131222.54	2128139.22	8.00	0.00
										++			8.00	
												2128139.44 2128139.58	8.00	0.0
		-								++		2128139.58	8.00	0.00
										+ +			8.00	0.0
		-								++		2128139.89		0.0
		-										2128140.06 2128175.11	8.00	0.0
													8.00	0.0
	-	-									6131199.62	2128183.01	8.00	0.0
		-								++			8.00	0.0
	-	-		-			-			+ +	6131199.34	2128183.17	8.00	0.0
	-	-								+ +		2128183.28	8.00	0.0
	+	-		-						+ +			8.00	0.0
	+	-								+ +		2128183.54 2128183.69		0.0
	+	-		-						+ +			8.00	0.0
		-		-						+ +	6131198.96		8.00	0.0
	-	-								+ +	6131198.96	2128184.01 2128314.70	8.00	0.0
	-											2128314.70	8.00	0.0
	-										6131106.79		8.00	0.0
											6131106.66		8.00	0.0
	-											2128324.87	8.00	0.0
	-											2128324.84	8.00	0.0
		-								++			8.00	0.0
		<u> </u>								++		2128325.06		
										+ +	6131093.57		8.00	0.0
	-	-									6131093.42		8.00	0.0
										++		2128325.18	8.00	0.0
		-									6131093.02	2128325.26	8.00	0.0
		-								++		2128325.37	8.00	0.0
	-											2128325.63	8.00	0.0
	-											2128325.03	8.00	0.0
	-	-										2128325.93	8.00	0.0
												2128325.93	8.00	0.0
		-										2128320.05	8.00	0.0
												2128379.25	8.00	0.0
												2128373.23	8.00	0.0
		-										2128462.31	8.00	0.0
	-										6131092.02		8.00	0.0
	-											2128462.63	8.00	0.0
		-												0.0
	+	-		-						+ +		2128462.78	8.00	
	+	-								+ +		2128462.90	8.00	0.0
	-	-								+ +		2128463.01 2128463.09	8.00	0.0
	-	-		-						+ +		2128463.09	8.00	0.0
	-	-		-						+ +		2128463.14	8.00	0.0
	-	-		-						+ +		2128463.17	8.00	0.0
	-	-		-						+ +		2128464.24	8.00	0.0
	-	-								+ +		2128464.24 2128464.21	8.00	0.0
	+	-		-						+			8.00	0.0
	-	-		-						+ +		2128464.16 2128464.08	8.00	0.0
	-	-		-								2128464.08	8.00	0.0
	-	-		-								2128403.98	8.00	0.0
	-	-		-								2128449.66	8.00	0.0
	+	-		-								2128455.62	8.00	0.0
	-									+ +		2128475.88	8.00	0.0
	+									+ +		2128475.88	8.00	0.0
	+	-								+ +		2128476.19	8.00	0.0
	-									+ +		2128476.33	8.00	0.0
	-	-		-								2128476.33	8.00	0.0
	+	-		-						+ +		2128476.46	8.00	0.0
	-	-		-						+ +		2128476.57	8.00	0.0
	-	-		-								2128476.87	8.00	0.0
	-	-		-						+ +		2128476.74	8.00	0.0
	+	-								+ +				0.0
	-									+ +		2128476.81 2128478.45	8.00	0.0
	-	-		-						+ +		2128478.45	8.00	0.0
							1			1 I.	U1J1241.00	2120400.41	0.00	I 0.0

Name	Sel.	M.	ID	Abso	rption	Z-Ext.	Cant	ilever	Н	leig	ght		Coordinat	es	
				left	right		horz.	vert.	Begin		End	х	У	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
												6131242.15	2128488.49	8.00	0.00
												6131242.28	2128488.50	8.00	0.00
												6131242.42	2128488.50	8.00	0.00
												6131245.56	2128488.12	8.00	0.00
												6131258.63	2128487.59	8.00	0.00
												6131261.58	2128492.04	8.00	0.00
												6131270.17	2128570.00	8.00	0.00
												6131270.18	2128570.01	8.00	0.00
												6131275.62	2128614.64	8.00	0.00
												6131278.14	2128645.26	8.00	0.00
