Appendices

Appendix N Noise Technical Report

Appendices

This page intentionally left blank.



Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC)

NOISE AND VIBRATION ANALYSIS CITY OF YUCAIPA

PREPARED BY:

Bill Lawson, PE, INCE blawson@urbanxroads.com (949) 336-5979

SEPTEMBER 7, 2023

15411-04 NA



TABLE OF CONTENTS

ТА	BLE O	F CONTENTS	. 111					
AF	APPENDICESIV							
LIS	IST OF EXHIBITSIV							
LIS	ST OF T	ABLES	V					
LIS	ST OF A	ABBREVIATED TERMS	.VI					
EX	ECUTI		1					
1	INT	RODUCTION	3					
	1.1	Site Location	3					
	1.2	Development Description	3					
	1.3	FCSP DEIR	6					
2	FU	NDAMENTALS	7					
	2.1	Range of Noise	7					
	2.2	Noise Descriptors	8					
	2.3	Sound Propagation	8					
	2.4	Noise Control	9					
	2.5	Noise Barrier Attenuation	9					
	2.6	Land Use Compatibility With Noise	. 10					
	2.7	Community Response to Noise	. 10					
	2.8	Vibration	. 11					
3	REG	GULATORY SETTING	13					
	3.1	State of California Noise Requirements	. 13					
	3.2	City of Yucaipa Public Safety Element	. 13					
	3.3	Operational Noise Standards	. 14					
	3.4	Construction Noise Standards	. 16					
	3.5	Construction Vibration Standards	. 16					
4	SIG	NIFICANCE CRITERIA	17					
	4.1	Noise Level Increases (Threshold A)	. 17					
	4.2	Vibration (Threshold B)	. 18					
	4.3	CEQA Guidelines Not Further Analyzed (Threshold C)	. 19					
	4.4	Significance Criteria Summary	. 19					
5	EXI	STING NOISE LEVEL MEASUREMENTS	21					
	5.1	Measurement Procedure and Criteria	. 21					
	5.2	Noise Measurement Locations	. 21					
	5.3	Noise Measurement Results	. 22					
6	TR	AFFIC NOISE METHODS AND PROCEDURES	25					
-	61	EHWA Traffic Noise Prediction Model	25					
	6.2	Off-Site Traffic Noise Prediction Model Inputs	. 25					
7	OF	F-SITE TRAFFIC NOISE ANALYSIS	29					
	71	Traffic Noise Contours	29					
	7.2	2050 Without Interchange ECSP Project Traffic Noise Level Increases	. 29					
	7.3	2050 With Interchange FCSP Project Traffic Noise Level Increases	. 36					
	7.4	OY Without Interchange POCC Project Traffic Noise Level Increases	. 36					

iii N-3

	7.5 7.6 7.7 7.8	OY With Interchange POCC Project Traffic Noise Level Increases	36 37 37 37 37
8 9	SEN	ISITIVE RECEIVER LOCATIONS	39 43
	9.1	FCSP Operational Noise Levels	43
	9.2	POCC Project Operational Noise Sources	43
	9.3	Reference Noise Levels	47
	9.4	CadnaA Noise Prediction Model	47
	9.5	POCC Project Operational Noise Levels	47
	9.6	POCC Project Operational Noise Level Compliance	48
	9.7	POCC Project Operational Noise Level Increases	49
10	CO	NSTRUCTION IMPACTS	51
	10.1	FCSP Construction Noise Levels	51
	10.2	POCC Project Construction Noise Sources	51
	10.3	POCC Construction Noise Levels	53
	10.4	Construction Reference Noise Levels	53
	10.5	Construction Noise Analysis	53
	10.6	POCC Project Site Construction Noise Level Compliance	54
	10.7	Nighttime Concrete Pour Noise Analysis	55
	10.8	Construction Vibration Analysis	55
11	REF	ERENCES	59
12	CEF		61

APPENDICES

APPENDIX 3.1: CITY OF YUCAIPA MUNICIPAL CODE

APPENDIX 5.1: STUDY AREA PHOTOS

APPENDIX 5.2: NOISE MEASUREMENT WORKSHEETS

APPENDIX 7.1: OFF-SITE TRAFFIC NOISE CALCULATIONS

APPENDIX 9.1: OPERATIONAL NOISE CALCULATIONS

APPENDIX 10.1: CONSTRUCTION NOISE CALCULATIONS

APPENDIX 10.2: NIGHTTIME CONCRETE POUR NOISE CALCULATIONS

LIST OF EXHIBITS

EXHIBIT 1-A:	FCSP & POCC LAND USE PLAN	. 4
EXHIBIT 1-B:	POCC PROJECT SITE PLAN	. 5
EXHIBIT 2-A:	TYPICAL NOISE LEVELS	. 7
EXHIBIT 2-B:	NOISE LEVEL INCREASE PERCEPTION	11
EXHIBIT 2-C:	TYPICAL LEVELS OF GROUND-BORNE VIBRATION	12
EXHIBIT 3-A:	LAND USE NOISE COMPATIBILITY CRITERIA	15
EXHIBIT 5-A:	NOISE MEASUREMENT LOCATIONS	23



EXHIBIT 8-A: RECEIVER LOCATIONS	. 40
EXHIBIT 9-A: POCC PROJECT OPERATIONAL NOISE SOURCE LOCATIONS	. 44
EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS	. 52
EXHIBIT 10-B: POCC NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS	. 56

LIST OF TABLES

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS	1
TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY	19
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS	22
TABLE 6-1: OFF-SITE ROADWAY PARAMETERS	26
TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES	27
TABLE 6-3: TIME OF DAY VEHICLE SPLITS	28
TABLE 6-4: WITHOUT PROJECT VEHICLE MIX	28
TABLE 7-1: 2050 WITHOUT INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES	30
TABLE 7-2: 2050 WITH INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES	31
TABLE 7-3: OY WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES	32
TABLE 7-4: OY WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES	33
TABLE 7-5: 2050 WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES	34
TABLE 7-6: 2050 WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES	35
TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS	45
TABLE 9-2: DAYTIME POCC PROJECT OPERATIONAL NOISE LEVELS	48
TABLE 9-3: NIGHTTIME POCC PROJECT OPERATIONAL NOISE LEVELS	48
TABLE 9-4: POCC PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE	49
TABLE 9-5: DAYTIME POCC PROJECT OPERATIONAL NOISE LEVEL INCREASES	50
TABLE 9-6: NIGHTTIME POCC PROJECT OPERATIONAL NOISE LEVEL INCREASES	50
TABLE 10-1: PCONSTRUCTION REFERENCE NOISE LEVELS	53
TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY	54
TABLE 10-3: POCC PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE	54
TABLE 10-4: POCC NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE	57
TABLE 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT	57
TABLE 10-6: POCC PROJECT CONSTRUCTION VIBRATION LEVELS	58

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				
DEIR	Draft Environmental Impact Reports				
EPA	Environmental Protection Agency				
FCSP	Freeway Corridor Specific Plan				
FHWA	Federal Highway Administration				
FTA	Federal Transit Administration				
INCE	Institute of Noise Control Engineering				
L _{eq}	Equivalent continuous (average) sound level				
L _{max}	Maximum level measured over the time interval				
mph	Miles per hour				
POCC	Pacific Oak Commerce Center				
PPV	Peak Particle Velocity				
Project	Freeway Corridor Specific Plan (FCSP) & Pacific Oak				
	Commerce Center (POCC)				
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, if any, for the proposed Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC) development in the City of Yucaipa. The development would amend the FCSP and include the construction of two warehouse buildings and a truck trailer lot. This study has been prepared consistent with applicable City of Yucaipa noise standards, and significance criteria based on guidance provided by 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.

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

This page intentionally left blank



1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC). This noise study briefly describes the proposed program-level impacts associated with the FSCP and the project-level impacts associated with the POCC. The noise study 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 long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed development site is bisected by Interstate 10 (I-10) and abuts Riverside County to the south. Regional access to the proposed site is provided by I-10 from the east and west. Local access is provided by Live Oak Canyon Road, County Line Road, Oak Glen Road, Wildwood Canyon Road, and Calimesa Boulevard. The proposed FSCP and focused POCC Project is in the City of Yucaipa. The nearest noise sensitive residential receivers are located approximately 1,048 feet north of the POCC Project site across the I-10 Freeway.

1.2 DEVELOPMENT DESCRIPTION

The FCSP update shown on Exhibit 1-A, would result in an increase of 25 dwelling units, a reduction of approximately 2.28 million square feet of Regional Commercial (RC), an increase of approximately 2.79 million square feet of Business Park (BP) from the previously approved FSCP. The update to the FCSP is intended to guide development within the 1,242-acre plan area. The FCSP update includes 2,472 residential dwelling units, approximately 1.1 million square feet of Regional Commercial, and 4 million square feet of Business Park uses. In addition, approximately 707 acres will be dedicated to Public Facilities, Agricultural Tourism, Open Space, and additional right-of-way.

The proposed POCC Project shown on Exhibit 1-B is within FCSP planning areas BP 2 and BP 3 and includes the development of two warehouse buildings and a truck trailer parking lot with 322 parking spaces. Building 1 would have 1,032,500 square feet of warehouse and 20,000 square feet of office use, for a total of 1,052,500 square feet of building space. Building 2 would have 981,500 square feet of warehouse and 20,000 square feet of office use, for a total of 1,001,500 square feet of building space. Exhibit 1-B illustrates a conceptual site plan of the proposed Pacific Oak Commerce Center. The on-site POCC Project-related noise sources are expected to include: cold storage loading dock activity, tractor trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.





EXHIBIT 1-A: FCSP & POCC LAND USE PLAN

LEGEND:

Freeway Corridor Specific Plan (FCSP) Boundary

N

URBAN CROSSROADS

EXHIBIT 1-B: POCC PROJECT SITE PLAN





1.3 FCSP DEIR

On August 2008, the City of Yucaipa adopted the Revised Draft Environmental Impact Report (DEIR) for the Yucaipa Freeway Corridor Specific Plan. (2) Appendix F of the DEIR included the Environmental Noise Study for the FCSP prepared by Wieland Associates, Inc. (3) The FCSP Noise Environmental Noise Study outlined the following potential environmental noise impacts and mitigation measures to reduce or avoid impacts.

1.3.1 OFF-SITE TRAFFIC NOISE

The FCSP DEIR determined that implementation of the revised proposed Specific Plan would result in the exposure of persons to transportation-related noise levels in excess of standards established in the City of Yucaipa's General Plan. This *significant* impact would occur at existing off-site noise-sensitive properties adjacent to study area roadway segments. According to the DEIR traffic associated with implementation of the revised proposed Specific Plan would increase the Ldn above the threshold of significance and/or increase the ambient traffic noise level by a substantial amount at existing off-site noise-sensitive receptors. However, the DEIR found that it is not considered practical or feasible to mitigate these impacts, as it would require making alterations to private off-site properties over which applicants of future development projects would have no control.

1.3.2 OPERATIONAL NOISE

For the operational noise impacts from the Project, the DEIR found that implementation of the FCSP may result in exposure of persons to noise levels in excess of standards established in the City of Yucaipa's Municipal Code and Development Code. This potentially significant impact may occur at existing off-site noise-sensitive properties in the near vicinity of the proposed commercial land uses. Additionally, the FCSP DEIR would also result in a substantial permanent increase in ambient noise levels in the vicinity of the Specific Plan site above levels existing without the revised proposed Specific Plan as a result of activities on-site. Therefore, the permanent noise level increase would have a *significant* impact.

1.3.3 CONSTRUCTION NOISE

The FCSP DEIR determined that the Municipal Code exempts temporary construction, repair, and demolition activities from the noise level limits, providing the activity occurs between 7:00 a.m. and 7:00 p.m. on Monday through Saturday. There will be no construction activities on Sundays or legal holidays. As a result, the DEIR found that the impact of construction noise would be *less than significant*.

1.3.4 CONSTRUCTION VIBRATION

The primary vibratory source during the construction of future development projects on the Specific Plan site would be large bulldozers. However, the impact would be considered *less than significant* because of the short duration of the activity, and because the vibration levels would be well below the threshold of building damage.



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	VERY NOISY		
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		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. (4) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA





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

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in 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 (typically one hour) and is commonly used to describe the "average" noise levels within the environment.

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

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



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

2.3.3 Atmospheric Effects

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 Noise Barrier Attenuation

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





2.6 LAND USE COMPATIBILITY WITH NOISE

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

2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)







2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (9), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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





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

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

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

3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

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

3.2 CITY OF YUCAIPA PUBLIC SAFETY ELEMENT

The City of Yucaipa has adopted a Noise Hazards Chapter in the Public Safety Element of the General Plan to protect residents and visitors from unacceptable noise and vibration. (11) The state and federal government regulate sources of noise from transportation sources or the workplace. Therefore, the City of Yucaipa works to control noise through the following policies:

- Policy S-6.1 Noise Assessment: Assess the compatibility of proposed land uses with the noise environment when preparing, revising, or reviewing applications for development projects or land use changes.
- Policy S-6.2 Acoustical Studies: Require acoustical studies for proposed projects within areas that exceed 60 dBA; discourage siting of new noise-sensitive uses in areas exceeding 65 dBA without appropriate mitigation.
- *Policy S-6.3 Noise Insulation and Vibration Standards:* Require new projects to comply with noise insulation and vibration reduction standards in local, regional, state, and federal regulations, as applicable.
- Policy S-6.4 Noise Nuisance Standards: Regulate the control of residential noise nuisances—such as parties, barking dogs, other animals, and limited agricultural operations—through the City's municipal code.
- Policy S-6.5 Development Patterns: Locate new development in areas where noise levels are appropriate for the use. Limit development of noise-producing uses adjacent to noisesensitive receptors and require that noise-producing land uses have adequate mitigation.



- Policy S-6.6 Land Use-Noise Compatibility: Require mitigation of exterior and interior noise to the levels in Table S-1. Encourage the use of building design, site planning, landscaping, and other features to reduce noise levels.
- Policy S-6.7 Vibration Reduction: Minimize vibration impacts from construction sites, roadways, and other sources with a combination of setbacks, structural design features, and operational regulations as appropriate.
- Policy S-6.8 Street Improvements to Reduce Noise: Employ noise mitigation practices and materials when designing or improving streets; emphasize use of natural buffers or setbacks between roads and noise-sensitive areas.

3.2.1 LAND USE COMPATIBILITY

The City of Yucaipa has adopted a Public Safety Element of the General Plan to protect residents and visitors from unacceptable noise and vibration. Potential noise sources are identified in the Public Safety Element and implementation strategies established to avoid or mitigate noise impacts from planned development. (11). The Noise Element typically provides the standards for land use compatibility for community noise exposure. However, the City of Yucaipa General Plan does not include specific transportation-related noise standards. While the General Plan provides background and noise fundamentals, it does not identify criteria to assess the impacts associated with transportation-related noise impacts. Therefore, for this analysis, the transportation noise criteria are derived from standards contained in the California Office of Planning and Research (OPR) *General Plan Guidelines*. (10) The OPR land use/noise compatibility standards are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources. The OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines, Appendix D: Noise Element Guidelines*, are shown on Exhibit 3-A.

When unmitigated exterior noise levels approaching 70 dBA CNEL, school land use is considered *normally acceptable*. With exterior noise levels ranging from 60 to 70 dBA CNEL, schools land uses are considered *conditionally acceptable*, and with exterior noise levels greater than 70 dBA CNEL, they are considered *normally unacceptable*. For *normally unacceptable* land use, *new construction or development should generally be discouraged*. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. (10)

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Project, stationary-source (operational) noise such as the expected cold storage loading dock activity, tractor trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan. For noise-sensitive residential property, the City of Yucaipa Municipal Code, Chapter 87.0905[b][1], identifies exterior noise levels standards of 55 dBA L_{eq} for the daytime hours (7:00 a.m. to 10:00 p.m.) and 55 dBA L_{eq} during the nighttime (10:00 p.m. to 7:00 a.m.) hours. For professional services the city identifies

a 55 dBA L_{eq} exterior noise standard, 60 dBA L_{eq} for other commercial and 70 dBA L_{eq} for industrial land uses. The City of Yucaipa Municipal Code Noise Standards are included in Appendix 3.1.

Land Use Category		Con	nmunity No L _{dn} or Cl				
	55	60	65	70	75	80	INTERPRETATION:
Residential - Low Density Single Family, Duplex, Mobile Homes		l					Normally Acceptable
Residential - Multi. Family		I.					based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation
Transient Lodging - Motels, Hotels							requirements.
Schools, Libraries, Churches, Hospitals, Nursing Homes							Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction
Auditoriums, Concert Halls, Amphitheaters							noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning
Sports Arena, Outdoor Spectator Sports							will normally suffice.
Playgrounds, Neighborhood Parks				1			Normally Unacceptable New construction or development should generally be discouraged. If new construction or development does
Golf Courses, Riding Stables, Water Recreation, Cemeteries							proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Office Buildings, Business Commercial and Professional							Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture							should generally not be undertaken.

EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA

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



3.4 CONSTRUCTION NOISE STANDARDS

The City of Yucaipa has set restrictions to control noise impacts associated with the construction of the proposed Project. According to Chapter 87.0905[e][1][c] of the City's Municipal Code exempts: *Temporary Construction, repair, or demolition activities between 7 a.m. and 7 p.m., except Sundays and Federal holidays.* (12) Project construction noise levels are, therefore, considered exempt from municipal regulation if activities occur within the hours specified in the City of Yucaipa Municipal Code, Chapter 87.0905 of 7:00 a.m. to 7:00 p.m., except Sundays and Federal holidays. However, neither the City of Yucaipa General Plan or Municipal Codes establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *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 L_{eq} as a reasonable threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA L_{eq} . (9 p. 179)

3.5 CONSTRUCTION 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. (9)

Chapter 87.0910[c][1][B] of the City's Municipal Code exempts *temporary construction, maintenance, or demolition activities between 7am and 7pm, except Sundays and Federal holidays.* However, to analyze vibration impacts originating from the operation and construction of the Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC), vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code. Under the City of Yucaipa's Municipal Code, Chapter 87.0910[a] no ground vibration is allowed which can be felt without the aid of instruments at or beyond the lot line, or which produces a particle velocity greater than or equal to two-tenths (0.2) inch per second measured at or beyond the lot line. (11) (13)

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 sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders a noise impact significant*. (14) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

Sensitive receivers are areas where humans are participating in activities that may be subject to the stress of significant interference from noise and often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Other receivers include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by the City of Yucaipa land use compatibility standards, as discussed below.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (15) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations 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_{eq}).



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. (14) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, 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 increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance at noise sensitive receiver locations are consistent with guidance provided by both the Federal Highway Administration (6 p. 9) and Caltrans (16 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The OPR land use/noise compatibility standards were used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land use is 70 dBA CNEL. To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the OPR land use/noise compatibility standards *normally acceptable* 70 dBA CNEL exterior noise level criteria.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC), vibration-generating activities are appropriately evaluated using the peak particle velocity (PPV) threshold of 0.2 inches per second as outlined in the City of Yucaipa Municipal Code, Chapter 87.0910[a]. (11) (13)



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 San Bernardino International Airport (SBD) located roughly 9 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.