												6131283.55	2128703.66	8.00	0.00
												6131283.56	2128703.69	8.00	0.00
												6131286.72	2128728.37	8.00	0.00
												6131286.73	2128728.41	8.00	0.00
												6131286.76	2128728.58	8.00	0.00
												6131286.83	2128728.74	8.00	0.00
												6131286.92	2128728.88	8.00	0.00
												6131287.04	2128729.01	8.00	0.00
												6131287.18	2128729.12	8.00	0.00
												6131287.33	2128729.20	8.00	0.00
												6131287.49	2128729.25	8.00	0.00
												6131287.67	2128729.28	8.00	0.00
												6131287.84	2128729.27	8.00	0.00
												6131287.85	2128729.27	8.00	0.00
												6131315.00	2128725.97	8.00	0.00
												6131330.32	2128724.58	8.00	0.00
												6131330.36	2128724.57	8.00	0.00
												6131330.38	2128724.57	8.00	0.00

# Building(s)

Name	Sel	M.	ID	RB	Residents	Absorption	Height	Т		Coordinat	65	
Nume			10	ND	Residents	Absorption	Begin		x	y	z	Ground
							(ft)	+	(ft)	(ft)	(ft)	(ft)
Verdugo Street 26762, 92675 San Juan Capistrano, (Regency Theatres)			building 00014	x	0		20.00	r		2128797.52	20.00	0.00
veraugo succe 20702, 52075 sun sum capisatino, (negency meanes)			bullang_00014	^	0		20.00	•	6130902.15		20.00	0.00
								+	6130893.56		20.00	0.00
								+		2128923.51	20.00	0.00
								+		2128935.43	20.00	0.00
								+		2128933.45	20.00	0.00
								+		2128933.80	20.00	0.00
								+	6130860.18		20.00	0.00
								+	6130860.37		20.00	0.00
								+		2128928.57	20.00	0.00
								+	6130855.67		20.00	0.00
								+		2128923.55	20.00	0.00
								+		2128925.26	20.00	0.00
								+		2128924.76	20.00	0.00
								+		2128927.13	20.00	0.00
										2128926.75	20.00	0.00
								+		2128928.71	20.00	0.00
									6130761.03		20.00	0.00
								+		2128902.08	20.00	0.00
Camino Capistrano 31786, 92675 San Juan Capistrano, (Swallow's Inn)			building_00024	x	0		20.00	r		2128950.54	20.00	0.00
										2128944.82	20.00	0.00
									6131137.47	2128884.03	20.00	0.00
									6131092.35	2128881.80	20.00	0.00
									6131089.10	2128880.57	20.00	0.00
			building_00026	х	0		20.00	r	6131092.63	2128812.51	20.00	0.00
									6131095.83	2128812.69	20.00	0.00
									6131169.10	2128817.33	20.00	0.00
									6131170.41	2128797.05	20.00	0.00
									6131161.53	2128796.48	20.00	0.00
									6131166.51	2128718.46	20.00	0.00
									6131099.77	2128714.23	20.00	0.00
									6131095.42	2128782.56	20.00	0.00
									6131110.28	2128783.49	20.00	0.00
									6131109.88	2128789.79	20.00	0.00
									6131094.17	2128788.80	20.00	0.00
Camino Capistrano 31781, 92675 San Juan Capistrano			building_00027	х	0		20.00	r	6130893.56	2128923.91	20.00	0.00
									6130908.21		20.00	0.00
									6130907.47	2128937.80	20.00	0.00
									6130980.54		20.00	0.00
										2128925.67	20.00	0.00
									6131005.78		20.00	0.00
								4	6130990.43		20.00	0.00
									6130987.48	2128884.75	20.00	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height			Coordinat	es	
							Begin		х	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