Analusia	Receiving	Condition(a)	Significance Criteria			
Analysis	Land Use	Condition(s)	Daytime	Nighttime		
		If ambient is < 60 dBA CNEL ≥ 5 dBA CNEL Project incl				
	Noise- Sensitive ¹	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase			
Off-Site	Schisterve	If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	Project increase		
Traffic	Non-Noise- Sensitive ²	If ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase			
		Exterior Noise Level Standards ³	55 dBA L _{eq}			
Operational	Noise-	If ambient is < 60 dBA L_{eq}^1	≥ 5 dBA L _{eq} Project increase			
Operational	Sensitive	If ambient is 60 - 65 dBA L_{eq}^1	≥ 3 dBA L _{eq} Project increase			
		If ambient is > 65 dBA L_{eq}^1	≥ 1.5 dBA L _{eq} Project increase			
Construction	Noise-	Noise Level Threshold ⁴	80 dBA L _{eq}	70 dBA L _{eq}		
Construction	Sensitive	Vibration Level Threshold ⁵	0.2 PPV	(in/sec)		

	SIGNIEICANCE	CRITERIA	SUMMARY
IADLE 4-1:	SIGNIFICANCE	CRITERIA	SUIVIIVIART

¹ FICON, 1992.

² OPR land use/noise compatibility standards.

³ City of Yucaipa Municipal Code, Chapter 87.0905[b][1] (Appendix 3.1)

⁴ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

⁵ City of Yucaipa Municipal Code, Chapter 87.0910[a] (Appendix 3.1)

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.



This page intentionally left blank



5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at seven 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 study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, April 6th, 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 sensitive receiver locations identified in Section 6 as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (4) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (9)

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. (9) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels



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

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the equivalent or the energy average hourly sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.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 ¹	Description	Energy Noise (dBA	CNEL	
		Daytime	Nighttime	
L1	Located north of the site near the residence at 13001 11th St.	56.8	57.2	63.7
L2	Located northeast of the site near the residence at 33462 Cienaga Dr.	57.6	61.0	67.4
L3	Located east of the site near the Hillcrest Mobile Estates at 33600 Calimesa Blvd.	79.7	78.7	85.5
L4	Located southeast of the site near the residence at 888 W County Lane Rd.	53.5	52.0	58.7
L5	Located southeast of the site near the residence at 888 W Ave L	52.0	47.6	55.1
L6	Located southwest of the site near the entrance to the residence at 31900 Live Oak Canyon Road.	67.6	64.9	72.0
L7	Located northwest of the site near the residence at 32054 Florida St.	57.3	62.1	68.3

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

¹ See Exhibit 5-A for the noise level measurement locations.

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

"Daytime" = 7:00 a.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, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.





EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

This page intentionally left blank



6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with City of Yucaipa *Noise Compatibility Guidelines* (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) consistent with FCSP DEIR. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (19) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (20)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the FCSP and POCC Project's off-site transportation noise impacts without and with the Wildwood Canyon Road Interchange. Table 6-1 identifies the 12 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 Yucaipa General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on the *Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC) Traffic Impact Analysis*, prepared by Translutions, Inc. for the following traffic scenarios (21).

- 1. Existing (E)
- 2. 2050 without Interchange without FCSP Project
- 3. 2050 without Interchange with FCSP Project
- 4. 2050 with Interchange without FCSP Project
- 5. 2050 with Interchange with FCSP Project
- 6. Opening Year without Interchange without POCC Project
- 7. Opening Year without Interchange with POCC Project
- 8. Opening Year with Interchange without POCC Project
- 9. Opening Year with Interchange with POCC Project
- 10. 2050 without Interchange without POCC Project



- 11. 2050 without Interchange with POCC Project
- 12. 2050 with Interchange without POCC Project
- 13. 2050 with Interchange with POCC Project

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with POCC Project ADT traffic volumes from the traffic analysis. The Project is anticipated to generate a net total of 4,355 two-way trips per day (actual vehicles) that includes 1,557 truck trips.

ID	Roadway	Segment	Classification ¹	Receiving Land Use ²	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	16th St.	s/o Avenue E	Collector	Sensitive	33'	40
2	16th St.	s/o Avenue E	Collector	Sensitive	33'	40
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Secondary	Non-Sensitive	44'	45
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Major	Non-Sensitive	52'	45
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Major	Non-Sensitive	52'	45
6	Oak Glen Rd.	s/o Calimesa Blvd.	Major	Non-Sensitive	52'	45
7	Oak Glen Rd.	n/o Calimesa Blvd.	Major	Sensitive	52'	45
8	Colorado St.	e/o 8th St.	Collector	Sensitive	33'	40
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Secondary	Sensitive	44'	45
10	County Line Rd.	w/o I-10 EB Ramps	Secondary	Sensitive	44'	45
11	County Line Rd.	e/o I-10 WB Ramps	Secondary	Non-Sensitive	44'	45
12	County Line Rd.	e/o Calimesa Blvd.	Secondary	Non-Sensitive	44'	45

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

¹ Freeway Corridor Specific Plan Update & Pacific Oak Commerce Center Traffic Impact Analysis, Translutions, Inc.

 $^{\rm 2}$ Based on a review of existing aerial imagery.

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

To quantify the off-site noise levels, the truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios.



	Roadway	Segment	Average Daily Traffic Volumes ¹												
ID				FCSP 2050		FCSP 2050 Int		POCC OY		POCC OY Int		POCC 2050		POCC 2050 Int	
			Existing	Without FCSP Project	With FCSP Project	Without FCSP Project	With FCSP Project	Without POCC Project	With POCC Project	Without POCC Project	With POCC Project	Without POCC Project	With POCC Project	Without POCC Project	With POCC Project
1	16th St.	s/o Avenue E	2,820	4,581	7,471	4,271	6,767	2,955	3,256	2,955	3,045	5,536	5,837	6,066	6,156
2	16th St.	s/o Avenue E	1,255	2,198	3,832	2,062	3,492	1,355	1,692	1,355	1,445	2,817	3,154	3,088	3,178
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	6,170	9,334	37,656	7,859	33,263	6,555	8,637	6,020	6,767	20,549	22,630	22,649	23,396
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	7,285	11,384	36,706	10,089	32,901	7,945	9,855	7,452	8,029	21,434	23,343	23,079	23,655
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	14,220	19,311	41,368	17,992	39,022	15,635	17,131	14,867	15,171	28,257	29,752	29,621	29,925
6	Oak Glen Rd.	s/o Calimesa Blvd.	25,215	31,142	50,232	30,424	58,990	27,540	28,270	25,876	26,061	43,389	44,119	39,772	39,957
7	Oak Glen Rd.	n/o Calimesa Blvd.	16,380	19,456	29,872	18,740	27,542	18,510	18,811	17,613	17,631	22,694	22,995	24,112	24,130
8	Colorado St.	e/o 8th St.	1,790	3,305	3,657	3,614	4,056	1,875	1,909	1,875	1,885	3,814	3,848	3,495	3,505
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	6,520	7,653	13,271	11,288	26,328	7,000	7,764	10,037	11,320	18,198	18,962	10,208	11,491
10	County Line Rd.	w/o I-10 EB Ramps	2,755	5,749	18,967	4,791	9,183	2,860	4,862	2,860	3,262	7,566	9,568	12,494	12,896
11	County Line Rd.	e/o I-10 WB Ramps	12,705	18,764	26,250	17,478	19,296	14,950	15,282	14,950	14,950	18,738	19,070	22,644	22,644
12	County Line Rd.	e/o Calimesa Blvd.	9,685	13,157	16,675	13,090	16,042	11,690	11,908	11,690	11,690	14,660	14,878	14,927	14,927

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

¹ Freeway Corridor Specific Plan Update & Pacific Oak Commerce Center Traffic Impact Analysis, Translutions, Inc.



		Total of Time of		
venicie Type	Daytime	Evening	Nighttime	Day Splits
Autos	70.60%	13.61%	15.79%	100.00%
Medium Trucks	80.34%	4.75%	14.92%	100.00%
Heavy Trucks	75.90%	8.21%	15.90%	100.00%

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

¹ Based on the 24-hour directional vehicle classification count collected on Cherry Valley Boulevard north of Roberts Road (Oak Valley North Specific Plan, Urban Crossroads, Inc.)

"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification		Total			
Classification	Autos	Autos Medium Trucks		TOLAI	
All Segments	97.53%	1.49%	0.98%	100.00%	

¹ Based on the 24-hour directional vehicle classification count collected on Cherry Valley Boulevard north of Roberts Road (Oak Valley North Specific Plan, Urban Crossroads, Inc.)


7 OFF-SITE TRAFFIC NOISE ANALYSIS

As described in Section 4.1, the off-site traffic noise impacts are evaluated based on noise level increases resulting from the Project. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *the Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC) Traffic Impact Analysis* prepared by Translutions, Inc. (21)

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-6 present a summary of the off-site traffic noise level increases for each traffic scenario. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

7.2 2050 WITHOUT INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-1 presents the 2050 Without Interchange CNEL noise levels. The 2050 Without Interchange Without FCSP Project exterior noise levels range from 62.6 to 73.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The 2050 Without Interchange with FCSP Project conditions will range from 64.8 to 75.1 dBA CNEL. Table 7-1 shows that the FCSP Project off-site traffic noise level increases range from 0.5 to 6.1 dBA CNEL. This incremental noise level increase would exceed the applicable significance thresholds under the with FCSP Project scenario for the following five study area roadway segments:

- 16th Street south of Avenue E (Segment #1)
- Live Oak Canyon Road north of I-10 Westbound Ramps (Segment #5)
- Oak Glen Road north of Calimesa Boulevard (Segment #7)
- Wildwood Canyon Road north of Calimesa Boulevard (Segment #9)
- County Line Road w/o I-10 EB Ramps (Segment #10)

Therefore, the FCSP Project's contribution to the 2050 off-site traffic noise levels would result in a *potentially significant* off-site traffic noise impact. This is consistent with the significant findings outlined in the FCSP DEIR.





	Road	Segment	Receiving	CN La	EL at Receiv nd Use (dB	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No FCSP Project	With FCSP Project	FCSP Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	65.8	67.9	2.1	1.5	Yes
2	16th St.	s/o Avenue E	Sensitive	62.6	65.0	2.4	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	68.7	74.8	6.1	n/a	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	68.7	73.8	5.1	n/a	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	71.0	74.3	3.3	3.0	Yes
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	73.0	75.1	2.1	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	71.0	72.9	1.9	1.5	Yes
8	Colorado St.	e/o 8th St.	Sensitive	64.3	64.8	0.5	3.0	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	67.8	70.2	2.4	1.5	Yes
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	66.6	71.8	5.2	1.5	Yes
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	71.7	73.2	1.5	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	70.2	71.2	1.0	3.0	No

TABLE 7-1: 2050 WITHOUT INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the FCSP Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CN La	EL at Receiv nd Use (dB	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No FCSP Project	With FCSP Project	FCSP Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	65.4	67.4	2.0	1.5	Yes
2	16th St.	s/o Avenue E	Sensitive	62.3	64.6	2.3	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	68.0	74.2	6.2	n/a	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	68.2	73.3	5.1	n/a	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	70.7	74.0	3.3	3.0	Yes
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	72.9	75.8	2.9	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	70.8	72.5	1.7	1.5	Yes
8	Colorado St.	e/o 8th St.	Sensitive	64.7	65.2	0.5	3.0	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	69.5	73.2	3.7	1.5	Yes
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	65.8	68.6	2.8	1.5	Yes
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	71.4	71.9	0.5	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	70.2	71.1	0.9	3.0	No

TABLE 7-2: 2050 WITH INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the FCSP Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CNI La	EL at Receiv nd Use (dB	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No POCC Project	With POCC Project	POCC Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	63.8	64.1	0.3	3.0	No
2	16th St.	s/o Avenue E	Sensitive	60.5	61.1	0.6	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	67.2	72.9	5.7	n/a	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	67.1	72.2	5.1	n/a	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	70.1	72.1	2.0	3.0	No
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	72.5	73.7	1.2	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	70.8	70.8	0.0	1.5	No
8	Colorado St.	e/o 8th St.	Sensitive	61.9	61.9	0.0	3.0	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	67.5	72.5	5.0	1.5	Yes
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	63.6	72.1	8.5	3.0	Yes
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	70.8	70.8	0.0	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	69.7	69.7	0.0	n/a	No

TABLE 7-3: OY WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the POCC Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CNI La	EL at Receiv nd Use (dB/	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No POCC Project	With POCC Project	POCC Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	63.8	63.9	0.1	3.0	No
2	16th St.	s/o Avenue E	Sensitive	60.5	60.6	0.1	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	66.8	70.1	3.3	n/a	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	66.8	69.6	2.8	n/a	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	69.8	70.7	0.9	n/a	No
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	72.2	72.3	0.1	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	70.6	70.6	0.0	1.5	No
8	Colorado St.	e/o 8th St.	Sensitive	61.9	61.9	0.0	3.0	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	69.0	69.4	0.4	1.5	No
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	63.6	64.0	0.4	3.0	No
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	70.8	70.8	0.0	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	69.7	69.7	0.0	n/a	No

TABLE 7-4: OY WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the POCC Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CNI La	EL at Receiv nd Use (dB	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No POCC Project	With POCC Project	POCC Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	66.6	66.7	0.1	1.5	No
2	16th St.	s/o Avenue E	Sensitive	63.6	64.0	0.4	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	72.1	74.8	2.7	3.0	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	71.4	74.0	2.6	3.0	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	72.6	73.9	1.3	3.0	No
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	74.5	75.3	0.8	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	71.7	71.7	0.0	1.5	No
8	Colorado St.	e/o 8th St.	Sensitive	65.0	65.0	0.0	1.5	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	71.6	74.3	2.7	1.5	Yes
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	67.8	73.0	5.2	1.5	Yes
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	71.7	71.8	0.1	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	70.7	70.7	0.0	3.0	No

TABLE 7-5: 2050 WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the POCC Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CN La	EL at Receiv nd Use (dB/	Incremental Noise Level Increase Threshold ²		
ID			Land Use ¹	No POCC Project	With POCC Project	POCC Project Addition	Limit	Exceeded?
1	16th St.	s/o Avenue E	Sensitive	67.0	67.0	0.0	1.5	No
2	16th St.	s/o Avenue E	Sensitive	64.0	64.1	0.1	3.0	No
3	Live Oak Cyn. Rd.	s/o Outer Highway 10 S	Non-Sensitive	72.6	73.7	1.1	3.0	No
4	Live Oak Cyn. Rd.	s/o I-10 WB Ramps	Non-Sensitive	71.7	72.9	1.2	3.0	No
5	Live Oak Cyn. Rd.	n/o I-10 WB Ramps	Non-Sensitive	72.8	73.3	0.5	3.0	No
6	Oak Glen Rd.	s/o Calimesa Blvd.	Non-Sensitive	74.1	74.1	0.0	3.0	No
7	Oak Glen Rd.	n/o Calimesa Blvd.	Sensitive	71.9	71.9	0.0	1.5	No
8	Colorado St.	e/o 8th St.	Sensitive	64.6	64.6	0.0	3.0	No
9	Wildwood Cyn. Rd.	n/o Calimesa Blvd.	Sensitive	69.1	69.4	0.3	1.5	No
10	County Line Rd.	w/o I-10 EB Ramps	Sensitive	70.0	70.1	0.1	1.5	No
11	County Line Rd.	e/o I-10 WB Ramps	Non-Sensitive	72.6	72.6	0.0	3.0	No
12	County Line Rd.	e/o Calimesa Blvd.	Non-Sensitive	70.8	70.8	0.0	3.0	No

TABLE 7-6: 2050 WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the POCC Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



7.3 2050 WITH INTERCHANGE FCSP PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-2 presents the 2050 With Interchange CNEL noise levels. The 2050 With Interchange Without FCSP Project exterior noise levels range from 62.3 to 72.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The 2050 With Interchange with FCSP Project conditions will range from 64.6 to 75.8 dBA CNEL. Table 7-2 shows that the FCSP Project off-site traffic noise level increases range from 0.5 to 6.2 dBA CNEL. This incremental noise level increase would exceed the applicable significance thresholds under the with FCSP Project scenario for the following five study area roadway segments:

- 16th Street south of Avenue E (Segment #1)
- Live Oak Canyon Road north of I-10 Westbound Ramps (Segment #5)
- Oak Glen Road north of Calimesa Boulevard (Segment #7)
- Wildwood Canyon Road north of Calimesa Boulevard (Segment #9)
- County Line Road west of I-10 Eastbound Ramps (Segment #10)

Therefore, the FCSP Project's contribution to the 2050 with interchange off-site traffic noise levels would result in a *potentially significant* off-site traffic noise impact. This is consistent with the significant findings outlined in the FCSP DEIR.

7.4 OY WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Opening Year Without Interchange (OY) POCC Project conditions CNEL noise levels. The OY Without Interchange Without POCC Project exterior noise levels range from 60.5 to 72.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The OY Without Interchange With POCC Project conditions will range from 61.1 to 73.7 dBA CNEL. Table 7-10 shows that the POCC Project off-site traffic noise level increases range from 0.0 to 8.5 dBA CNEL. This incremental noise level increase would exceed the applicable significance thresholds under the with POCC Project scenario for the following two study area roadway segments:

- Wildwood Canyon Road north of Calimesa Boulevard (Segment #9)
- County Line Road west of I-10 Freeway Eastbound Ramps (Segment #10)

Therefore, the POCC Project's contribution to off-site traffic noise would result in a *potentially significant* off-site traffic noise impact. This is consistent with the significant findings outlined in the FCSP DEIR.

7.5 OY WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-4 presents the Opening Year With Interchange (OY Int) POCC Project conditions CNEL noise levels. The Opening Year With Interchange without POCC Project exterior noise levels range from 60.5 to 72.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The Opening Year With Interchange with POCC Project conditions will range from 60.6 to 72.3 dBA CNEL. Table 7-4 shows that the POCC Project off-site traffic noise level increases range from 0.0 to 3.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to all the study area roadway



segments would experience *less than significant* Opening Year With Interchange noise level increases on receiving land uses due to the POCC Project.

7.6 2050 WITHOUT INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the 2050 Without Interchange POCC Project conditions CNEL noise levels. The 2050 Without Interchange Without POCC Project exterior noise levels range from 63.6 to 74.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The 2050 Without Interchange With POCC Project conditions will range from 64.0 to 75.3 dBA CNEL. Table 7-5 shows that the POCC Project off-site traffic noise level increases range from 0.0 to 5.2 dBA CNEL. This incremental noise level increase would exceed the applicable significance thresholds under the with POCC Project scenario for the following two study area roadway segments:

- Wildwood Canyon Road north of Calimesa Boulevard (Segment #9)
- County Line Road west of I-10 Freeway Eastbound Ramps (Segment #10)

Therefore, the POCC Project's contribution to off-site traffic noise would result in a *potentially significant* off-site traffic noise impact. This is consistent with the significant findings outlined in the FCSP DEIR.

7.7 2050 WITH INTERCHANGE POCC PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-6 presents the 2050 Interchange POCC Project conditions CNEL noise levels. The 2050 With Interchange without POCC Project exterior noise levels range from 64.0 to 74.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The 2050 With Interchange with POCC Project conditions will range from 64.1 to 74.1 dBA CNEL. Table 7-6 shows that the POCC Project off-site traffic noise level increases range from 0.0 to 1.2 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to all the study area roadway segments would experience *less than significant* 2050 With Interchange noise level increases on receiving land uses due to the POCC Project.

7.8 OFF-SITE TRAFFIC NOISE MITIGATION

The off-site Traffic Noise Analysis shows that the Project traffic noise level increases on study area roadway segments will exceed the incremental noise level increase thresholds shown on Table 4-1 and represents a *potentially significant* impact consistent with the findings outlined in the FCSP DEIR. The FCSP DEIR determined that it is not considered practical or feasible to mitigate these impacts, as it would require making alterations to private off-site properties over which applicants of future development projects would have no control. Therefore, the Project-related off-site traffic noise level increases at adjacent noise-sensitive land uses are considered a *significant and unavoidable* impact.



This page intentionally left blank



8 SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, outpatient 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.

The Environmental Noise Study for the FCSP found that implementation of the approved FCSP would result in the introduction of new noise sources that may potentially impact existing offsite noise-sensitive properties near commercial and business park land uses. (3 p. 22) This includes potential operational noise source level impacts to the existing residential areas surrounding the approved FCSP. Existing neighborhoods potentially impacted include the single-family residential communities located north of the site near Florida Street, north of Oak Glenn Road and those near Colorado Street.

To describe the potential off-site POCC Project noise levels, seven receiver locations in the vicinity of the POCC Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the POCC 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 POCC Project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 13000 11th Street, approximately 1,048 feet north of the POCC Project site. R1 is placed in the private outdoor living areas (backyard) facing the POCC Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 33425 James Stewart Court, approximately 2,462 feet northeast of the POCC Project site. R2 is placed in the private outdoor living areas (backyard) facing the POCC Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.





EXHIBIT 8-A: RECEIVER LOCATIONS

LEGEND: N CSP Boundary POCC Project Boundary Receiver Locations — Distance from receiver to POCC Project site boundary (in feet)



- R3: Location R3 represents the existing noise sensitive residences within the Hillcrest Mobile Estates at 33600 Calimesa Boulevard, approximately 2,693 feet east of the POCC Project site. Since there are no private outdoor living areas (backyards) facing the POCC Project site, receiver R3 is placed at the nearest residential 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 noise sensitive residence at 888 W County Line Road, approximately 1,736 feet southeast of the POCC Project site. R4 is placed in the private outdoor living areas (backyard) facing the POCC Project site. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents the Mesa View Middle School at 800 Mustang Way S Monterey Avenue, approximately 2,412 feet southeast of the POCC Project site. R5 is situated in the northwest corner of the athletic field facing the POCC Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence at 32029 Live Oak Canyon Road, approximately 1,832 feet southwest of the POCC Project site. R6 is placed in the private outdoor living areas (backyard) facing the POCC Project site. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing noise sensitive residence at 32080 Florida Street, approximately 2,259 feet northwest of the POCC Project site. R7 is placed in the private outdoor living areas (backyard) facing the POCC Project site. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.



This page intentionally left blank



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 development.

9.1 FCSP OPERATIONAL NOISE LEVELS

The DEIR determined that implementation of the FCSP may result in exposure of persons to noise levels in excess of standards established in the City of Yucaipa's Municipal Code and Development Code. This includes *potentially significant* operational noise source level impacts from truck deliveries, load dock activities, parking lot activities, and mechanical equipment to the existing off-site noise-sensitive properties surrounding the approved FCSP. According to the Environmental Noise Study for the FCSP, compliance with the City's typical Conditions of Approval is sufficient to mitigate all significant impacts. (3 p. 22)

9.2 POCC PROJECT 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 POCC Project site. This includes a combination of noise sources such as cold storage loading dock activity, tractor trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. The POCC operational noise sources shown on Exhibit 9-A includes over 39 individual noise sources to conservatively describe the potential worst-case noise environment. Consistent with similar warehouse uses, the POCC Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays.

9.3 REFERENCE NOISE LEVELS

To estimate the POCC 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 POCC Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the POCC Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the cold storage loading dock activity, tractor trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time. These sources of noise activity will likely vary throughout the day.





EXHIBIT 9-A: POCC PROJECT OPERATIONAL NOISE SOURCE LOCATIONS

Reference	Noise Source	Mi Ho	n./ ur¹	Reference Noise Level	Sound Power
Noise Source	Height (Feet)	Day	Night	(dBA L _{eq}) @ 50 Feet	Level (dBA)²
Cold Storage Loading Dock Activity	8'	60	60	65.7	111.5
Tractor Trailer Parking Activity	8'	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	30	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Truck Movements	8'	60	60	59.8	93.2

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

¹ Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the POCC Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

² Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

9.3.1 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)

9.3.2 COLD STORAGE LOADING DOCK ACTIVITY

The reference cold storage loading dock activities are intended to describe the typical outdoor operational noise activities associated with the POCC Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers, this reference noise level conservatively assumes that all loading dock activity is associated with cold storage facilities, even though only 25 percent cold storage is anticipated. (21) The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level measurement ruck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location.



Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.3.3 TRACTOR TRAILER PARKING ACTIVITY

To evaluate the noise levels associated with truck idling, backup alarms, trailer movements and storage activities, Urban Crossroads collected a reference noise level measurement at an existing parcel hub facility to describe the potential operational noise levels associated with POCC Project operational activities. The measured reference noise level at 50 feet from activity was measured at 62.8 dBA L_{eq}. The reference noise level measurement includes a semi-truck with trailer pass-by event, background switcher cab trailer towing, drop-off, idling, and backup alarm events. Tractor trailer activity is estimated during all the daytime, evening, and nighttime hours.

9.3.4 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 L_{eq} . 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 POCC Project buildings.

9.3.5 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 POCC Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the POCC Project's proposed building.

9.3.6 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of a warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. 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.





9.3.7 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represent multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the POCC Project driveways and maneuvering in and out of the outdoor loading dock activity area.

9.4 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the POCC 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 POCC 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_w) 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 POCC Project operational noise levels presented in this section.

9.5 POCC PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed POCC Project operations that include cold storage loading dock activity, tractor trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the POCC Project site and the POCC Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the POCC Project 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 34.6 to 43.5 dBA Leq.





Noise Coursel	Ор	Operational Noise Levels by Receiver Location (dBA Leq)								
Noise Source-	R1	R2	R3	R4	R5	R6	R7			
Cold Storage Loading Dock Activity	42.1	38.5	39.7	41.2	38.6	32.9	34.2			
Tractor Trailer Parking Activity	37.1	32.6	33.6	35.1	33.9	28.8	28.3			
Roof-Top Air Conditioning Units	23.8	20.3	20.6	18.7	16.8	16.3	17.1			
Trash Enclosure Activity	23.4	19.5	20.4	22.9	20.5	14.3	14.8			
Parking Lot Vehicle Movements	11.4	7.2	7.4	0.9	0.0	1.9	3.4			
Truck Movements	25.6	21.1	21.4	22.1	20.5	19.5	19.8			
Total (All Noise Sources)	43.5	39.7	40.8	42.3	40.0	34.6	35.4			

TABLE 9-2: DAYTIME POCC PROJECT OPERATIONAL NOISE LEVELS

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

Table 9-3 shows the unmitigated POCC Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 35.9 to 43.4 dBA L_{eq} . The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.

Noise Source1	Ор	Operational Noise Levels by Receiver Location (dBA Leq)								
	R1	R2	R3	R4	R5	R6	R7			
Cold Storage Loading Dock Activity	42.1	38.5	39.7	41.2	38.6	34.6	34.7			
Tractor Trailer Parking Activity	37.1	32.6	33.6	35.1	33.9	30.4	28.8			
Roof-Top Air Conditioning Units	21.4	17.9	18.2	16.3	14.7	14.7	15.3			
Trash Enclosure Activity	19.4	15.5	16.4	18.9	16.6	11.9	11.5			
Parking Lot Vehicle Movements	11.4	7.2	7.4	0.9	0.0	3.1	3.8			
Truck Movements	25.6	21.1	21.4	22.1	20.6	20.0	20.0			
Total (All Noise Sources)	43.4	39.6	40.7	42.2	40.0	36.2	35.9			

TABLE 9-3: NIGHTTIME POCC PROJECT OPERATIONAL NOISE LEVELS

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

9.6 POCC PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the POCC Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Yucaipa exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-4 shows the unmitigated operational noise levels associated with the POCC Project will not exceed the City of Yucaipa daytime and nighttime exterior noise level standards. Therefore, the operational noise impacts are considered *less than significant*.





Receiver Location ¹	POCC Project Operational Noise Levels (dBA Leq) ²		Noise Leve (dBA	l Standards Leq) ³	Noise Level Standards Exceeded? ⁴		
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	43.5	43.4	55	55	No	No	
R2	39.7	39.6	55	55	No	No	
R3	40.8	40.7	55	55	No	No	
R4	42.3	42.2	55	55	No	No	
R5	40.0	40.0	55	55	No	No	
R6	34.6	36.2	55	55	No	No	
R7	35.4	35.9	55	55	No	No	

TABLE 9-4: POCC PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 8-A for the receiver locations.

² Proposed POCC Project unmitigated operational noise levels as shown on Tables 9-2 and 9-3.

³ Exterior noise level standards, as shown on Table 4-1.

⁴ Do the estimated POCC Project operational noise source activities exceed the noise level standards?

⁵ "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

9.7 POCC PROJECT OPERATIONAL NOISE LEVEL INCREASES

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

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the POCC Project-operational and existing ambient noise levels. The difference between the combined POCC Project and ambient noise levels describes the POCC Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when POCC Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-5 and 9-6, respectively. As indicated on Table 9-5, the POCC Project will generate a daytime operational noise level increase ranging from 0.0 to 0.3 dBA L_{eq} at the nearest receiver locations. Table 9-6 shows that the POCC Project will generate a nighttime operational noise level increases will not exceed the operational noise level increase significance criteria presented in Table 4-1, and, therefore, the increases at the sensitive receiver locations will be *less than significant*.

Receiver Location ¹	Total POCC Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined POCC Project and Ambient ⁵	POCC Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	43.5	L1	56.8	57.0	0.2	5.0	No
R2	39.7	L2	57.6	57.7	0.1	5.0	No
R3	40.8	L3	79.7	79.7	0.0	1.5	No
R4	42.3	L4	53.5	53.8	0.3	5.0	No
R5	40.0	L5	52.0	52.3	0.3	5.0	No
R6	34.6	L6	67.6	67.6	0.0	1.5	No
R7	35.4	L7	57.3	57.3	0.0	5.0	No

¹ See Exhibit 8-A for the receiver locations.

² Total POCC Project daytime operational noise levels as shown on Table 9-2.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

⁴ Observed daytime ambient noise levels as shown on Table 5-1.

⁵ Represents the combined ambient conditions plus the POCC Project activities.

⁶ The noise level increase expected with the addition of the proposed POCC Project activities.

⁷ Significance increase criteria as shown on Table 4-1.

TABLE 9-6: NIGHTTIME POCC PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total POCC Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined POCC Project and Ambient ⁵	POCC Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	43.4	L1	57.2	57.4	0.2	5.0	No
R2	39.6	L2	61.0	61.0	0.0	5.0	No
R3	40.7	L3	78.7	78.7	0.0	1.5	No
R4	42.2	L4	52.0	52.4	0.4	5.0	No
R5	40.0	L5	47.6	48.3	0.7	5.0	No
R6	36.2	L6	64.9	64.9	0.0	5.0	No
R7	35.9	L7	62.1	62.1	0.0	5.0	No

¹ See Exhibit 8-A for the receiver locations.

² Total POCC Project nighttime operational noise levels as shown on Table 9-3.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

⁴ Observed nighttime ambient noise levels as shown on Table 5-1.

⁵ Represents the combined ambient conditions plus the POCC Project activities.

⁶ The noise level increase expected with the addition of the proposed POCC Project activities.

⁷ Significance increase criteria as shown on Table 4-1.



10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC).

10.1 FCSP CONSTRUCTION NOISE LEVELS

The DEIR determined that construction of future development projects may produce a substantial temporary or periodic increase in ambient noise levels in the vicinity above levels existing without the FCSP. However, the FCSP DEIR determined that the construction activities that comply with the time and day restrictions provided in the City of Yucaipa Municipal Code are not required to comply with any noise limitations. Therefore, the DEIR found that the impact of FCSP construction noise would be *less than significant*.

10.2 POCC PROJECT CONSTRUCTION NOISE SOURCES

This section analyzes the potential construction noise impacts at the nearest receiver locations, identified in Section 8, resulting from the construction of the proposed POCC Project. Exhibit 10-A presents the on-site construction noise source activity in relation to the nearest sensitive receiver locations. According to Chapter 87.0905[e][1][c] of the City's Municipal Code exempts: *Temporary Construction, repair, or demolition activities between 7 a.m. and 7 p.m., except Sundays and Federal holidays.* (12) POCC Project construction noise levels are, therefore, considered exempt from municipal regulation if activities occur within the hours specified in the City of Yucaipa Municipal Code, Chapter 87.0905 of 7:00 a.m. to 7:00 p.m., except Sundays and Federal holidays. However, neither the City of Yucaipa General Plan or County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. 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. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA L_{eq} (9 p. 179).

10.3 POCC 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 POCC Project construction activities are expected to occur in the following stages, site preparation, grading, building construction, paving and architectural coating.







EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS

LEGEND: Construction Activity FCSP Boundary 💮 Receiver Locations — Distance from receiver to POCC Project site boundary (in feet)



10.4 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.

10.5 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the POCC Project construction noise level impacts at the nearby sensitive 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 they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 48.8 to 55.5 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model calculations.

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

TABLE 10-1: PCONSTRUCTION REFERENCE NOISE LEVELS

¹ FHWA Road Construction Noise Model.

² 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.

³ Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.



Receiver Location ¹	Construction Noise Levels (dBA L _{eq})							
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels ²		
R1	55.5	54.8	52.1	49.4	47.7	55.5		
R2	49.1	48.4	45.7	43.0	41.3	49.1		
R3	48.9	48.2	45.5	42.8	41.1	48.9		
R4	51.7	51.0	48.3	45.6	43.9	51.7		
R5	49.0	48.3	45.6	42.9	41.2	49.0		
R6	49.6	48.9	46.2	43.5	41.8	49.6		
R7	48.8	48.1	45.4	42.7	41.0	48.8		

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

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

10.6 POCC PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the POCC Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold 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 satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during POCC Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to POCC Project construction noise are considered *less than significant* at all receiver locations.

 TABLE 10-3: POCC PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

	Construction Noise Levels (dBA L _{eq})					
Receiver Location ¹	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴			
R1	55.5	80	No			
R2	49.1	80	No			
R3	48.9	80	No			
R4	51.7	80	No			
R5	49.0	80	No			
R6	49.6	80	No			
R7	48.8	80	No			

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

 2 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.

³ Construction noise level thresholds as shown on Table 4-1.

⁴ Do the estimated POCC Project construction noise levels exceed the construction noise level threshold?



10.7 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of POCC Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the hours permitted by Chapter 87.0905[e][1][c] of the City of Yucaipa Municipal Code, the POCC Project Applicant will be required to obtain authorization for nighttime work from the City of Yucaipa. Any nighttime construction noise activities are evaluated against the FTA nighttime exterior construction noise level threshold of 70 dBA Leq for noise sensitive residential land use. (9 p. 179)

10.7.1 NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS

To estimate the noise levels due to nighttime concrete pouring activities, sample reference noise level measurements were taken during a nighttime concrete pouring at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling.

To describe the nighttime concrete pour noise levels associated with the construction, this analysis relies on reference sound pressure level of 67.7 dBA L_{eq} at 50 feet representing a sound power level of 100.3 dBA L_w . While the POCC Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA L_w is used to describe the expected POCC Project nighttime concrete pour noise activities.

10.7.2 NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 10-4, the noise levels associated with the nighttime concrete pour activities are estimated to range from 24.3 to 31.7 dBA $L_{eq.}$ The analysis shows that the unmitigated nighttime concrete pour activities will satisfy the FTA 70 dBA L_{eq} nighttime residential noise level threshold at all the nearest noise sensitive receiver locations. Therefore, the noise impacts due to POCC Project construction nighttime concrete pour noise activity is considered *less than significant* at all receiver locations with prior authorization for nighttime work from the City of Yucaipa. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.









. .	Concrete Pour Construction Noise Levels (dBA L _{eq})					
Location ¹	Exterior Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴			
R1	31.7	70	No			
R2	28.3	70	No			
R3	29.3	70	No			
R4	31.3	70	No			
R5	29.2	70	No			
R6	24.3	70	No			
R7	25.0	70	No			

TABLE 10-4: POCC NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

² Nighttime Concrete Pour noise model inputs are included in Appendix 10.2.

³ Construction noise level thresholds as shown on Table 4-1.

⁴ Do the estimated POCC Project construction noise levels exceed the construction noise level threshold?

10.8 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 in Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts 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 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual



Table 10-6 presents the expected POCC Project related vibration levels at the nearby receiver locations. At distances ranging from 1,048 to 2,693 feet from POCC Project construction activities, construction vibration velocity levels are estimated to range from 0.000 to 0.001 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.2 PPV (in/sec), the typical POCC Project construction vibration levels will fall below the building damage thresholds at all the sensitive receiver locations. Therefore, the POCC Project-related vibration impacts are considered *less than significant* during typical construction activities at the POCC Project site.

Location ¹	Distance to Const.	Typical Construction Vibration Levels PPV (in/sec) ³						Thresholds	Thresholds
	Activity (Feet) ²	Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level	PPV (in/sec) ⁴	Exceeded?⁵
R1	1,048'	0.000	0.000	0.000	0.000	0.001	0.001	0.2	No
R2	2,462'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R3	2,693'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R4	1,736'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R5	2,412'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R6	1,832'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R7	2,259'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No

TABLE 10-6: POCC PROJECT CONSTRUCTION VIBRATION LEVELS

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

² Distance from receiver building facade to POCC Project construction boundary (POCC Project site boundary).

³ Based on the Vibration Source Levels of Construction Equipment (Table 10-5).
 ⁴ City of Yucaipa Municipal Code, Chapter 87.0910[a] (Appendix 3.1)

⁵ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

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



11 REFERENCES

- 1. **State of California.** *California Environmental Quality Act, Environmental Checklist Form Appendix G.* 2019.
- 2. **P&D Consultants.** *Revised Draft Environmental Impact Report for the Yucaipa Freeway Corridor Specific Plan (State Clearinghouse No. 2006041096).* August 2008.
- 3. Wieland Associates, Inc. Environmental Noise Study for the Revised Proposed Freeway Corridor Specific Plan in the City of Yucaipa. July 21, 2008.
- 4. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
- 5. 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. March 1974. EPA/ONAC 550/9/74-004.
- 6. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. December 2011.
- 7. U.S. Department of Transportation, Federal Highway Administration. *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
- 8. U.S. Environmental Protection Agency Office of Noise Abatement and Control. *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise*. October 1979 (revised July 1981). EPA 550/9/82/106.
- 9. U.S. Department of Transportation, Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
- 10. Office of Planning and Research. State of California General Plan Guidlines. 2018.
- 11. City of Yucaipa. General Plan Public Safety Element. April 2016.
- 12. Yucaipa, City of. Yucaipa Municipal Code Chapter 87.0905 (2)(e)(C).
- 13. —. Municipal Code Chapter 87.0910 Vibration.
- 14. California Court of Appeal. *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; Cal.Rptr.3d, October 2008.
- 15. Federal Interagency Committee on Noise. Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.
- 16. California Department of Transportation. Technical Noise Supplement. November 2009.
- 17. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 18. U.S. Department of Transportation, Federal Highway Administration. FHWA Highway Traffic Noise Prediction Model. December 1978. FHWA-RD-77-108.
- 19. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 20. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.