									6130985.48	2128885.65	20.00	0.00
									6130983.88	2128886.84	20.00	0.00
									6130982.59	2128888.28	20.00	0.00
									6130981.70	2128890.00	20.00	0.00
									6130981.44	2128891.64	20.00	0.00
									6130977.99	2128891.29	20.00	0.00
									6130977.94	2128889.58	20.00	0.00
									6130977.50	2128888.35	20.00	0.00
									6130976.39	2128887.49	20.00	0.00
									6130974.49	2128886.93	20.00	0.00
									6130971.74	2128886.57	20.00	0.00
									6130971.70	2128883.58	20.00	0.00
									6130972.30	2128878.52	20.00	0.00
									6130915.68	2128873.43	20.00	0.00
									6130918.77	2128840.23	20.00	0.00
									6130968.70	2128843.99	20.00	0.00
									6130969.34	2128837.58	20.00	0.00
									6130994.73	2128839.53	20.00	0.00
									6130993.63	2128854.76	20.00	0.00
									6131011.66	2128856.15	20.00	0.00
									6131014.92	2128815.35	20.00	0.00
									6130916.74		20.00	0.00
									6130902.15	2128806.29	20.00	0.0
			building_00048	х	0		20.00	r	6130920.96		20.00	0.0
									6130916.74	2128807.58	20.00	0.00
									6131014.92	2128815.35	20.00	0.0
								Ĩ	6131018.71		20.00	0.00
			building_00051	х	0		20.00	r	6131031.62	2128627.49	20.00	0.00
									6131036.41	2128627.79	20.00	0.00
									6131042.29	2128544.34	20.00	0.00
									6131002.71	2128541.60	20.00	0.00
									6131000.58	2128571.47	20.00	0.00
									6130996.80	2128571.19	20.00	0.00
									6130993.01	2128624.78	20.00	0.00
			building_00052	х	0		20.00	r	6130991.68	2128643.53	20.00	0.00
									6131030.31	2128646.21	20.00	0.00
									6131031.62	2128627.49	20.00	0.00
									6130993.01	2128624.78	20.00	0.00
			building_00053	х	0		20.00	r	6130971.10	2128670.78	20.00	0.00
									6130987.77	2128672.04	20.00	0.00
									6130986.03		20.00	0.00
									6131026.47	2128697.58	20.00	0.00
									6131030.23		20.00	0.00
									6131007.40		20.00	0.00
									6131006.99	2128652.57	20.00	0.00
									6130972.71	2128649.98	20.00	0.00
			building_00054	х	0		20.00	r	6130877.40	2128694.32	20.00	0.00
									6130950.16	2128699.88	20.00	0.00
	_									2128693.58	20.00	0.00
									6130969.24		20.00	0.00
									6130971.10		20.00	0.00
										2128649.98	20.00	0.00
	-	<u> </u>							6130973.00		20.00	0.00
	-								6130881.63		20.00	0.00
	-								6130880.72		20.00	0.00
	-								6130879.89		20.00	0.00
	-		building_00055	х	0		20.00	r	6130849.93		20.00	0.00
	-								6130855.21		20.00	0.00
	-								6130855.99		20.00	0.00
	-								6130879.89		20.00	0.00
	-								6130880.72		20.00	0.00
	-	-						_	6130864.09		20.00	0.00
	-	-						-	6130863.93		20.00	0.00
	-	-						-	6130851.36		20.00	0.00
	-		1 11 12 12 12 12					-	6130851.13		20.00	0.00
	-		building_00056	х	0		20.00	r	6130820.50		20.00	0.00
	-	-						-	6130851.36		20.00	0.00
	-							-	6130863.93		20.00	0.00
	-							-	6130864.09		20.00	0.00
	-	-						-	6130865.31		20.00	0.00
	-		1 11 12 12 12 12					-	6130821.88		20.00	0.00
	-		building_00057	х	0		20.00	r	6130817.12		20.00	0.00