- 21. **Translutions.** *Freeway Corridor Specific Plan & Pacific Oak Commerce Center Traffic Impact Analysis, Translutions, Inc.* August 2023.
- 22. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning. FHWA Roadway Construction Noise Model. January, 2006.



12 CERTIFICATIONS

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Freeway Corridor Specific Plan (FCSP) & Pacific Oak Commerce Center (POCC) POCC 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



This page intentionally left blank



APPENDIX 3.1:

CITY OF YUCAIPA MUNICIPAL CODE

This page intentionally left blank


Yucaipa, California Municipal Code

DEVELOPMENT CODE

DIVISION 7 GENERAL DESIGN STANDARDS

CHAPTER 9 PERFORMANCE STANDARDS

- 87.0901 Intent.
- 87.0905 Noise.
- 87.0910 Vibration.
- 87.0915 Air Quality.
- 87.0920 Glare.
- 87.0925 Heat.
- 87.0930 Electrical Disturbances.
- 87.0935 Fire Hazards.
- 87.0940 Waste Disposal.

87.0901 Intent.

(a) The provisions of this chapter shall apply to residential, institutional, commercial and industrial land uses.

(b) Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include noise, air quality, glare, heat, and waste disposal and runoff control. Performance standards protect the health and safety of workers, nearby residents, and businesses and prevent damaging effects to surrounding properties. (Amended by Ord. 253 § 14, 2006)

87.0905 Noise.

(a) Noise Measurement

Noise will be measured with a sound level meter which meets the standards of the American National Standards Institute (ANSI Section SI4-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A). The Director of the Community Development Department shall be the noise control officer.

Noise Standards (b)

(1) The following table describes the noise standard for emanations from any source as it affects adjacent properties.

Noise Standards

Affected Land Use (receiving noise)	Noise Level (Ldn)	Time Period
Residential	55 dBA	7am to 10pm
	55 dBA	10pm to 7am
Professional	55 dBA	Anytime
Services		
Other Commercial	60 dBA	Anytime
Industrial	70 dBA	Anytime

(2) No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed any of the following levels.

(A) The noise standard for that receiving land use [as specified in subsection (b) (1) of this section] for a cumulative period of more than 30 minutes in any hour

(B) The noise standard plus 5 dBA for a cumulative period of more than five minutes in any hour

(C) The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour

(D) The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour

(E) The noise standard plus 20 dBA for any period of time

(c) If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise exposure standard shall be increased to reflect said ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels (d) in subsection (b)(1) of this section shall be reduced by 5 dBA.

Exempt Noises (e)

- (1) The following sources of noise are exempt.
 - (A) Motor vehicles not under the control of the industrial use
 - (B) Emergency equipment, vehicles, and devices

(C) Temporary construction, repair, or demolition activities between 7am and 7pm, except Sundays and Federal holidays

87.0910 Vibration.

(a) Vibration Standard

No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the lot line, nor will any vibration be permitted which produces a particle velocity greater than or equal to twotenths (0.2) inches per second measured at or beyond the lot line.

(b) Vibration Measurement

Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings are to be made at points of maximum vibration along any lot line next to a lot within a residential, commercial, and industrial land use district.

Exempt Vibrations (c)

- The following sources of vibration are not regulated by this Code. (1)
 - (A) Motor vehicles not under the control of the subject use

(B) Temporary construction, maintenance, or demolition activities between 7am and 7pm, except Sundays and Federal holidays

87.0915 Air Quality.



APPENDIX 5.1:

STUDY AREA PHOTOS







15411_L1_A 1.North 34, 1' 3.670000"117, 4' 56.630000"



15411_L1_A 2.South 34, 1' 3.570000"117, 4' 56.520000"



15411_L1_A 3.East 34, 1' 3.530000"117, 4' 56.580000"



15411_L1_A 4.West 34, 1' 3.490000"117, 4' 56.690000"



15411_L2_B 1.North 34, 1' 1.580000"117, 4' 31.220000"



15411_L2_B 2.South 34, 1' 1.550000"117, 4' 31.250000"



15411_L2_B 3.East 34, 1' 1.560000"117, 4' 31.200000"



15411_L2_B 4.West 34, 1' 1.560000"117, 4' 31.250000"



15411_L3_C 1.North 34, 0' 45.500000"117, 4' 23.920000"



15411_L3_C 2.South 34, 0' 45.440000"117, 4' 23.970000"



15411_L3_C 3.East 34, 0' 45.480000"117, 4' 23.810000"



15411_L3_C 4.West 34, 0' 45.460000"117, 4' 23.950000"

73 N-79



15411_L4_D 1.North 34, 0' 7.980000"117, 4' 31.060000"



15411_L4_D 2.South 34, 0' 7.950000"117, 4' 31.030000"



15411_L4_D 3.East 34, 0' 7.840000"117, 4' 30.950000"



15411_L4_D 4.West 34, 0' 7.840000"117, 4' 31.010000"



15411_L5_F 1.North 34, 0' 0.920000"117, 4' 29.190000"



15411_L5_F 2.South 34, 0' 0.850000"117, 4' 29.170000"



15411_L5_F 3.East 34, 0' 0.870000"117, 4' 29.140000"



15411_L5_F 4.West 34, 0' 0.950000"117, 4' 29.300000"



15411_L6_I 1.North 34, 0' 29.720000"117, 6' 38.120000"



15411_L6_I 2.South 34, 0' 29.720000"117, 6' 38.120000"



15411_L6_I 3.East 34, 0' 29.720000"117, 6' 38.090000"



15411_L6_I 4.West 34, 0' 29.660000"117, 6' 38.340000"





15411_L7_X 1.North 34, 1' 3.240000"117, 6' 13.950000"



15411_L7_X 2.South 34, 1' 3.090000"117, 6' 13.970000"



15411_L7_X 3.East 34, 1' 3.190000"117, 6' 14.000000"



15411_L7_X 4.West 34, 1' 3.140000"117, 6' 14.000000"



APPENDIX 5.2:

NOISE MEASUREMENT WORKSHEETS





						24-Ho	ur Noise Le	evel Measu	urement S	ummary						
Date: Project:	Thursday, A FCP+POCC	April 6, 2023			Location: Source:	L1 - Located St.	north of the s	site near the	residence at	: 13001 11th	Meter	Piccolo II			JN: Analyst:	15441 Z. Ibrahim
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.	.0															
2 80.	0															
5 70.	0															
۔ 60 سے 60	0							2.1								
in 50.	0 - 7	- 6.4	9.9	59.2	29.0	.0 .0	4	6.1 6	<u>v</u> (<mark></mark>	<mark>ں ا</mark>	<mark>-i 4</mark>	<mark>5.1</mark>	<u>⊢ </u> ,	<u> </u>	6.1
Ť 40.		_ v r				- <mark>-2</mark> 2		<u>ہ</u>		6 <mark>4</mark> — 10 —	2 <mark>2</mark>	2 <mark></mark> 2	<u>й</u> <u>к</u>	2	<u> </u>	<u> </u>
	0	1 2	3	4 5	6	7 8	9 1	LO 11	12 1	L3 14	15 1	.6 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	54.4	57.4	51.9	57.2	57.0	56.5	56.2	54.9	54.0	52.7	52.3	52.0	54.4	10.0	64.4
	1	54.9	57.7 60.0	52.0	57.5	57.4 59.6	57.0 59.2	56.7	55.6	54.6	52.9	52.5	52.1	54.9	10.0	64.9 66.6
Night	3	56.6	60.3	53.4	60.0	59.7	59.1	58.7	57.4	56.2	54.3	53.9	53.5	56.6	10.0	66.6
	4	58.0	62.6	54.2	62.3	62.0	61.4	61.0	58.9	57.2	55.1	54.7	54.3	58.0	10.0	68.0
	5	59.2	61.6	57.2	61.5	61.3	60.9	60.6	59.8	59.0	57.8	57.6	57.3	59.2	10.0	69.2
	6	59.6	62.7 59.4	57.7	62.1 59.1	61.6 58.8	60.9 58.4	60.7 58.1	60.0 57.3	59.4	55.6	58.1	57.8	59.6	10.0	69.6 56.8
	8	52.0	55.4	50.1	55.0	54.7	54.0	53.6	52.4	51.7	50.7	50.4	50.2	52.0	0.0	52.0
	9	53.4	55.7	51.2	55.5	55.3	55.0	54.8	54.0	53.2	51.9	51.7	51.3	53.4	0.0	53.4
	10	56.1	59.8	52.2	59.5	59.1	58.7	58.4	57.4	55.6	52.9	52.6	52.3	56.1	0.0	56.1
	11	65.7 50.2	72.5	58.5	/2.4 54.7	72.3 54.4	/1.3	/0.1	66.2 51.0	63.7	59.6	59.1	58.6	65.7 50.2	0.0	65.7 50.2
	12	49.2	52.8	46.9	52.3	51.9	51.2	50.9	49.8	48.9	47.5	47.4	47.0	49.2	0.0	49.2
Day	14	55.3	60.2	51.0	60.0	59.8	59.2	58.7	56.0	54.2	51.9	51.6	51.1	55.3	0.0	55.3
	15	52.5	55.0	50.4	54.8	54.6	54.2	53.9	53.0	52.3	51.0	50.8	50.5	52.5	0.0	52.5
	16	52.1	54.9	50.0	54.7	54.4	53.9	53.5	52.7	51.9	50.6	50.4	50.1	52.1	0.0	52.1
	17	53.4 54.8	50.5	51.3	57.3	55.8 57.1	55.3 56.7	56.3	54.0 55.4	53.1	51.8	53.1	51.4	53.4 54.8	0.0	53.4 54.8
	19	55.1	60.7	52.8	60.0	59.2	57.4	56.7	55.5	54.7	53.4	53.2	52.9	55.1	5.0	60.1
	20	52.7	58.3	50.6	57.4	56.3	54.8	53.9	52.9	52.3	51.2	51.0	50.7	52.7	5.0	57.7
	21	53.8	57.3	51.6	57.1	56.9	56.3	55.9	54.4	53.4	52.1	51.9	51.7	53.8	5.0	58.8
Night	22	56.1	59.6	53.9	59.7	59.5 59.1	58.9 58.4	58.0	57.2	55.8	54.7	54.3	54.0	56.1	10.0	66.1
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour	Leq	(dBA)
Day	Min	49.2	52.8	46.9	52.3	51.9	51.2	50.9	49.8	48.9	47.5	47.3	47.0	CNEL	Daytime	Nighttime
Energy	Average	65.7 56.8	/2.5	58.5 rage:	/2.4	/2.3	/1.3	/0.1	66.2 54.8	63.7 53.7	59.6	59.1	58.6		(7am-10pm)	(10pm-7am)
Nicht	Min	54.4	57.4	51.9	57.2	57.0	56.5	56.2	54.9	54.0	52.7	52.3	52.0	63.7	56.8	57.2
Night	Max	59.6	62.7	57.7	62.3	62.0	61.4	61.0	60.0	59.4	58.4	58.1	57.8			
Energy	Average	57.2	Ave	rage:	60.0	59.7	59.1	58.8	57.6	56.5	54.8	54.5	54.1			



						24-Ho	ur Noise Le	evel Measu	urement S	Summary						
Date:	Thursday, A	pril 6, 2023			Location:	L2 - Located	northeast of	the site near	the residen	ce at 33462	Meter	Piccolo II			JN:	15441
Project:	FCP+POCC				Source:	Cienaga Dr.									Analyst:	Z. Ibrahim
							Hourly L _{eq} d	IBA Readings	(unadjusted))						
85.	0															
(8 0. 1 1 1 1 1 1 1 1 1 1																
b 70.																
<u>></u> 55.	0 <u>-</u> u -	9.9 1.6	1.8	53.2 53.2	0.8	0.	4	n					64.7	ດ		0.4
nog 45. 40.	0 - 13	0			9	55	2 <mark>2</mark>	<mark>53.9</mark>	24. 3	<mark>53.7</mark> 51.9	20.	25.4	24.9	<mark>21</mark>	8	ē
35.	ō + +	1 2	2	4 E	6	7 0	0 1	0 11	12	12 14	15 1	6 17	19 10	20	21 22	
	0	1 2	5	4 5	0	/ 0	9 1	Hour Be	eginning	15 14	10 1	.0 17	10 19	20	21 22	25
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	57.6	60.8	54.7	60.6	60.3	59.7	59.3	58.2	57.3	55.7	55.3	54.9	57.6	10.0	67.6
	2	61.6	65.7	57.8	65.4	65.0	64.3	63.9	62.5	61.2	57.5	57.1	58.0	61.6	10.0	71.6
Night	3	61.8	66.5	58.4	66.1	65.6	64.6	64.0	62.6	61.3	59.5	59.0	58.5	61.8	10.0	71.8
	4	62.6	66.1	59.3	65.9	65.6	65.1	64.6	63.3	62.2	60.3	59.9	59.5	62.6	10.0	72.6
	5	63.2	66.3	60.9	66.0	65.7	65.1	64.8	63.8	62.9	61.6	61.3 56.0	61.0	63.2	10.0	73.2
	7	59.0	67.6	53.9	67.0	66.2	64.5	64.1	58.0	56.2	54.7	54.3	54.0	59.0	0.0	59.0
	8	55.2	60.8	52.1	60.2	59.5	58.0	57.4	55.6	54.5	53.1	52.7	52.3	55.2	0.0	55.2
	9	56.4	60.6	53.3	60.1	59.6	58.9	58.4	57.1	56.0	54.3	53.9	53.5	56.4	0.0	56.4
	10	56.5	59.9	53.9	59.5	59.2	58.7	58.4	57.3	56.1	54.6	54.3	54.0	56.5	0.0	56.5
	11	53.9	57.7	51.1	57.4	57.0	50.4	55.9 56.7	54.0	53.5 53.7	51.9	51.5	51.2	53.9 54 3	0.0	53.9 54 3
	13	53.7	57.6	50.8	57.2	56.9	56.2	55.6	54.2	53.2	51.7	51.3	50.9	53.7	0.0	53.7
Day	14	51.9	56.1	49.2	55.7	55.3	54.6	54.1	52.5	51.4	50.0	49.7	49.3	51.9	0.0	51.9
	15	56.0	60.5	53.3	60.0	59.6	58.4	57.8	56.6	55.6	54.1	53.8	53.5	56.0	0.0	56.0
	16	55.0	59.0	51.8	58.6	58.3	57.6	57.0	55.7	54.5	52.8	52.4	52.0	55.0	0.0	55.0
	17	55.4	62.0	52.0	61.7	60.8	59.3	58.1	55.9	54.3	52.8	52.5	52.1	55.4	0.0	55.4
	18	54.9	58.1	52.5	57.8	57.6	57.0	50.7	55.0 64.7	54.5	53.2	52.9	52.6	54.9 64.7	0.0	54.9 60.7
	20	57.9	60.8	55.7	60.5	60.3	59.7	59.3	58.5	57.5	56.4	56.0	55.8	57.9	5.0	62.9
	21	59.2	62.4	56.8	62.1	61.8	61.3	60.9	59.8	58.9	57.6	57.3	57.0	59.2	5.0	64.2
Night	22	58.6	62.6	56.2	62.0	61.6	60.9	60.4	59.2	58.3	56.9	56.6	56.3	58.6	10.0	68.6
Night	23	60.4	63.6	57.6	63.4	63.2	62.7	62.3	61.1	60.1	58.4	58.1	57.7	60.4	10.0	70.4
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour	Leq	dBA)
Day	Min	51.9	56.1	49.2	55.7	55.3	54.6	54.1	52.5	51.4	50.0	49.7	49.3	CNEL	Daytime	Nighttime
Energy	Average	57.6	70.2 Ave	rage:	75.3 60.8	74.4 60.3	70.9 59.2	58.6	56.7	58.9	57.0	57.3	57.0		(7am-10pm)	(10pm=7am)
Lincigy	Min	57.6	60.8	54.7	60.6	60.3	59.7	59.3	58.2	57.3	55.7	55.3	54.9	67.4	57.6	61.0
Night	Max	63.2	67.4	60.9	67.1	66.8	66.0	65.2	63.8	62.9	61.6	61.3	61.0		57.0	01.0
Energy	Average	61.0	Ave	rage:	64.4	64.1	63.4	63.0	61.3	60.2	58.4	58.1	57.7			



						24-Ho	ur Noise Le	evel Measu	urement S	ummary						
Date: Project:	Thursday, A FCP+POCC	opril 6, 2023			Location: Source:	L3 - Located 33600 Calime	east of the sit esa Blvd.	e near the H	lillcrest Mob	ile Estates at	Meter:	Piccolo II			JN: Analyst:	15441 Z. Ibrahim
							Hourly L _{eq} c	IBA Readings	(unadjusted)							
85.	0															
(Vap) 65. 60. b 60. b 60. b 60.	000000 76.7	76.7	77.7	79.8	81.3	81.2	80.4	79.6	79.5	79.3	80.1	80.0	79.7	78.4	78.3	77.1
5 0. 9 45. 9 45. 40. 35.																
	0	1 2	3	4 5	6	7 8	9 1	0 11	12 1	.3 14	15 16	5 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	76.7	85.3	65.0	84.9	84.2	82.6	81.6	77.4	73.7	67.3	66.1	65.1	76.7	10.0	86.7
		76.9	85.5	63.9	85.1 85.5	84.4 84.7	83.0 82.9	81.9 81.7	77.4	73.6 72.8	65.8	65.1 64 5	63.4	76.9	10.0	86.9
Night	3	77.7	85.9	66.0	85.5	84.9	83.3	82.4	78.7	74.9	68.7	67.4	66.2	77.7	10.0	87.7
Ŭ	4	79.8	87.6	70.8	87.1	86.4	84.5	83.5	80.7	78.1	73.3	72.2	71.0	79.8	10.0	89.8
	5	80.7	86.9	73.5	86.5	85.9	84.6	83.9	81.7	79.8	76.0	75.0	73.7	80.7	10.0	90.7
	6	81.3	87.3	75.6	86.9	86.2	84.8	84.1	82.1	80.5	77.7	76.9	75.8	81.3	10.0	91.3
	/ 8	81.2	87.4 84.9	76.5 74.8	87.0 84.6	86.4 84.1	85.0 82 9	83.9 82.3	81.7	80.3 79.1	78.1 76.6	77.4 75.9	76.7 75.0	81.2 79.8	0.0	81.2 79.8
	9	80.4	85.4	74.8	85.0	84.6	83.6	83.0	81.3	79.7	76.9	76.0	75.0	80.4	0.0	80.4
	10	80.5	88.3	74.7	87.8	87.0	84.7	83.5	81.0	79.3	76.5	75.8	74.9	80.5	0.0	80.5
	11	79.6	85.6	73.2	85.2	84.5	83.1	82.5	80.5	78.7	75.7	74.6	73.5	79.6	0.0	79.6
	12	79.5	86.4	72.7	85.9	85.0	83.1	82.2	80.3	78.5	75.3	74.3	72.9	79.5	0.0	79.5
Devi	13	79.1	84.9	72.8	84.5	83.9	82.6	82.0	80.1	78.3	75.3	74.4	73.0	79.1	0.0	79.1
Day	14	79.3 80.1	85.2	73.3 74.7	84.8 85.5	84.2 84.8	82.8	82.2 82.7	80.2	78.5 79.4	75.7	74.9	73.6	79.3 80.1	0.0	79.3 80.1
	16	79.9	86.8	74.1	86.2	85.2	83.4	82.5	80.6	79.0	76.2	75.5	74.3	79.9	0.0	79.9
	17	80.0	86.5	74.2	86.0	85.2	83.4	82.7	80.7	79.2	76.3	75.5	74.4	80.0	0.0	80.0
	18	79.7	85.6	73.6	85.2	84.6	83.3	82.4	80.5	78.8	75.7	74.9	73.8	79.7	0.0	79.7
	19	79.0	85.6	71.8	85.2	84.6	83.0	82.3	79.9	77.9	74.2	73.1	71.9	79.0	5.0	84.0
	20	78.4	85.5	70.7	85.1	84.4	82.9	82.2	79.3	77.0	72.9	71.9	70.9	78.4	5.0	83.4
	21	/8.3	87.1	69.4	86.7	85.8	<u>83.3</u>	81.9	/8./ 79 5	75.6	71.7	70.6	69.5	/8.3	5.0	83.3
Night	22	77.1	85.0	66.5	84.6	84.0	82.5	81.6	78.0	73.0	69.0	67.7	66.7	77.1	10.0	87.8
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24 Hour	Leg	dBA)
Day	Min	78.3	84.9	69.4	84.5	83.9	82.6	81.9	78.7	76.3	71.7	70.6	69.5	CNEI	Daytime	Nighttime
Day	Max	81.2	88.3	76.5	87.8	87.0	85.0	83.9	81.7	80.3	78.1	77.4	76.7	CNLL	(7am-10pm)	(10pm-7am)
Energy	Average	79.7	Avei	rage:	85.6	84.9	83.4	82.5	80.4	78.7	75.6	74.7	73.6	OFF	70 7	70 7
Night	Max	81.3	85.0	75.6	84.6	84.0 86.4	82.5 84.8	81.6 84.1	82.1	72.8	05.8 77.7	64.5 76.9	63.4 75.8	د.ده	13.1	/ð./
Energy	Average	78.7	Ave	rage:	85.8	85.0	83.4	82.5	79.1	76.0	70.5	69.4	68.3			



						24-Ho	ur Noise Le	evel Measu	urement S	Summary						
Date: Project:	Thursday, A FCP+POCC	April 6, 2023			Location: Source:	L4 - Located County Lane	southeast of Rd.	the site near	the resider	ice at 888 W	Meter	: Piccolo II			JN: Analyst:	15441 Z. Ibrahim
							Hourly L _{eq} (IBA Readings	(unadjusted)						
85.	0															
€ 80.	0															
B 70.	Ŏ															
-00. -00.	ŏ					8										
1 50.	0 0 0	4 0	9	4 00		62.	<u> </u>	x 4	0	0 7.8	<u>∞</u>	m <mark>oo</mark>	v v	<u> </u>	<u>8</u> –	9
H 40.	0 8	46	46	50		27	23	40	43	49	41	44 46	44 49		47 47	49
55.	0	1 2	3	4 5	6	7 8	9 1	.0 11	12	13 14	15 1	L6 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}		L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	<i>L</i> _{eq}	Adj.	Adj. L _{eq}
	1	48.9	49.5	46.9	49.3	49.0	48.4	48.1	49.4	48.7	47.5	47.3	44.1	48.9	10.0	56.4
	2	47.5	51.7	43.7	51.5	51.2	50.7	50.3	48.8	46.3	44.5	44.2	43.8	47.5	10.0	57.5
Night	3	46.6	50.2	43.4	49.9	49.7	49.1	48.8	47.4	46.2	44.1	43.8	43.5	46.6	10.0	56.6
	4	46.4	49.2	44.2	48.9	48.7	48.3	48.0	47.0	46.2	44.9	44.7	44.3	46.4	10.0	56.4
	6	59.6	71.3	48.9	70.3	69.1	66.6	65.1	57.6	52.0	50.3	50.0	49.1	59.6	10.0	69.6
	7	62.2	74.2	51.7	73.8	73.2	69.4	67.0	59.4	55.0	52.5	52.2	51.8	62.2	0.0	62.2
	8	54.9	63.8	42.9	63.5	63.1	61.9	60.5	54.0	50.4	44.6	44.2	43.5	54.9	0.0	54.9
	9 10	53.7 46.8	63.5 54.9	38.2 41.0	63.1 54.3	62.8 53.7	61.7 52.5	60.3 51.3	50.6 46.8	42.4 44.2	39.4 41.9	38.9 41.6	38.4	53.7 46.8	0.0	53.7 46.8
	11	47.4	56.2	38.9	55.7	55.4	54.3	53.1	47.1	43.2	39.7	39.4	39.0	47.4	0.0	47.4
	12	43.0	49.9	37.3	49.4	49.0	47.7	46.7	44.0	41.1	38.3	37.9	37.5	43.0	0.0	43.0
Dav	13	49.0	58.9	34.8	58.7	58.3	56.4	55.2	48.9	38.4	35.3	35.1	34.9	49.0	0.0	49.0
Day	14	47.8	57.7	39.5	67.2 57.4	57.0	55.9	54.8	43.9	38.1	40.1 34.5	39.8 34.0	39.4	57.8 47.8	0.0	57.8 47.8
	16	44.3	53.1	36.1	52.1	51.2	49.4	48.1	44.8	42.2	38.5	37.8	36.7	44.3	0.0	44.3
	17	46.8	55.5	36.3	54.6	53.9	52.4	51.4	47.7	44.2	38.1	37.4	36.6	46.8	0.0	46.8
	18	44.7	53.5	34.9	52.6	51.8	50.2	49.0	45.5	42.2	37.2	36.3	35.3	44.7	0.0	44.7
	20	49.2	58.5 50.0	42.0	57.6 49.7	56.9 49.4	55.3 48.6	54.0 48.2	48.8	45.0 46.4	43.5 45.5	43.2	42.7	49.2	5.0	54.2 51.7
	21	47.8	51.1	45.6	50.8	50.5	49.9	49.5	48.3	47.4	46.2	45.9	45.7	47.8	5.0	52.8
Night	22	47.1	50.1	45.2	49.8	49.6	49.1	48.6	47.6	46.8	45.8	45.5	45.3	47.1	10.0	57.1
Timoframo	23	49.0	53.4	46.2	53.1	52.9	52.1	51.2	49.5	48.5	47.0	46.7	46.3	49.0	10.0	59.0
Timejrame	Min	43.0	49.9	<i>⁻ min</i> 33.5	49.4	49.0	47.7	46.7	43.9	38.1	34.5	34.0	33.6	24-Hour	Davtime	Nighttime
Day	Max	62.2	74.2	51.7	73.8	73.2	69.4	67.0	59.4	55.0	52.5	52.2	51.8	CNEL	(7am-10pm)	(10pm-7am)
Energy	Average	53.5	Ave	rage:	57.4	56.8	55.4	54.2	48.9	44.8	41.0	40.6	40.1	FO 7		
Night	Min Max	46.4	49.2	43.4 49 5	48.9 70 3	48.7 69.1	48.3 66.6	48.0	47.0	46.1	44.1	43.8	43.5 49 7	58./	53.5	52.0
Energy	Average	52.0	Ave	rage:	53.1	52.7	51.9	51.4	49.5	47.9	46.5	46.2	45.9			



Location: US-Location southeast of the site near the residence at 888 W Meter: P(COO II Meter: P(COO							24-Ho	ur Noise Le	evel Measu	urement S	Summary						
Houry L ₁₄ (EA Readings (unadjucted) Total of the second s	Date: Project:	Thursday, A FCP+POCC	April 6, 2023			Location: Source:	L5 - Located Ave L	southeast of	the site near	the resider	ice at 888 W	Meter	: Piccolo II			JN: Analyst:	15441 Z. Ibrahim
Nght A Col								Hourly L _{eq} (IBA Readings	(unadjusted							
Night 1 <td>85.</td> <td>0</td> <td></td>	85.	0															
Nght 1 2 3 4 5 6 7 8 9 1 <th1< th=""> 1 1 1</th1<>	6 80. 75.	0															
V 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 1 1 448 453 450 457 452 440 441 434 423 421 441 453 442 433 430 422 433 465 448 405 433 473 471 458 456 453 473 100 553 553 553 553 553 553	و 70. 65.	0															
9 0.0 0.1 0.2 0.0	ٿ 60. <u>ح</u> 55.	0					5.2										
1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Timeform Hour Les Liss Liss <thliss< th=""> <thliss< th=""></thliss<></thliss<>	no 45.	0 0 3.0 0 0 0 0 0 0 0 0 0 0 0 0	8.0	9.9	7.3 9.6	3.0	6. <mark>1000000000000000000000000000000000000</mark>	7.8	<mark>0 4</mark> 0 0	<mark>4</mark> Ω.	2.7		<mark>6</mark> .2	2.1 7.0	2.1	2.4 2.4	2.4
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Tinefram: Hour Lag Lag Li% L2% L5% L3% L3% L3% L3% L3% L3% L3% L4 41 43.4 43.3 43.3 43.1 41.3 40.8 100 53.6 11 408 43.4 43.2 43.3 43.5 L3 44.3 44.3 49.9 49.9 49.9 49.9 49.9 49.9 42.6 43.3 47.5 10.0 55.6 5 49.6 53.1 47.4 52.8 52.5 51.3 53.1 50.1 55.4 52.8 52.0 50.3 50.5 53.3 50.0 50.5 53.3 50.0 50.5 53.3 50.0 50.5 50.3 50.0 <t< td=""><td>– 40. 35.</td><td>0 4</td><td>4 4</td><td>4</td><td>4 4</td><td>O</td><td></td><td>4 4</td><td>4 4</td><td>4</td><td>4 4</td><td>4</td><td>4 4</td><td>4 4</td><td>4</td><td>4 4</td><td>4</td></t<>	– 40. 35.	0 4	4 4	4	4 4	O		4 4	4 4	4	4 4	4	4 4	4 4	4	4 4	4
Timeframe Hour L _{est} L _{st} U% U% <thu%< th=""> <thu%< th=""></thu%<></thu%<>		0	1 2	3	4 5	6	7 8	91	0 11 Hour Be	12 eginning	13 14	15 :	16 17	18 19	20	21 22	23
0 43.6 45.2 41.3 45.9 45.7 42.6 44.3 44.1 42.4 42.1 41.9 43.6 10.0 53.6 1 40.8 43.4 38.9 43.2 43.0 42.6 42.3 41.3 43.4 40.5 40.2 48.0 10.0 55.8 2 48.0 53.6 40.1 53.4 53.1 52.4 51.9 49.9 46.6 40.8 40.5 40.2 48.0 10.0 55.6 5 49.6 53.1 47.4 52.8 52.5 51.9 51.3 50.1 49.2 48.0 47.8 47.5 49.6 10.0 53.6 6 53.0 93.8 50.1 56.6 59.1 57.1 15.3 50.1 44.8 47.5 65.2 0.0 52.2 51.7 53.0 50.5 50.3 50.4 54.9 0.0 45.9 10 45.9 52.3 42.1 51.8	Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
1 40.8 45.4 30.9 45.2 45.0 42.3 44.3 40.3 39.4 45.6 42.3 44.3 49.9 42.6 42.3 44.6 44.6 42.3 44.9 42.5 44.6 44.5 44.6 42.3 44.9 42.3 44.9 42.3 44.9 42.3 44.9 42.3 44.9 42.4 44.5 44.6 42.3 44.3 44.5 44.5 42.3 44.5 44.6 42.3 44.7 44.5 44.6 44.6 44.6 44.6 44.6 44.6 44.6 4		0	43.6	46.2	41.8	45.9	45.7	45.2	44.9	44.1	43.4	42.3	42.1	41.9	43.6	10.0	53.6
Night 3 466 50.8 42.2 50.5 50.2 49.7 49.3 47.9 45.9 42.9 42.6 42.3 46.6 10.0 55.6 4 47.3 50.1 45.2 49.8 49.6 49.1 48.8 47.9 47.1 45.8 45.6 42.3 47.3 10.0 57.3 6 53.0 59.8 50.1 59.6 59.1 57.1 55.4 52.8 52.0 50.3 50.0 53.0 10.0 63.0 7 54.9 61.9 49.8 61.3 61.1 60.4 58.7 57.7 53.0 50.5 50.3 50.0 54.9 62.2 0.0 62.2 8 62.2 73.4 42.3 73.2 72.8 71.0 68.4 57.6 51.3 44.48 43.7 42.6 42.2 43.9 43.6 42.4 43.6 42.6 42.2 43.9 0.0 44.3 44.3 0.0 </td <td></td> <td>2</td> <td>40.8</td> <td>43.4 53.6</td> <td>40.1</td> <td>43.2 53.4</td> <td>43.0 53.1</td> <td>42.6 52.4</td> <td>42.3 51.9</td> <td>41.3</td> <td>40.5</td> <td>40.8</td> <td>40.5</td> <td>40.2</td> <td>40.8</td> <td>10.0</td> <td>50.8</td>		2	40.8	43.4 53.6	40.1	43.2 53.4	43.0 53.1	42.6 52.4	42.3 51.9	41.3	40.5	40.8	40.5	40.2	40.8	10.0	50.8
4 47.3 50.1 47.2 49.6 49.6 49.6 49.6 47.1 47.8 45.6 45.3 47.3 10.0 57.3 6 53.0 59.8 50.1 59.6 59.1 57.1 55.4 52.8 52.0 50.9 50.6 50.3 50.0 54.9 0.0 63.0 7 54.9 61.9 49.8 61.3 61.1 60.4 58.7 57.6 51.3 40.8 43.7 42.6 62.2 0.0 54.9 0.0 54.9 9 47.8 56.7 40.6 55.2 55.7 53.7 51.7 47.6 45.3 42.5 41.9 40.9 47.8 0.0 47.8 10 45.9 52.3 42.1 51.8 51.3 48.8 48.5 42.6 38.7 38.0 37.2 44.5 0.0 44.5 11 44.3 52.7 38.6 37.7 45.6 45.5 53.8	Night	3	46.6	50.8	42.2	50.5	50.2	49.7	49.3	47.9	45.9	42.9	42.6	42.3	46.6	10.0	56.6
3 49.0 33.1 47.4 32.3 30.1 49.2 48.0 47.8 47.3 43.0 10.0 95.0 7 54.9 61.9 49.8 61.3 61.1 60.4 58.7 55.7 53.0 50.5 50.3 50.0 54.6 62.2 20.0 54.9 6.0 54.9 0.0 54.9 9 47.8 56.7 40.6 56.2 55.7 53.7 51.7 47.6 45.3 42.5 41.9 40.9 47.8 0.0 54.9 10 45.9 52.3 42.1 51.8 51.3 49.8 48.8 46.5 44.9 42.6 42.2 45.9 0.0 45.9 11 44.3 52.7 38.4 52.2 51.6 49.8 48.2 44.5 42.2 34.9 0.0 44.3 0.0 44.5 12 44.5 52.6 35.9 52.1 51.3 44.5 42.2 38.7		4	47.3	50.1	45.2	49.8	49.6	49.1	48.8	47.9	47.1	45.8	45.6	45.3	47.3	10.0	57.3
7 54.9 61.9 49.8 61.3 61.1 60.4 58.7 55.7 53.0 50.5 50.3 50.0 54.9 0.0 54.9 9 47.8 56.7 40.6 56.2 55.7 53.7 51.7 47.6 43.3 44.8 43.7 42.6 62.2 0.0 62.2 10 45.9 52.3 42.1 51.8 51.3 49.8 48.8 46.5 44.9 42.2 42.2 45.9 0.0 47.8 11 44.3 52.7 38.4 52.2 51.6 49.8 48.2 44.5 42.2 39.4 39.0 38.6 44.3 0.0 44.3 12 44.5 52.6 35.5 53.8 53.0 47.1 45.6 42.6 38.7 38.0 37.2 44.4.5 0.0 45.4 13 42.7 52.6 35.5 53.8 53.1 51.6 50.8 47.9 42.7 0.0		6	49.6 53.0	53.1	47.4 50.1	52.8 59.6	52.5	51.9	51.3	50.1	49.2 52.0	48.0	47.8 50.6	47.5 50.3	49.6 53.0	10.0	63.0
8 62.2 73.4 42.3 73.2 72.8 71.0 68.4 57.6 51.3 44.8 43.7 42.6 62.2 0.0 62.2 9 47.8 56.7 43.6 55.7 53.7 51.7 47.6 45.3 42.5 41.9 40.9 47.8 0.0 47.8 10 45.9 52.3 42.1 51.8 51.3 49.8 48.2 44.5 42.2 39.4 39.0 38.6 44.3 0.0 44.5 11 44.3 52.7 38.4 52.1 51.4 49.5 48.3 45.3 42.6 38.7 38.6 44.5 0.0 44.5 13 43.2 54.6 35.5 52.1 51.3 48.5 46.1 42.7 39.7 36.5 35.7 42.3 0.0 42.3 14 42.7 52.6 35.5 52.1 51.3 48.5 46.1 42.7 39.7 36.2 35.7		7	54.9	61.9	49.8	61.3	61.1	60.4	58.7	55.7	53.0	50.5	50.3	50.0	54.9	0.0	54.9
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		8	62.2	73.4	42.3	73.2	72.8	71.0	68.4	57.6	51.3	44.8	43.7	42.6	62.2	0.0	62.2
11 44.3 52.7 38.4 52.2 51.6 49.8 48.2 44.5 42.2 39.4 39.0 38.6 44.3 0.0 44.3 12 44.5 52.6 36.9 52.1 51.4 49.5 48.3 45.3 42.6 38.7 38.0 37.2 44.5 0.0 44.5 13 43.2 54.6 35.5 53.8 53.0 47.1 45.6 42.5 40.4 36.9 36.5 35.7 43.2 0.0 42.7 15 42.3 49.7 36.5 49.2 48.6 46.8 45.6 43.0 40.7 38.1 37.7 36.9 42.3 0.0 42.3 16 45.4 54.2 35.2 53.9 53.6 52.0 51.3 45.3 41.0 37.0 36.3 35.5 45.4 0.0 42.3 17 46.2 54.4 35.9 52.7 52.0 47.9 43.3 39.2 <td></td> <td>9 10</td> <td>47.8</td> <td>50.7</td> <td>40.8</td> <td>56.2</td> <td>55.7</td> <td>49.8</td> <td>48.8</td> <td>47.6</td> <td>45.3 44.9</td> <td>42.5</td> <td>41.9</td> <td>40.9</td> <td>47.8</td> <td>0.0</td> <td>47.8</td>		9 10	47.8	50.7	40.8	56.2	55.7	49.8	48.8	47.6	45.3 44.9	42.5	41.9	40.9	47.8	0.0	47.8
12 44.5 52.6 36.9 52.1 51.4 49.5 48.3 45.3 42.6 38.7 38.0 37.2 44.5 0.0 44.5 Day 13 43.2 54.6 35.5 53.8 53.0 47.1 45.6 42.5 40.4 36.9 36.5 35.7 43.2 0.0 43.2 Day 14 42.7 52.6 35.5 52.1 51.3 48.5 46.1 42.7 39.7 36.7 36.2 35.7 43.2 0.0 42.3 15 42.3 49.7 36.5 53.9 53.6 52.0 51.3 45.3 41.0 37.0 36.3 35.5 45.4 0.0 45.4 16 45.4 35.5 53.8 53.1 51.6 50.8 47.9 42.2 37.3 36.6 35.4 40.0 46.2 40.0 46.2 46.3 49.0 46.3 46.2 0.0 42.1 1.0 52.0 </td <td></td> <td>11</td> <td>44.3</td> <td>52.7</td> <td>38.4</td> <td>52.2</td> <td>51.6</td> <td>49.8</td> <td>48.2</td> <td>44.5</td> <td>42.2</td> <td>39.4</td> <td>39.0</td> <td>38.6</td> <td>44.3</td> <td>0.0</td> <td>44.3</td>		11	44.3	52.7	38.4	52.2	51.6	49.8	48.2	44.5	42.2	39.4	39.0	38.6	44.3	0.0	44.3
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		12	44.5	52.6	36.9	52.1	51.4	49.5	48.3	45.3	42.6	38.7	38.0	37.2	44.5	0.0	44.5
15 42.3 49.7 36.5 49.2 48.6 46.8 45.6 43.0 40.7 38.1 37.7 36.9 42.3 0.0 42.3 16 45.4 54.2 35.2 53.9 53.6 52.0 51.3 45.3 41.0 37.0 36.3 35.5 45.4 0.0 45.4 17 46.2 54.4 35.5 53.8 53.1 51.6 50.8 47.9 42.2 37.3 36.6 35.8 46.2 0.0 46.2 18 42.1 49.2 35.1 48.8 48.4 47.2 46.4 42.9 40.0 36.6 35.8 46.2 0.0 42.1 19 47.0 54.6 37.9 54.2 53.9 52.7 52.0 47.9 43.3 39.2 38.7 38.1 47.0 5.0 52.0 20 42.4 46.3 39.7 46.0 45.6 44.4 42.7 41.5 40.0 39.8 42.1 5.0 47.1 21 44.0 46.3	Dav	13	43.2	54.6 52.6	35.5	53.8 52.1	53.0 51.3	47.1 48.5	45.6 46.1	42.5	40.4 39.7	36.9	36.5	35.7	43.2	0.0	43.2
16 45.4 54.2 35.2 53.9 53.6 52.0 51.3 45.3 41.0 37.0 36.3 35.5 45.4 0.0 45.4 17 46.2 54.4 35.5 53.8 53.1 51.6 50.8 47.9 42.2 37.3 36.6 35.8 46.2 0.0 46.2 18 42.1 49.2 35.1 48.8 48.4 47.2 46.4 42.9 40.0 36.7 36.1 35.3 42.1 0.0 45.4 19 47.0 54.6 37.9 54.2 53.9 52.7 52.0 47.9 43.3 39.2 38.1 42.1 5.0 52.0 20 42.1 46.3 39.7 46.0 45.6 44.6 44.1 42.7 41.5 40.2 40.0 39.8 42.1 5.0 47.1 21 44.0 48.5 40.7 48.2 47.9 47.2 46.6 44.8 43.1 41.4 41.1 40.8 44.0 5.0 49.0 Night <	- /	15	42.3	49.7	36.5	49.2	48.6	46.8	45.6	43.0	40.7	38.1	37.7	36.9	42.3	0.0	42.3
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		16	45.4	54.2	35.2	53.9	53.6	52.0	51.3	45.3	41.0	37.0	36.3	35.5	45.4	0.0	45.4
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		1/	46.2 42 1	54.4 49.2	35.5	53.8 48.8	53.1 48.4	51.6 47.2	50.8 46.4	47.9 42.9	42.2	37.3	36.6	35.8	46.2 42 1	0.0	46.2 42 1
20 42.1 46.3 39.7 46.0 45.6 44.6 44.1 42.7 41.5 40.2 40.0 39.8 42.1 5.0 47.1 21 44.0 48.5 40.7 48.2 47.9 47.2 46.6 44.8 43.1 41.4 41.1 40.8 44.0 5.0 49.0 Night 22 42.4 46.5 39.2 46.3 46.1 45.7 45.1 43.2 41.5 39.8 39.5 39.3 42.4 10.0 52.4 23 42.4 46.3 39.5 46.0 45.8 44.9 44.4 43.1 42.0 40.1 39.9 39.6 42.4 10.0 52.4 Timeframe Hour Lea Lmax Lmin L1% L2% L5% L8% L50% L90% L99% L99% 24-Hour CNEL CNEL<		19	47.0	54.6	37.9	54.2	53.9	52.7	52.0	47.9	43.3	39.2	38.7	38.1	47.0	5.0	52.0
21 44.0 48.5 40.7 48.2 47.9 47.2 46.6 44.8 43.1 41.4 41.1 40.8 44.0 5.0 49.0 Night 22 42.4 46.5 39.2 46.3 46.1 45.7 45.1 43.2 41.5 39.8 39.5 39.3 42.4 10.0 52.4 23 42.4 46.3 39.5 46.0 45.8 44.9 44.4 43.1 42.0 40.1 39.9 39.6 42.4 10.0 52.4 Timeframe Hour Leq Lmax Lmin L1% L2% L5% L50% L90% L95% L99% 42.4 10.0 52.4 Day Min 42.1 46.3 35.1 46.0 45.6 44.6 44.1 42.5 39.7 36.7 36.1 35.3 CNEL Daytime Nighttime Day Min 42.2 73.4 49.8 73.2 72.8 71.0 68.4 57.6 53.0 50.3 50.0 CNEL Ometratin		20	42.1	46.3	39.7	46.0	45.6	44.6	44.1	42.7	41.5	40.2	40.0	39.8	42.1	5.0	47.1
Night 22 42.4 40.3 59.2 40.1 49.7 43.1 43.1 41.3 59.8 59.3 59.3 42.4 10.0 52.4 23 42.4 46.3 39.5 46.0 45.8 44.9 44.4 43.1 42.0 40.1 39.9 39.6 42.4 10.0 52.4 Timeframe Hour Leq Lmax Lmin L1% L2% L5% L8% L25% L90% L90% L99% 42.4 10.0 52.4 Day Min 42.1 46.3 35.1 46.0 45.6 44.6 44.1 42.5 39.7 36.7 36.1 35.3 24-Hour Day Leq (dBA) Day Min 42.2 73.4 49.8 73.2 72.8 71.0 68.4 57.6 53.0 50.5 50.3 50.0 24-Hour CNEL CNEL Day ime (7am-10pm) Output me (10pm-7am)		21	44.0	48.5	40.7	48.2	47.9	47.2	46.6	44.8	43.1	41.4	41.1	40.8	44.0	5.0	49.0
Timeframe Hour Leq Lmax Lmin L1% L2% L5% L5% L50% L90% L99% L99% L4max Leq (dBA) Day Min 42.1 46.3 35.1 46.0 45.6 44.6 44.1 42.5 39.7 36.7 36.1 35.3 CNEL Daytime Nightime Max 62.2 73.4 49.8 73.2 72.8 71.0 68.4 57.6 53.0 50.5 50.3 50.0 CNEL Daytime Nightime Energy Average 52.0 Average: 53.8 53.3 51.5 50.2 46.5 43.4 40.2 39.6 39.0 70.0 (10pm-7am) Night Min 40.8 43.4 38.9 43.2 43.0 42.6 42.3 41.3 40.5 39.4 39.2 39.0 55.1 52.0 47.6 Night Max 53.0 59.8 50.1 59.6 59.1 <td< td=""><td>Night</td><td>22</td><td>42.4</td><td>46.3</td><td>39.2</td><td>46.0</td><td>45.8</td><td>43.7</td><td>45.1</td><td>43.2</td><td>41.5</td><td>40.1</td><td>39.5</td><td>39.5</td><td>42.4</td><td>10.0</td><td>52.4</td></td<>	Night	22	42.4	46.3	39.2	46.0	45.8	43.7	45.1	43.2	41.5	40.1	39.5	39.5	42.4	10.0	52.4
Day Min Max 42.1 62.2 46.3 73.4 35.1 49.8 46.0 73.2 45.6 73.2 44.6 73.2 44.6 71.0 44.6 68.4 42.5 53.0 39.7 53.0 36.7 50.5 36.1 50.3 35.3 50.0 CNEL (7am-10pm) Daytime (7am-10pm) Nighttime (7am-10pm) Energy Average 52.0 Average: 53.8 53.3 51.5 50.2 46.5 43.4 40.2 39.6 39.0 39.0 4000	Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour	Leq	(dBA)
Energy Average 52.0 Average: 53.8 53.3 51.5 50.2 46.5 43.4 40.2 39.6 39.0 55.1 55.1 57.3 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 43.1 43.3 4	Day	Min Max	42.1	46.3 73.4	35.1 49.8	46.0 73.2	45.6 72.8	44.6 71.0	44.1 68.4	42.5	39.7 53.0	36.7 50.5	36.1 50 3	35.3 50.0	CNEL	Daytime (7am-10nm)	Nighttime (10pm-7am)
Min Max 40.8 53.0 43.4 59.8 38.9 50.1 43.2 59.6 43.0 59.6 42.6 59.1 41.3 55.4 40.5 52.8 39.4 50.0 39.2 50.9 39.0 50.6 39.0 50.6 55.1 52.0 47.6 Energy Average 47.6 Average: 49.7 49.4 48.7 48.2 46.7 45.3 43.3 43.1 42.8	Energy	Average	52.0	Ave	erage:	53.8	53.3	51.5	50.2	46.5	43.4	40.2	39.6	39.0		(Fain Lopin)	
Max 53.0 59.8 50.1 59.6 59.1 57.1 55.4 52.8 52.0 50.9 50.6 50.3 Energy Average 47.6 Average: 49.7 49.4 48.7 48.2 46.7 45.3 43.3 43.1 42.8	Night	Min	40.8	43.4	38.9	43.2	43.0	42.6	42.3	41.3	40.5	39.4	39.2	39.0	55.1	52.0	47.6
	Energy	Max Average	53.0	59.8 Ave	50.1 srage:	59.6 49.7	59.1 49.4	57.1 48.7	55.4 48.2	52.8 46.7	52.0 45.3	50.9 43.3	50.6	50.3			