	-	-						-	6130831.83		20.00	0.00
		1						1	6130848.04	2128694.35	20.00	0.00
								+				2.1
									6130849.93	2128669.91	20.00	0.00
										2128669.91 2128654.32	20.00 20.00 20.00	0.0

Name	Sel.	M.	ID	RB	Residents Ab	osorption	Height		Coordinat	es	
							Begin	х	У	Z	Ground
		⊢	L				(ft)	(ft)	(ft)	(ft)	(ft)
Camino Capistrano 31792, 92675 San Juan Capistrano		⊢	building_00025	х	0		13.42 r		2128881.80	13.42	0.00
		<u> </u>		_				6131137.47		13.42	0.00
		<u> </u>		_					2128885.04 2128844.83	13.42	0.00
	-			_					2128845.21	13.42 13.42	0.00
	-								2128843.21	13.42	0.00
									2128812.69	13.42	0.00
Camino Capistrano 31931, 92675 San Juan Capistrano			building_00040	x	0		13.68 r	6130850.48		13.68	0.00
			0_						2128059.06	13.68	0.00
								6131015.77	2128020.82	13.68	0.00
								6130850.18	2128022.08	13.68	0.00
El Camino Real 31806, 92675 San Juan Capistrano, (Blas Aguilar Adobe)		L	building_00032	х	0		13.88 r	6131358.93	2128838.71	13.88	0.00
		-							2128837.94	13.88	0.00
		⊢	ļ					6131365.31		13.88	0.00
		<u> </u>		_					2128832.41	13.88	0.00
	-	<u> </u>		_					2128793.68	13.88	0.00
								6131360.52	2128803.35	13.88	0.00
									2128807.17	13.88 13.88	0.00
	-								2128805.33	13.88	0.00
									2128823.13	13.88	0.00
Camino Capistrano 31761, 92675 San Juan Capistrano			building_00019	х	0		14.27 r		2129061.94	14.27	0.00
· · · · ·									2128985.15	14.27	0.00
								6130998.97	2128996.68	14.27	0.00
								6131002.69	2128996.99	14.27	0.00
								6130994.48	2129097.47	14.27	0.00
		<u> </u>							2129096.88	14.27	0.00
		<b> </b>							2129096.44	14.27	0.00
		<u> </u>		_					2129115.38	14.27	0.00
	-	<u> </u>		_					2129110.40	14.27	0.00
		<u> </u>		_					2129105.96 2129104.96	14.27 14.27	0.00
	-			_					2129104.98	14.27	0.00
	-								2129033.69	14.27	0.00
									2129063.32	14.27	0.00
Ortega Highway 26850, 92675 San Juan Capistrano, (Mission Promenade)			building_00007	x	0		15.03 r	6131328.11		15.03	0.00
			0_					6131323.85		15.03	0.00
								6131303.19	2129061.12	15.03	0.00
								6131301.51	2129043.24	15.03	0.00
		L						6131265.99	2129047.58	15.03	0.00
		<u> </u>							2129080.92	15.03	0.00
		<b> </b>							2129101.67	15.03	0.00
		<u> </u>		_					2129101.99	15.03	0.00
	-	<u> </u>		_					2129104.43	15.03	0.00
		<u> </u>		_					2129107.78 2129118.91	15.03 15.03	0.00
				_					2129118.91	15.03	0.00
									2129108.05	15.03	0.00
									2129108.09	15.03	0.00
			[]						2129017.27	15.03	0.00
		L							2129015.23	15.03	0.00
									2129005.74	15.03	0.00
		_							2128995.57	15.03	0.00
		⊢	ļ						2129008.98	15.03	0.00
		<u> </u>							2128996.52	15.03	0.00
		—							2129001.58	15.03	0.00
		_							2129008.92 2129006.31	15.03	0.00
									2129006.31 2129005.90	15.03 15.03	0.00
Del Obispo Street 31771, 92675 San Juan Capistrano, (Taco Bell)			building_00031	x	0		16.31 r		2129005.90	16.31	0.00
			_ unung_00031	^					2128868.20	16.31	0.00
									2128865.39	16.31	0.00
									2128866.32	16.31	0.00
									2128869.38	16.31	0.00
		_						6131732.58	2128870.08	16.31	0.00
									2128867.31	16.31	0.00
		⊢	ļ						2128867.70	16.31	0.00
		-							2128852.62	16.31	0.00
		<u> </u>							2128852.70	16.31	0.00
		—							2128835.99	16.31	0.00
Camino Canistrano 21071 02675 San Juan Canistrona (Union Bank)	-	_	building 00044				16 27		2128832.93 2127938.03	16.31 16.37	0.00
Camino Capistrano 31971, 92675 San Juan Capistrano, (Union Bank)			building_00041	х	0		16.37 r		2127938.03 2127936.19	16.37	0.00
			<u> </u>						2127936.19	16.37	0.00
L	-	_									0.00
	1 1	1						6130943.41	212/842.43	16.37	
Del Obispo Street 31791, 92675 San Juan Capistrano, (Marie Callender's)			building_00030	x	0		16.67 r	6130943.41 6131673.90	2127842.43 2128570.76	16.37 16.67	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Τ		Coordinat	es	
							Begin		х	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
								Ι	6131702.92	2128595.58	16.67	0.00
									6131795.14	2128604.49	16.67	0.00
								T	6131797.88	2128576.58	16.67	0.00
								T	6131803.40	2128577.09	16.67	0.00
								+		2128510.95	16.67	0.00
								+		2128508.01	16.67	0.00
								+		2128484.87	16.67	0.00
								+		2128478.94	16.67	0.00
								+		2128513.48	16.67	0.00
								-		2128513.48	16.67	0.00
								+		2128509.81	16.67	0.00
								+				
								+		2128513.07	16.67	0.00
								+		2128559.13	16.67	0.00
	_							+		2128560.88	16.67	0.00
Camino Capistrano 31866, 92675 San Juan Capistrano	_		building_00070	х	0		16.93	+		2128554.53	16.93	0.00
	_							+		2128495.53	16.93	0.00
								+		2128497.01	16.93	0.00
								+		2128470.75	16.93	0.00
								+		2128469.36	16.93	0.00
								+	6131180.22		16.93	0.00
								+	6131141.65		16.93	0.00
									6131138.05	2128526.34	16.93	0.00
								Ţ	6131133.17	2128526.04	16.93	0.00
								Γ	6131131.66	2128552.12	16.93	0.00
Del Obispo Street 31863, 92675 San Juan Capistrano			building_00065	х	0		17.65 I	T	6131670.16	2128258.39	17.65	0.00
								T	6131724.39	2128328.08	17.65	0.00
								-		2128294.56	17.65	0.00
								t	6131774.92	2128303.59	17.65	0.00
								+		2128278.11	17.65	0.00
								+		2128249.48	17.65	0.00
								+		2128252.15	17.65	0.00
								+	6131743.24		17.65	0.00
Camino Capistrano 31901, 92675 San Juan Capistrano			building_00039	х	0		17.72	+		2128248.50	17.72	0.00
Camino Capistrano 31301, 92673 San Juan Capistrano			bulluling_00033	^	0		17.72	+		2128248.30	17.72	0.00
								+			17.72	0.00
	_							-		2128187.94 2128188.09	17.72	0.00
	_							+				
	_							+		2128172.67	17.72	0.00
	_		L :L :: 000000					+		2128173.22	17.72	0.00
Del Obispo Street 31865, 92675 San Juan Capistrano	_		building_00008	х	0		20.08	+		2128116.30	20.08	0.00
								-		2128078.21	20.08	0.00
	_							-		2128073.70	20.08	0.00
								+		2128060.27	20.08	0.00
									6131631.14	2128051.28	20.08	0.00
									6131619.61	2128060.02	20.08	0.00
									6131617.68	2128057.54	20.08	0.00
									6131561.57	2128099.53	20.08	0.00
									6131575.00	2128115.87	20.08	0.00
								Τ	6131580.39	2128122.45	20.08	0.00