						24-Ho	our Noise Le	evel Measu	urement S	Summary						
Date:	Thursday, A	pril 6, 2023			Location:	L6 - Located	southwest of	the site nea	r the entran	ce to the	Meter:	Piccolo II			JN:	15441
Project:	FCP+POCC				Source:	residence at	31900 Live O	ak Canyon R	oad.						Analyst:	Z. Ibrahim
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.	.0															
a 80.	.0															
و 70. 65.	.0					4 4				al 4	- <mark>0</mark> - r	4				
ٿ 60. <u>ح</u> 55.	.0	- N - 6	5.8	68.	20	69 68	<mark>67.1</mark>	0.99	<u></u>	69 69	69 <mark>.</mark> 69	89	67.0 65.6	<mark>.55.1</mark>	54.8	
no 45.	21.0	58.					+ +					+ +		┼ॅ ┼		
– 40. 35.	.0 + +															+
	0	1 2	3	4 5	6	7 8	9 1	.0 11	12 2	13 14	15 1	6 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}		L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		Adj.	Adj. L _{eq}
	1	57.0	70.9	44.1	70.5	69.6	66.2	63.1	52.9	47.5	44.7	44.4	44.2	58.2	10.0	68.2
	2	57.8	70.0	42.8	69.6	68.6	65.3	62.6	55.5	48.2	43.4	43.1	42.8	57.8	10.0	67.8
Night	3	62.8	75.6	45.1	75.1	74.1	70.3	68.0	59.2	52.2	46.2	45.7	45.2	62.8	10.0	72.8
	5	68.2	78.9	47.8	73.0	77.4	75.3	73.7	67.8	61.5	52.1	50.9	47.5	68.2	10.0	74.0
	6	70.2	79.5	52.2	79.0	78.3	76.5	75.5	70.9	65.7	56.4	53.6	52.4	70.2	10.0	80.2
	7	69.4 68.4	78.8 78.1	50.0	78.3	77.5	76.2	75.1	70.1	63.3 62.3	52.4 51.6	51.2 50.0	50.2 47.8	69.4 68.4	0.0	69.4 68.4
	9	67.1	77.8	49.2	77.4	76.5	74.0	72.4	67.0	60.5	51.4	50.4	49.5	67.1	0.0	67.1
	10	67.2	77.9	51.6	77.5	76.8	73.9	71.9	67.3	61.9	53.8	52.7	51.7	67.2	0.0	67.2
	11	66.0 67.6	75.5	48.3	75.0	74.3	72.8	71.6	66.5 67.7	60.5 61.9	50.5	49.4 51.3	48.5	66.0 67.6	0.0	66.0 67.6
	13	67.2	76.3	51.7	75.8	75.2	74.5	72.5	68.0	62.4	53.7	52.7	51.9	67.2	0.0	67.2
Day	14	69.4	78.9	51.1	78.4	77.7	76.0	74.5	70.0	64.7	54.1	52.5	51.4	69.4	0.0	69.4
	15	69.2 68.7	77.8	50.8 49 5	77.2	76.5	74.9	73.9	70.6	65.6 65.6	55.0	53.0 52.7	51.1 50.2	69.2 68.7	0.0	69.2 68.7
	10	68.4	76.4	49.5	76.0	75.2	74.3	73.3	69.9	65.2	53.6	51.7	49.9	68.4	0.0	68.4
	18	67.0	75.9	48.4	75.4	74.8	73.4	72.4	68.1	62.1	52.2	50.3	48.7	67.0	0.0	67.0
	19 20	65.6 65.1	75.2	45.4	74.8	74.1	72.2	71.1	66.3	59.7 58.4	47.8	46.7	45.6 45.1	65.6 65.1	5.0 5.0	70.6 70.1
	20	64.0	75.3	45.5	74.8	73.8	72.5	69.6	63.2	55.2	46.8	46.4	45.7	64.0	5.0	69.0
Night	22	64.8	76.4	44.7	76.1	75.5	73.8	71.6	60.4	52.8	45.9	45.3	44.8	64.8	10.0	74.8
Timeframe	23 Hour	61.2	/3.0	44.6	/2.5 L1%	/1.6 L2%	68.8 L5%	66.9 L8%	59.3 L25%	51.0 L50%	45.5 L90%	45.1 L95%	44.7 L99%	61.2	10.0 Lea	(dBA)
Dav	Min	64.0	75.2	44.9	74.8	73.8	71.2	69.6	63.2	55.2	46.8	46.4	45.1	24-Hour CNEI	Daytime	Nighttime
Enorm	Max	69.4	78.9	51.7	78.4	77.7	76.2	75.1	70.6	65.6	55.3	53.0	51.9	GNEL	(7am-10pm)	(10pm-7am)
Energy	Min	57.0	69.5	42.8	69.0	68.0	64.7	62.4	52.7	46.2	43.4	43.1	49.2	72.0	67.6	64.9
Night	Max	70.2	79.5	52.2	79.0	78.3	76.5	75.5	70.9	65.7	56.4	53.6	52.4	, 2.0	07.0	0-113
Energy	Average	64.9	Ave	erage:	74.0	73.1	70.3	68.1	60.0	53.2	47.5	46.8	46.2			



						24-Ho	ur Noise Le	evel Measu	urement S	Summary						
Date: Project:	Thursday, A FCP+POCC	April 6, 2023			Location: Source:	L7 - Located Florida St.	northwest of	the site nea	r the resider	nce at 32054	Meter:	Piccolo II			JN: Analyst:	15441 Z. Ibrahim
							Hourly L _{eq} d	dBA Readings	(unadjusted))						
85.	0						1							1		
8 0. 75.	0															
b 70.	0			_		_										
ٿ 60. <u>ح</u> 55.	0	- <u>v</u> 6	م	3.6	55.5	<mark>.4</mark>				~				<mark>9</mark>	3.7 3.7	— -
n 50. o 45.	0 1 65	59	20	9		29.00	<mark></mark>	<mark>4.1</mark>	<mark></mark>	<mark>57.</mark>	2.6	<mark>6.6 0.4</mark>	0.8 55.8			0
– 40. 35.	0						- <u>0</u> 1	<mark>л — п</mark> —	- <u>0</u>		4	4 4	<u> </u>			
	0	1 2	3	4 5	6	7 8	91	10 11 Hour Be	12 eginning	13 14	15 1	.6 17	18 19	20	21 22	23
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	59.7	64.0	55.5	63.7	63.4	62.9	62.4	60.7	59.1	56.7	56.2	55.7	59.7	10.0	69.7
	2	59.2	63.6	55.1	63.3	63.1	62.7	62.3	60.1	58.8	56.9	55.9	55.2	59.2	10.0	69.2
Night	3	59.9	63.3	56.6	63.0	62.8	62.3	62.0	60.8	59.6	57.6	57.2	56.7	59.9	10.0	69.9
	4	62.0	65.1	59.1	64.9	64.7	64.2	63.8	62.6	61.7	60.0	59.6	59.2	62.0	10.0	72.0
	6	65.5	67.8	63.6	67.5	67.3	66.9	66.7	66.0	65.4	64.2	64.0	63.7	65.5	10.0	73.6
	7	62.6	65.4	60.7	65.2	64.9	64.5	64.1	63.0	62.3	61.2	61.0	60.8	62.6	0.0	62.6
	8	59.4	64.1	56.4	63.8	63.5	62.5	61.8	59.7	58.7	57.2	56.9	56.6	59.4	0.0	59.4
	10	54.1	61.5	48.4	60.9	60.2	59.1	54.0	55.2	52.5	49.1	48.8	48.5	54.1	0.0	52.7
	11	52.8	56.4	50.1	56.1	55.7	55.0	54.6	53.5	52.5	50.9	50.5	50.2	52.8	0.0	52.8
	12	52.8	58.7	49.3	58.0	57.5	56.4	55.7	53.3	51.9	50.2	49.9	49.4	52.8	0.0	52.8
Dav	13	57.7	54.2	47.6	54.0	53.8	62.8 53.2	52.8	58.1	55.5 49.9	53.3 48.3	52.9 48.0	52.4	57.7	0.0	57.7
,	15	45.6	53.9	41.6	53.5	53.1	51.7	49.2	44.7	43.5	42.2	41.9	41.7	45.6	0.0	45.6
	16	46.4	53.5	41.8	53.2	52.9	51.4	50.0	47.0	44.5	42.4	42.2	41.9	46.4	0.0	46.4
	17	46.6	56.7	41.7	55.5	52.9	50.6	49.0	46.1	44.1	42.5	42.2	41.8	46.6	0.0	46.6
	18	55.8	59.9	47.1 53.1	57.6	57.3	55.5 58.6	53.0	51.0	49.9 55.3	53.8	47.6 53.5	53.2	55.8	5.0	50.8 60.8
	20	61.6	65.8	58.8	65.5	65.1	64.5	64.0	62.0	61.2	59.6	59.3	58.9	61.6	5.0	66.6
	21	62.6	68.4	59.1	68.1	67.7	66.2	65.2	62.9	61.8	60.1	59.7	59.3	62.6	5.0	67.6
Night	22	63.7 60.1	69.1 64.9	59.0 56.3	68.9 64.6	68.6 64.4	68.1 63.6	67.6 63.0	64.5 60.7	62.4	60.0 57.4	59.6 56.9	59.2 56.4	63.7 60.1	10.0	73.7
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24 Hour	Leq	(dBA)
Day	Min	45.6	53.5	41.6	53.2	52.9	50.6	49.0	44.7	43.5	42.2	41.9	41.7	CNEL	Daytime	Nighttime
Energy	Max Average	62.6 57.3	68.4 Δνο	60.7	68.1 59.4	67.7 58 Q	66.2 57.8	65.2 56.9	63.0 54.5	62.3 53.0	61.2 51.3	61.0 51.0	60.8 50.6		(7am-10pm)	(10pm-7am)
Night	Min	59.2	62.9	55.1	62.7	62.4	61.8	61.4	60.1	58.8	56.4	55.9	55.2	68.3	57.3	62.1
Night	Max	65.5	69.1	63.6	68.9	68.6	68.1	67.6	66.0	65.4	64.2	64.0	63.7			
Energy	Average	62.1	Ave	rage:	65.0	64.8	64.2	63.8	62.3	61.0	59.0	58.6	58.1			





APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CALCULATIONS





	FHWA-R	D-77-108 HIC	GHWA	Y NOISE	E PREDI	CTION MO	DEL (9/	12/20	21)		
Scenario Road Name Road Segmen	b: 2050 FCSF e: 16th St. t: s/o Avenue	PNP ∋E				Project N Job Nur	lame: F(mber: 15	CSP 8 5411	POCC		
SITE S	PECIFIC IN	NPUT DAT	4			NO	ISE M	ODEL	INPUT	5	
Highway Data					Site Col	nditions (H	lard = 1	0, Sol	ft = 15)		
Average Daily 1	Traffic (Adt):	4,581 vehi	icles				A	utos:	15		
Peak Hour I	Percentage:	7.70%			M	edium Truc	ks (2 Ax	(les):	15		
Peak Ho	our Volume:	353 vehic	les		He	eavy Truck	s (3+ Ax	(les):	15		
Vet	icle Speed:	40 mph		-	Vohiclo	Mix					
Near/Far Lar	e Distance:	12 feet			Venicle	nicleType	D)av	Evenina	Niaht	Daily
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			N	ledium Tru	cks: 8	0.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all. 1-Berm):	0.0				Heavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	33.0 feet		-	Noine C	ouroo Elos	ationa	(in fo	a.#1		
Centerline Dist. t	o Observer:	33.0 feet		-	NOISE 3	Autoo:			=1)		
Barrier Distance t	o Observer:	0.0 feet			Modi	m Trucks:	2.00	00 07			
Observer Height (A	Above Pad):	5.0 feet			Hoo	w Trucks	2.23	57 DA 1	Grade Ad	iustmen	t 0.0
Pa	d Elevation:	0.0 feet			nea	vy muchs.	0.00	04	0/000/10	aounon	. 0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent D	Distance	e (in fe	eet)		
F	load Grade:	0.0%				Autos:	32.83	33			
	Left View:	-90.0 deg	rees		Mediu	im Trucks:	32.56	62			
	Right View:	90.0 deg	rees		Hea	vy Trucks:	32.58	89			
FHWA Noise Mode	I Calculation	S									
VehicleType	REMEL	Traffic Flow	V D	istance	Finite	e Road	Fresne	el E	Barrier Atte	en Be	rm Atten
Autos:	66.51	-5.9	96	2.6	64	-1.20	-4	4.52	0.0	000	0.000
Medium Trucks:	77.72	-24.1	13	2.6	69	-1.20	-4	4.86	0.0	000	0.000
Heavy Trucks:	82.99	-25.9	93	2.6	69	-1.20	-{	5.69	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo an	d barr	ier atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq E	vening	Leq Ni	ight		Ldn	С	NEL
Autos:	62	2.0	60.8		59.7	7	55.6		63.2	2	63.7
Medium Trucks:	55	5.1	54.5		48.2	2	48.4		56.1		56.3
Heavy Trucks:	58	3.5	57.7		54.1		52.2		59.7	7	60.0
Vehicle Noise:	64	1.2	63.2		61.0)	57.7		65.3	3	65.8
Centerline Distance	e to Noise C	ontour (in fe	et)			1					
				70	dBA	65 dE	BA	60) dBA	55	dBA
			Ldn:		16		35		75		161
			CNEL:		17		37		80		172

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9/12/20	021)		
Scenar	io: 2050 FCSP	WP				Project	Name:	FCSP	& POCC		
Road Nam	ne: 16th St.					Job Ni	umber:	15411			
Road Segme	nt: s/o Avenue	E									
SITE	SPECIFIC IN	PUT DATA				N	OISE	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions ('Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,471 vehicle	s					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 /	Axles):	15		
Peak H	lour Volume:	575 vehicles	6		He	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	40 mph		v	ehicle I	Mix					-
Near/Far La	ne Distance:	12 feet		-	Vehi	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	70.6%	13.6%	15.8%	97.539
Ba	rrior Hoight	0.0 feet			Me	edium Tr	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all_1-Berm)	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	33.0 feet						- (- 4	- 41		
Centerline Dist.	to Observer:	33.0 feet		~	ioise so	ource Ele	evation	s (in re	eet)		
Barrier Distance	to Observer:	0.0 feet			Madiu	Autos m Trucka	. 0.	207			
Observer Height	(Above Pad):	5.0 feet			Heav	n nucks	. Z.	297	Grade Ad	liustment	. 0 0
P	ad Elevation:	0.0 feet			neav	y mucka	. 0.	004	0/000//10	Juounoni	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degree	s		Mediur	m Trucks	: 32.	562			
	Right View:	90.0 degree	s		Heav	y Trucks	: 32.	589			
FHWA Noise Mod	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	iel	Barrier Att	ten Ber	m Atten
Autos:	66.51	-3.84		2.64	ŀ	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-22.01		2.69)	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	82.99	-23.81		2.69)	-1.20		-5.69	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenı	uation)						-
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq I	Vight		Ldn	C	NEL
Autos:	64	.1	62.9		61.8		57.7	7	65.3	3	65.
Medium Trucks:	57	.2	56.6		50.3		50.5	5	58.3	2	58.
Heavy Trucks:	60	.7	59.8		56.2		54.3	3	61.	9	62.
Vehicle Noise:	66	.3	65.3		63.1		59.9)	67.	5	67.
Centerline Distan	ce to Noise Co	ontour (in feet)		70 ~	DA I	6F 4	ID A	4	OdPA	FF	dRA
				70 a	22	03 0	10M /10	6	10.0004	1 35	UDA 22/
		~	UEL ·		24		+0 51		104		224
		01			24		51				200

Thursday, September 7, 2023

FHWA-F	D-77-108 HIGH	WAY NO	ISE F	PREDIC	TION M	ODEL	9/12/2	:021)		
Scenario: 2050 FCS Road Name: 16th St. Road Segment: s/o Avenu	P Int NP e E				Project Job Nu	Name: Imber:	FCSP 15411	& POCC		
SITE SPECIFIC I	NPUT DATA				N	OISE	MODE	L INPUTS	5	
Highway Data			S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt):	4,271 vehicle	es					Autos.	: 15		
Peak Hour Percentage:	7.70%			Me	dium Tru	cks (2	Axles)	: 15		
Peak Hour Volume:	329 vehicles	6		He	avy Truc	ks (3+	Axles).	15		
Vehicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far Lane Distance:	12 feet			Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data					A	utos:	70.69	6 13.6%	15.8%	97.539
Barrier Height:	0.0 feet			Me	edium Tr	ucks:	80.3%	6 4.7%	14.9%	1.499
Barrier Type (0-Wall, 1-Berm):	0.0			ŀ	Heavy Tr	ucks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	33.0 feet						- 6- 4	41		
Centerline Dist. to Observer:	33.0 feet		N	oise sc	ource Ele	vation	S (IN T	eet)		
Barrier Distance to Observer:	0.0 feet			Madiu	Autos	. 0	207			
Observer Height (Above Pad):	5.0 feet			Heav	n Trucks	. 2 . 0	004	Grade Adi	iustment	. 0.0
Pad Elevation:	0.0 feet			neav	y mucks	. 0	004	Grade Auj	usunem	. 0.0
Road Elevation:	0.0 feet		Li	ane Equ	uivalent	Distan	ce (in	feet)		
Road Grade:	0.0%				Autos	: 32	.833			
Left View:	-90.0 degree	es		Mediur	m Trucks	: 32	.562			
Right View:	90.0 degree	es		Heav	ry Trucks	: 32	.589			
FHWA Noise Model Calculatio	าร									
VehicleType REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier Atte	en Ber	m Atten
Autos: 66.5	1 -6.26		2.64		-1.20		-4.52	0.0	000	0.00
Medium Trucks: 77.7	-24.44		2.69		-1.20		-4.86	0.0	000	0.00
Heavy Trucks: 82.9	-26.23		2.69		-1.20		-5.69	0.0	000	0.00
Unmitigated Noise Levels (wit	nout Topo and	barrier at	tenu	ation)						
VehicleType Leq Peak Ho	ur Leq Day	Le	q Eve	ening	Leq I	light		Ldn	C	NEL
Autos: 6	1.7	60.5		59.4		55.	3	62.9)	63.
Medium Trucks: 5	4.8	54.2		47.9		48.	1	55.8	3	56.
Heavy Trucks: 5	8.2	57.4		53.7		51.	9	59.4	1	59.
Vehicle Noise: 6	3.9	62.9		60.7		57.	4	65.0)	65.
Centerline Distance to Noise C	ontour (in feet))		1						
		ட	70 dE	BA	65 c	BA		60 dBA	55	dBA
		Ldn:		15		- 33	5	71		154

	FHWA-RI	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION M	ODEL (S	9/12/2	021)		
Scenar Road Nam Road Segme	io: 2050 FCSF ne: 16th St. nt: s/o Avenue	P Int WP				Project Job N	Name: F umber: 1	CSP	& POCC		
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	6,767 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	(xles):	15		
Peak H	lour Volume:	521 vehicles	3		He	avy Truc	:ks (3+ A	(xles):	15		
Ve	hicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	12 feet		-	Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Bai	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	33.0 feet		N	loise So	ource Ele	evations	s (in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	s: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	m Trucks	: 2.2	297			
Observer Height ((Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Ad	iustment	: 0.0
Pa	ad Elevation:	0.0 feet				,					
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in :	feet)		
	Road Grade:	0.0%				Autos	s: 32.8	333			
	Left View:	-90.0 degree	s		Mediur	m Trucks	32.	562			
	Right View:	90.0 degree	s		Heav	y Trucks	32.5	589			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atten
Autos:	66.51	-4.27		2.64		-1.20		-4.52	0.0	000	0.000
Medium Trucks:	77.72	-22.44		2.69)	-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-24.24		2.69)	-1.20		-5.69	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Ev	ening	Leq I	Night		Ldn	С	NEL
Autos:	63	5.7	62.5		61.4		57.3		64.9)	65.4
Medium Trucks:	56	5.8	56.2		49.9		50.1		57.8	3	58.0
Heavy Trucks:	60).2	59.4		55.7		53.8		61.4	1	61.7
Vehicle Noise:	65	i.9	64.9		62.7		59.4		67.0)	67.4
Centerline Distance	ce to Noise Co	ontour (in feet)									
				70 di	BA	65 0	dBA	6	60 dBA	55	dBA
			Ldn:		21		45		97		209
		CI	VEL:		22		48		103		223

	FHWA-R	D-77-108 HIGI	WAY N	NOISE P	REDIC	TION MO	DEL (9	/12/2	021)		
Scenari Road Nam Road Segmen	o: 2050 FCSF e: 16th St. at: s/o Avenue	PNP ≥E				Project N Job Nur	ame: F nber: 1	CSP 5411	& POCC		
SITE S	SPECIFIC IN	NPUT DATA				NO	ISE M	ODE	L INPUTS	3	
Highway Data				Si	te Con	ditions (H	lard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	2,198 vehic	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	169 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	40 mph		Ve	hicle	Mix					
Near/Far Lar	ne Distance:	12 feet			Veh	icleType	ſ	Dav	Evenina	Niaht	Daily
Site Data						Au	tos: 7	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			М	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tru	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	33.0 feet		N	nise Sr	ource Elev	ations	(in fe	pet)		
Centerline Dist. t	to Observer:	33.0 feet				Autos	0.0	00			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	/v Trucks:	8.0	04	Grade Adj	ustment	: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		La	ne Eq	uivalent D	listance	e (in i	teet)		
F	Road Grade:	0.0%				Autos:	32.8	33			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	32.5	62			
	Right View:	90.0 degre	es		Heav	/y Trucks:	32.5	89			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Atte	en Bei	rm Atten
Autos:	66.51	-9.15	i	2.64		-1.20	-	4.52	0.0	00	0.000
Medium Trucks:	77.72	-27.32	2	2.69		-1.20	-	4.86	0.0	00	0.000
Heavy Trucks:	82.99	-29.12	2	2.69		-1.20	-	5.69	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Eve	ning	Leg Ni	ight		Ldn	С	NEL
Autos:	58	3.8	57.6		56.5		52.4		60.0)	60.5
Medium Trucks:	51	1.9	51.3		45.0		45.2		52.9)	53.1
Heavy Trucks:	55	5.4	54.5		50.9		49.0		56.6	i	56.9
Vehicle Noise:	61	1.0	60.0		57.8		54.5		62.2		62.6
Centerline Distanc	e to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dE	3A	6	60 dBA	55	dBA
			Ldn:		10		21		46		99
		C	NEL:		11		23		49		105

	FHWA-RD	-77-108 HIGH	WAY I	NOISE F	PREDIC	TION M	ODEL (9/12/2	021)		
Scenari	o: 2050 FCSP	WP				Project	Name:	FCSP	& POCC		
Road Nam	e: 16th St.					Job N	umber:	15411			
Road Segmer	nt: s/o Avenue	E									
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE	L INPUT	S	-
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	3,832 vehicle	s					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2	Axles):	15		
Peak H	our Volume:	295 vehicles	3		Hei	avy Truc	:ks (3+)	Axles):	15		
Vel	hicle Speed:	40 mph		V	ehicle N	Nix					
Near/Far Lar	ne Distance:	12 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	lutos:	70.6%	13.6%	15.8%	97.539
Bar	rier Heiaht:	0.0 feet			Me	edium Ti	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Ti	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	33.0 feet		A.	oico Co		ovation	e (in f	of		
Centerline Dist. I	to Observer:	33.0 feet		N	0158 30	Auto		ə (III T 000	er)		
Barrier Distance t	to Observer:	0.0 feet			Modiur	n Truck	s. U.	207			
Observer Height ()	Above Pad):	5.0 feet			Heav	v Truck	5. Z. 5. R	004	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet			neav	y mack.	j. U.	004			0.0
Roa	d Elevation:	0.0 feet		Li	ane Equ	uivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 32.	833			
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 32.	562			
	Right View:	90.0 degree	s		Heav	y Truck	s: 32.	589			
FHWA Noise Mode	l Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.74		2.64		-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-24.91		2.69		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	82.99	-26.71		2.69		-1.20		-5.69	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	ation)						-
VehicleType	Leq Peak Hou	r Leq Day		Leg Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	61.	.2	60.0		58.9		54.8	3	62.4	1	62.
Medium Trucks:	54	.3	53.7		47.4		47.	3	55.3	3	55.
Heavy Trucks:	57.	.8	56.9		53.3		51.4	1	59.)	59.
Vehicle Noise:	63.	.4	62.4		60.2		57.	D	64.	3	65.
Centerline Distanc	e to Noise Co	ntour (in feet)			1			1			
			L	70 dl	BA	65	dBA	6	i0 dBA	55	dBA
			Ldn:		14		31		67		143
					4.5						

Thursday, September 7, 2023

FHWA-	RD-77-108 HIGH	WAY NO	SE PRED	ICTION MO	DDEL (9	/12/20)21)		
Scenario: 2050 FC	SP Int NP			Project I	<i>Vame:</i> F	CSP a	& POCC		
Road Name: 16th St.	_			Job Nu	mber: 1	5411			
Road Segment: s/o Aveni	ie E								
SITE SPECIFIC	NPUT DATA			N	DISE M	ODE		5	
Highway Data			Site C	onditions (Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt):	2,062 vehicle	es			A	lutos:	15		
Peak Hour Percentage:	7.70%		1	Aedium Tru	cks (2 A	xles):	15		
Peak Hour Volume:	159 vehicles	S		Heavy Truci	ks (3+ A	xles):	15		
Vehicle Speed:	40 mph		Vehicl	e Mix					
Near/Far Lane Distance:	12 feet		V	ehicleType	1	Day	Evening	Night	Daily
Site Data				A	utos: T	70.6%	13.6%	15.8%	97.53%
Barrier Height	0.0 feet			Medium Tru	icks: 8	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-Berm);	0.0			Heavy Tru	icks: 1	75.9%	8.2%	15.9%	0.98%
Centerline Dist. to Barrier.	33.0 feet		Neice	Course Ele	votiona	(in to	e fi		
Centerline Dist. to Observer.	33.0 feet		NOISe	Source Ele	vauons		el)		
Barrier Distance to Observer.	0.0 feet		Mar	Autos.	0.0	00			
Observer Height (Above Pad)	5.0 feet		Wet	our Trucks	2.2	97	Grade Ad	iustmont	
Pad Elevation:	0.0 feet		110	avy muchs	0.0	04	Orade Auj	usunon	0.0
Road Elevation:	0.0 feet		Lane I	quivalent	Distanc	e (in f	ieet)		
Road Grade:	0.0%			Autos	32.8	33			
Left View:	-90.0 degree	es	Med	ium Trucks	32.5	62			
Right View:	90.0 degree	es	He	avy Trucks	32.5	89			
FHWA Noise Model Calculation	ns		1						
VehicleType REMEL	Traffic Flow	Distand	e Fin	te Road	Fresne	el I	Barrier Atte	en Ber	m Atten
Autos: 66.5	1 -9.43		2.64	-1.20	-	4.52	0.0	000	0.00
Medium Trucks: 77.7	2 -27.60		2.69	-1.20	-	4.86	0.0	000	0.00
Heavy Trucks: 82.9	9 -29.40		2.69	-1.20	-	-5.69	0.0	000	0.00
Unmitigated Noise Levels (wi	hout Topo and	barrier at	tenuatior)					
VehicleType Leq Peak H	our Leq Day	' Le	q Evening	Leq N	light		Ldn	CI	NEL
Autos:	58.5	57.4	56	.2	52.1		59.7	7	60.
Medium Trucks:	51.6	51.0	44	.7	44.9		52.6	6	52.
Heavy Trucks:	55.1	54.2	50	.6	48.7		56.3	3	56.
Vehicle Noise:	50.7	59.7	57	.5	54.3		61.9)	62.
Centerline Distance to Noise	Contour (in feet,)		-				1	
			70 dBA	65 d	BA	6	0 dBA	55	dBA
		Ldn:		9	20		44		95
				-					