									6131583.32	2128120.59	20.08	0.00
								T	6131614.81	2128160.93	20.08	0.00
Verdugo Street 26701, 92675 San Juan Capistrano		1	building_00001	х	0		22.11	+		2128902.26	22.11	0.00
• • •										2128912.45	22.11	0.00
		1		-				_		2128911.74	22.11	0.00
		1		-				_		2128621.13	22.11	0.00
		1		-				_		2128630.99	22.11	0.00
		-						_		2128630.99	22.11	0.00
		-						+		2128648.91	22.11	0.00
		-						_		2128651.97	22.11	0.00
	_	-						-				0.00
		-						-		2128903.70	22.11	
		-						_		2128904.12	22.11	0.00
		-						-		2128903.32	22.11	0.00
		-								2128902.52	22.11	0.00
Ortega Highway 26801, 92675 San Juan Capistrano		-	building_00017	х	0		22.34 I	_		2129212.13	22.34	0.00
								+		2129229.76	22.34	
								-		2129228.34	22.34	0.00
								_		2129244.91	22.34	0.00
								-		2129243.83	22.34	0.00
								ſ	6131032.06	2129241.00	22.34	0.00
								T	6131041.59	2129240.18	22.34	0.00
								T	6131052.68	2129239.19	22.34	0.00
								-		2129242.93	22.34	0.00
		1						-		2129239.15	22.34	0.00
		1						-		2129236.50	22.34	0.00
		-		-						2129230.50	22.34	0.00
	1											5.00
								_				0.00
									6131115.22	2129197.44	22.34	0.00
									6131115.22 6131091.65			0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	x	у	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
									2129208.97	22.34	0.00
	_								2129211.77 2129212.89	22.34 22.34	0.00
									2129212.89	22.34	0.00
									2129214.52	22.34	0.00
Del Obispo Street 31877, 92675 San Juan Capistrano			building_00068	х	0		23.72 r		2127915.80	23.72	0.00
· · · · k · · · · · · · · · · · · · · ·			0_						2128001.65	23.72	0.00
									2127953.23	23.72	0.00
								6131479.60	2127918.14	23.72	0.00
								6131455.18	2127938.19	23.72	0.00
								6131436.97	2127915.18	23.72	0.00
								6131451.24	2127894.72	23.72	0.00
								6131517.59	2127940.08	23.72	0.00
								6131543.99	2127901.80	23.72	0.00
									2127832.13	23.72	0.00
Camino Capistrano 31892, 92675 San Juan Capistrano, (Ellies Table)			building_00059	х	0		24.31 r		2128325.06	24.31	0.00
									2128323.79	24.31	0.00
									2128322.34	24.31	0.00
	_								2128321.53 2128322.55	24.31 24.31	0.00
	-								2128322.55	24.31	0.00
	+			-					2128321.37	24.31	0.00
	+								2128283.71	24.31	0.00
	$\neg$			-					2128278.36	24.31	0.00
	+			-					2128281.17	24.31	0.00
									2128321.60	24.31	0.00
									2128321.28	24.31	0.00
Camino Capistrano 31972, 92675 San Juan Capistrano, (Chase)			building_00011	х	0		24.61 r		2127953.28	24.61	0.00
								6131128.20	2127835.12	24.61	0.00
								6131201.53	2127833.22	24.61	0.00
								6131204.59	2127951.37	24.61	0.00
Del Obispo Street 31873, 92675 San Juan Capistrano			building_00071	х	0		25.95 r		2127922.97	25.95	0.00
									2127976.83	25.95	0.00
									2128031.11	25.95	0.00
									2127977.24	25.95	0.00
Camino Capistrano 31871, 92675 San Juan Capistrano			building_00069	х	0		26.12 r		2128446.38	26.12	0.00
									2128331.77	26.12	0.00
	_								2128328.60	26.12	0.00
									2128351.91	26.12	0.00
	-								2128346.57 2128403.28	26.12 26.12	0.00
	_								2128403.72	26.12	0.00
									2128418.98	26.12	0.00
									2128415.75	26.12	0.00
									2128430.06	26.12	0.00
								6130900.04	2128432.25	26.12	0.00
								6130899.71		26.12	0.00
Camino Capistrano, 92675 San Juan Capistrano			building_00072	х	0		26.12 r	6130968.42	2128483.95	26.12	0.00
									2128485.56	26.12	0.00
								6130992.70	2128516.48	26.12	0.00
	[								2128517.55	26.12	0.00
									2128512.63	26.12	0.00
	$ \rightarrow $								2128514.87	26.12	
	-+								2128457.21	26.12	0.00
	-+								2128455.72	26.12	0.00
									2128449.20	26.12	0.00
	-+								2128449.03	26.12 26.12	0.00
	-+								2128447.43 2128446.14	26.12	0.00
	-+								2128446.14	26.12	
	-								2128448.38	26.12	0.00
	-+								2128464.87	26.12	0.00
	-								2128463.26	26.12	0.00
El Camino Real 31776, 92675 San Juan Capistrano, (Camino Real Playhouse)			building_00033	х	0		27.79 r		2128940.34	27.79	0.00
									2128909.59	27.79	0.00
									2128875.42	27.79	0.00
									2128876.77	27.79	0.00
								6131564.12	2128846.41	27.79	0.00
								6131420.29	2128869.57	27.79	0.00
								6131420.29 6131421.52	2128877.09	27.79	0.00
								6131420.29 6131421.52 6131382.76	2128877.09 2128883.33	27.79 27.79	0.00
								6131420.29 6131421.52 6131382.76 6131384.92	2128877.09 2128883.33 2128896.58	27.79 27.79 27.79	0.00 0.00 0.00
Camino Capistrano 31952, 92675 San Juan Capistrano			building_00073	x	0		73.82 r	6131420.29 6131421.52 6131382.76 6131384.92 6131196.23	2128877.09 2128883.33 2128896.58 2128223.51	27.79 27.79 27.79 73.82	0.00 0.00 0.00 0.00
Camino Capistrano 31952, 92675 San Juan Capistrano			building_00073	x	0		73.82 r	6131420.29 6131421.52 6131382.76 6131384.92 6131196.23 6131194.83	2128877.09 2128883.33 2128896.58 2128223.51 2128137.50	27.79 27.79 27.79 73.82 73.82	0.00 0.00 0.00 0.00 0.00
Camino Capistrano 31952, 92675 San Juan Capistrano			building_00073	x	0		73.82 r	6131420.29 6131421.52 6131382.76 6131384.92 6131196.23 6131194.83 6131175.74	2128877.09 2128883.33 2128896.58 2128223.51	27.79 27.79 27.79 73.82	0.00 0.00 0.00 0.00

Name	Sel.	М.	ID	RB	Residents	Absorption	Height	Coordinates				
							Begin	х	У	z	Ground	
							(ft)	(ft)	(ft)	(ft)	(ft)	
								6131180.74	2128096.82	73.82	0.00	
								6131205.00	2128096.42	73.82	0.00	
								6131204.79	2128085.18	73.82	0.00	
								6131216.01	2128084.99	73.82	0.00	
								6131216.18	2128095.43	73.82	0.00	
								6131242.54	2128094.97	73.82	0.00	
								6131243.06	2128126.26	73.82	0.00	
								6131282.11	2128125.62	73.82	0.00	
								6131280.84	2128050.16	73.82	0.00	
								6131198.94	2128051.52	73.82	0.00	
								6131198.70	2128036.24	73.82	0.00	
								6131158.40	2128036.93	73.82	0.00	
								6131158.44	2128039.95	73.82	0.00	
								6131113.64	2128040.71	73.82	0.00	
								6131114.97	2128119.11	73.82	0.00	
								6131135.91	2128118.79	73.82	0.00	
								6131137.68	2128224.48	73.82	0.00	