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9	/12/20	021)		
Scenar Road Nam	Scenario: 2050 FCSP Int WP Road Name: 16th St. Pood Segment: s(o Avenue F					Project Job N	Name: F umber: 1	CSP 5411	& POCC		
Road Segme	nt: s/o Avenue	E									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	ODE		s	
Highway Data				S	Site Con	ditions (Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	3,492 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	269 vehicle	5		He	avy Truc	:ks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		L	/ehicle	Mix					
Near/Far La	ne Distance:	12 feet		F	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8	% 97.53%
Ba	rrier Heiaht:	0.0 feet			M	edium Tr	ucks:	30.3%	4.7%	14.9	% 1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9	% 0.98%
Centerline Di	st. to Barrier:	33.0 feet			Voise Sc	ource Ele	evations	(in fe	et)		
Centerline Dist.	to Observer:	33.0 feet		Ē	10.00 00	Autos	· 00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 0.0	97			
Observer Height ((Above Pad):	5.0 feet			Heav	v Trucks	. 2.2	04	Grade Ad	iustme	nt: 0.0
Pa	ad Elevation:	0.0 feet				,					
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distanc	e (in f	'eet)		
	Road Grade:	0.0%				Autos	s: 32.8	33			
	Left View:	-90.0 degree	es		Mediui	m Trucks	s: 32.5	62			
	Right View:	90.0 degree	es		Heav	y Trucks	32.5	89			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Att	en B	lerm Atten
Autos:	66.51	-7.14		2.64	4	-1.20		4.52	0.0	000	0.000
Medium Trucks:	77.72	-25.31		2.69	9	-1.20		4.86	0.0	000	0.000
Heavy Trucks:	82.99	-27.11		2.69	9	-1.20		5.69	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	r	Leq Ev	/ening	Leq I	Night		Ldn		CNEL
Autos:	60	.8	59.6		58.5		54.4		62.0	0	62.5
Medium Trucks:	53	.9	53.3		47.0		47.2		54.9	9	55.1
Heavy Trucks:	57	.4	56.5		52.9		51.0		58.6	6	58.9
Vehicle Noise:	63	.0	62.0		59.8		56.6		64.2	2	64.6
Centerline Distant	ce to Noise Co	ontour (in feet,)								
				70 d	iBA	65 0	'BA	6	0 dBA	1	55 dBA
			Ldn:		13		29		63		135
		C	NEL:		14		31		67		143

	FHWA-R	D-77-108 HIG	HWAY	NOISE I	PREDIC	CTION MO	DEL (9	/12/20	021)		
Scenario Road Name Road Segmen	o: 2050 FCSF e: Live Oak C t: s/o Outer F	P NP Syn. Rd. Highway 10 S				Project N Job Nur	lame: F nber: 1	CSP 5411	& POCC		
SITE S	PECIFIC IN	NPUT DATA				NO	ISE M	ODE	L INPUT	5	
Highway Data				S	ite Cor	nditions (H	lard = 1	10, So	oft = 15)		
Average Daily 1	Traffic (Adt):	9,334 vehic	les				A	utos:	15		
Peak Hour I	Percentage:	7.70%			Me	edium Truc	ks (2 A	xles):	15		
Peak Ho	our Volume:	719 vehicl	es		He	eavy Truck	s (3+ A	xles):	15		
Vet	icle Speed:	45 mph		V	ahiclo	Mix					
Near/Far Lar	e Distance:	36 feet			Veh	nicleType	1	Dav	Evenina	Niaht	Daily
Site Data						Au	tos: T	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			М	ledium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tru	cks: 1	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet		N	loise S	ource Elev	ations	(in fe	pet)		
Centerline Dist. t	o Observer:	44.0 feet				Autos	0.0	00			-
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (A	Above Pad):	5.0 feet			Hear	vy Trucks:	8.0	04	Grade Adj	iustment	: 0.0
Pa	d Elevation:	0.0 feet						- (1			
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent L	Istanc	e (IN 1	eet)		
	coad Grade:	0.0%			Madiu	Autos.	40.4	00			
	Len View:	-90.0 degn	ees		Hear	W Trucks	40.2	41			
	ragin view.	50.0 degi	563		mou	<i>ry maono</i> .	40.2	.02			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/ .	Barrier Atte	en Bei	m Atten
Autos:	68.46	-3.3	8	1.28		-1.20	-	4.61	0.0	000	0.000
Medium Trucks:	79.45	-21.5	5	1.31		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-23.3	5	1.31		-1.20	-	5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	d barri	er attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	ay 🛛	Leq Ev	ening	Leq Ni	ight		Ldn	C	NEL
Autos:	65	5.2	64.0		62.9)	58.7		66.3	3	66.8
Medium Trucks:	58	3.0	57.4		51.1		51.3		59.0)	59.2
Heavy Trucks:	6'	1.0	60.2		56.5		54.6		62.2	2	62.5
Venicle Noise:	6	(.1	66.1		64.0)	60.7		68.3	5	68.7
Centerline Distanc	e to Noise C	ontour (in fee	et)	70 4		05 -15	24		0 -0 4		-10.4
			1 day	70 di	DA 24	00 dE	72	6	157	55	udA 220
		,	NEL:		34		73		157		339
			NVLL.		50		10		100		501

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DEL (9	/12/20	021)		
Scenario	: 2050 FCSP	WP				Project Na	ame: F	CSP	& POCC		
Road Name	e: Live Oak Cy	/n. Rd.				Job Nun	nber: 1	5411			
Road Segmen	t: s/o Outer Hi	ighway 10 S									
SITE S	SPECIFIC IN	PUT DATA				NO	ISE M	ODE	L INPUT	s	
Highway Data				5	Site Con	ditions (H	ard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	37,656 vehicle	es				A	utos:	15		
Peak Hour I	Percentage:	7.70%			Me	dium Truci	ks (2 A)	xles):	15		
Peak Ho	our Volume:	2,900 vehicle	s		Hea	avy Trucks	s (3+ A)	xles):	15		
Vel	nicle Speed:	45 mph		V	/ehicle N	lix					
Near/Far Lar	e Distance:	36 feet			Vehi	cleType	L	Day	Evening	Night	Daily
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			Me	edium Truc	ks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy Truc	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet			loiso So	urco Elov	ations	(in fo	of		
Centerline Dist. t	o Observer:	44.0 feet		7	10138 30	Autos:	0.0	00	ey		
Barrier Distance t	o Observer:	0.0 feet			Mediur	Autos.	2.2	00			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks:	2.2	57 04	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			Ticav	y muchs.	0.0	04	0/000/10	aounom.	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	ıivalent D	istance	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	40.2	41			
	Right View:	90.0 degree	es		Heav	y Trucks:	40.2	62			
FHWA Noise Mode	I Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	2.68		1.28	3	-1.20	-	4.61	0.0	000	0.000
Medium Trucks:	79.45	-15.49		1.31	1	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.29		1.31	1	-1.20	-	5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day	<i>(</i>	Leq Ev	rening	Leq Ni	ght		Ldn	CI	VEL
Autos:	71.	.2	70.0		68.9		64.8		72.4	1	72.9
Medium Trucks:	64.	.1	63.5		57.2		57.4		65.	1	65.3
Heavy Trucks:	67.	.1	66.2		62.6		60.7		68.	3	68.6
Vehicle Noise:	73.	.2	72.2		70.1		66.7		74.4	1	74.8
Centerline Distanc	e to Noise Co	ntour (in feet,)	70			. 1				10.4
			L	70 d	IBA	65 dB	A 405	6	U aBA	55	ава
			Lan:		86		185		398		859
							207		1/16		016

Thursday, September 7, 2023

FHWA-F	RD-77-108 HIGH	WAY NO	ISE P	REDIC	TION MO	DEL	(9/12/2	021)		
Scenario: 2050 FCS	P Int NP				Project I	Vame:	FCSP	& POCC		
Road Name: Live Oak	Cyn. Rd.				Job Nu	mber:	15411			
Road Segment: s/o Outer	Highway 10 S									
SITE SPECIFIC	NPUT DATA				N	DISE	MODE	L INPUT	s	
Highway Data			Si	te Con	ditions (Hard :	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	7,859 vehicle	es					Autos	15		
Peak Hour Percentage:	7.70%			Me	dium Tru	cks (2	Axles)	: 15		
Peak Hour Volume:	605 vehicles	6		He	avy Truci	ks (3+	Axles)	15		
Vehicle Speed:	45 mph		V	hicle I	Mix					
Near/Far Lane Distance:	36 feet			Veh	icleTvpe		Dav	Evenina	Night	Dailv
Site Data					A	utos:	70.69	6 13.6%	15.8%	97.539
Parriar Haight	0.0 foot			Me	edium Tru	icks:	80.39	6 4.7%	14.9%	1.49%
Barrier Type (0-Wall 1-Berm)	0.0			ŀ	leavy Tru	icks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	44.0 feet				-					
Centerline Dist. to Observer:	44.0 feet		N	oise Sc	ource Ele	vatio	ns (in f	eet)		
Barrier Distance to Observer:	0.0 feet				Autos	. 0	0.000			
Observer Height (Above Pad):	5.0 feet			Meaiui	m Trucks	2		Crada Ad	ivetment	
Pad Elevation:	0.0 feet			Heav	y Trucks	8	.004	Graue Auj	Justinent	. 0.0
Road Elevation:	0.0 feet		Lá	ane Equ	uivalent	Distar	nce (in	feet)		
Road Grade:	0.0%				Autos	40	.460			
Left View:	-90.0 degree	es		Mediur	n Trucks	40).241			
Right View:	90.0 degree	es		Heav	y Trucks	40	0.262			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 68.4	6 -4.13		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 79.4	5 -22.30		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.2	5 -24.10		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (wit	hout Topo and	barrier a	tenu	ation)						
VehicleType Leq Peak H	our Leq Day	Le	q Eve	ening	Leq N	light		Ldn	C	NEL
Autos: 6	64.4	63.2		62.1		58	.0	65.6	5	66.
Medium Trucks:	57.3	56.7		50.4		50	.6	58.3	3	58.
Heavy Trucks: 6	50.3	59.4		55.8		53	.9	61.5	5	61.
Vehicle Noise:	6.4	65.4		63.2		59	.9	67.5	5	68.
Centerline Distance to Noise	Contour (in feet,									
			70 dE	BA	65 d	BA		60 dBA	55	dBA
		Ldn:		30		6	5	140		302

	FHWA-RI	0-77-108 HIGH	WAY N	OISE F	PREDIC	TION M	ODEL (9/12/2	021)		
Scenari Road Nam Road Segmer	io: 2050 FCSF e: Live Oak C nt: s/o Outer H	P Int WP yn. Rd. lighway 10 S				Project Job N	Name: I umber:	FCSP 15411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	33,263 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Med	dium Tr	ucks (2 A	(xles)	15		
Peak H	our Volume:	2,561 vehicles	3		Hea	avy Tru	cks (3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		V	ahicla I	Niv					
Near/Far La	ne Distance:	36 feet			Vehi	cleType		Dav	Evenina	Night	Daily
Site Data					1011	, o.o., po	Autos:	70.6%	13.6%	15.8%	97.53%
Bai	rior Height:	0.0 feet			Me	edium Ti	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all_1-Berm):	0.0			H	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	44.0 feet			laiaa Sa	uree El	ovetion	n lin fi	a a fi		
Centerline Dist.	to Observer:	44.0 feet		/1	loise 30	urce El	evalions	200	eel)		
Barrier Distance	to Observer:	0.0 feet			Modium	AULO n Truck	5. U.I	207			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	5. Z.J	201	Grade Ad	iustman	H 0 0
Pá	ad Elevation:	0.0 feet			neav.	y much	5. 0.1	504	Orade Au	usunem	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distanc	ce (in	feet)		
1	Road Grade:	0.0%				Auto	s: 40.4	460			
	Left View:	-90.0 degree	s		Mediun	n Truck	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.:	262			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	68.46	2.14		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-16.03		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.83		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	L	.eq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	70	.7	69.5		68.4		64.3	5	71.8	3	72.3
Medium Trucks:	63	.5	62.9		56.7		56.9)	64.6	3	64.7
Heavy Trucks:	66	.5	65.7		62.0		60.1		67.1	7	68.0
Vehicle Noise:	72	7	71.6		69.5		66.2	-	73.8	3	74.2
Centerline Distance	e to Noise Co	ontour (in feet)									
				70 di	BA	65	dBA	(60 dBA	55	dBA
			Ldn:		79		170		367		790
		CI	VEL:		84		181		391		842

	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	TION MO	DEL (9	/12/20	121)		
Scenari Road Nam Road Segmen	o: 2050 FCSF e: Live Oak C ht: s/o I-10 WI	P NP Syn. Rd. B Ramps				Project N Job Nur	lame: F nber: 1	CSP 8 5411	& POCC		
SITE S	SPECIFIC IN	NPUT DATA				NO	ISE M	ODE		3	
Highway Data				s	ite Con	ditions (H	lard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	11,384 vehic	les				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	877 vehicle	es		He	avy Truck	s (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		V	ahicle	Mix					
Near/Far Lar	ne Distance:	48 feet			Veh	icleType	1)av	Evening	Night	Daily
Site Data					VCII	Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			М	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tru	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	52.0 feet			loise Si	ource Elev	ations	(in fo	of)		
Centerline Dist. t	o Observer:	52.0 feet		-		Autos	0.0	00			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	/v Trucks:	8.0	04	Grade Adj	ustment	: 0.0
Pa	d Elevation:	0.0 feet		_							
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent D	Distance	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	46.4	00			
	Left View:	-90.0 degre	ees		Mediu	m Trucks:	46.2	09			
	Right View:	90.0 degre	ees		Heav	/y Trucks:	46.2	28			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.5	2	0.38	3	-1.20	-	4.66	0.0	00	0.000
Medium Trucks:	79.45	-20.6	9	0.41		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-22.4	9	0.41		-1.20	-	5.41	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	d barrie	er attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	ay 🛛	Leq Ev	ening	Leq Ni	ight		Ldn	C	NEL
Autos:	65	5.1	64.0		62.8		58.7		66.3		66.8
Medium Trucks:	58	3.0	57.4		51.1		51.3		59.0)	59.2
Heavy Trucks:	61	1.0	60.1		56.5		54.6		62.2		62.5
Vehicle Noise:	67	7.1	66.1		64.0		60.7		68.3		68.7
Centerline Distanc	e to Noise C	ontour (in fee	et)			1					
			L	70 d	BA	65 dE	BA	6	0 dBA	55	dBA
			Ldn:		40		86		185		398
		(CNEL:		42		91		197		425

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC		DEL (9/12	2/2021)		
Scenar	io: 2050 FCSP	WP				Project Na	me: FCS	P & POCC		
Road Nan	ne: Live Oak C	/n. Rd.				Job Num	ber: 154	11		
Road Segme	nt: s/o I-10 WB	Ramps								
SITE	SPECIFIC IN	PUT DATA				NOI	SE MOI	DEL INPUT	s	
Highway Data					Site Con	ditions (Ha	ard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	36,707 vehicle	es				Auto	os: 15		
Peak Hour	Percentage:	7.70%			Me	dium Truck	s (2 Axle	s): 15		
Peak F	lour Volume:	2,826 vehicle	s		He	avy Trucks	(3+ Axle	s): 15		
Ve	ehicle Speed:	45 mph			Vehicle I	Nix				
Near/Far La	ne Distance:	48 feet			Vehi	cleType	Day	/ Evening	Night	Daily
Site Data						Auto	os: 70.	6% 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			Me	edium Truc	ks: 80.	3% 4.7%	14.9%	1.49%
Barrier Type (0-V	Vall. 1-Berm):	0.0			ŀ	leavy Truc	ks: 75.	9% 8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	52.0 feet		H	Noiso Sa	urco Elov	tione (ir	foot		
Centerline Dist.	to Observer:	52.0 feet		Ľ	10/36 30	Autor:	0.000	i ieeij		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	2 297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8 004	Grade Ad	diustment	t: 0.0
P	ad Elevation:	0.0 feet			near	y mucho.	0.004		,	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent Di	stance (I	in feet)		
	Road Grade:	0.0%				Autos:	46.400			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	46.209			
	Right View:	90.0 degree	es		Heav	y Trucks:	46.228			
FHWA Noise Mod	el Calculations	5								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier At	ten Ber	rm Atten
Autos:	68.46	2.57		0.3	8	-1.20	-4.6	6 0.	.000	0.000
Medium Trucks:	79.45	-15.60		0.4	1	-1.20	-4.8	37 0.	.000	0.000
Heavy Trucks:	84.25	-17.40		0.4	1	-1.20	-5.4	1 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)				_	
VehicleType	Leq Peak Hou	r Leq Day	·	Leq E	vening	Leq Nig	ht	Ldn	C	NEL
Autos:	70	.2	69.0		67.9		63.8	71.	.4	71.9
Medium Trucks:	63	.1	62.4		56.2		56.4	64.	.1	64.3
Heavy Trucks:	66	.1	65.2		61.6		59.7	67.	2	67.6
Vehicle Noise:	72	.2	71.2		69.0		65.7	73.	.3	73.8
Centerline Distan	ce to Noise Co	ntour (in feet)	70	-04	05.10		CO -10 4		
			L	70 (з <i>ВА</i> 07	65 dB/	407	oU aBA	55	aBA
		0	Lan:		87		187	404	+	869
		Ci	VEL:		93		200	43	J	927
		0.			00		_00	-0	-	

Thursday, September 7, 2023

FHWA-R	D-77-108 HIGH\	NAY NO	SE PR	REDICT		EL (9/12/	2021)		
Scenario: 2050 FCS	P Int NP			F	Project Na	me: FCSF	% POCC		
Road Name: Live Oak (Cyn. Rd.				Job Num	ber: 1541	1		
Road Segment: s/o I-10 W	B Ramps								
SITE SPECIFIC I	NPUT DATA				NOI	SE MOD	EL INPUTS	6	
Highway Data			Site	e Condi	itions (Ha	ard = 10, S	Soft = 15)		
Average Daily Traffic (Adt):	10,089 vehicle	s				Autos	s: 15		
Peak Hour Percentage:	7.70%			Medi	um Truck	s (2 Axles,): 15		
Peak Hour Volume:	777 vehicles			Heav	vy Trucks	(3+ Axles): 15		
Vehicle Speed:	45 mph		Vet	nicle Mi	Y				
Near/Far Lane Distance:	48 feet		VCI	Vehicl	eType	Day	Evening	Night	Daily
Site Data					Auto	os: 70.6	% 13.6%	15.8%	97.539
Barrier Height:	0.0 feet			Меа	lium Truci	ks: 80.3	% 4.7%	14.9%	1.499
Barrier Type (0-Wall, 1-Berm):	0.0			He	avy Truci	ks: 75.9	% 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	52.0 feet		Noi	ine Cou	ree Eleve	tiono (in	fa at)		
Centerline Dist. to Observer:	52.0 feet		NOI	se 300	Autorio		leel)		
Barrier Distance to Observer:	0.0 feet			An allower	Autos:	0.000			
Observer Height (Above Pad):	5.0 feet		N	Healum	Trucks:	2.297	Grade Adi	ustmont	
Pad Elevation:	0.0 feet			neavy	TTUCKS.	0.004	Graue Auj	usuneni	. 0.0
Road Elevation:	0.0 feet		Lan	ne Equi	valent Di	stance (in	feet)		
Road Grade:	0.0%				Autos:	46.400			
Left View:	-90.0 degree	s	٨	Nedium	Trucks:	46.209			
Right View:	90.0 degree	s		Heavy	Trucks:	46.228			
FHWA Noise Model Calculation	IS								
VehicleType REMEL	Traffic Flow	Distanc	e I	Finite R	load I	Fresnel	Barrier Atte	en Ber	m Atten
Autos: 68.46	-3.04		0.38		-1.20	-4.66	6 0.0	00	0.00
Medium Trucks: 79.45	-21.21		0.41		-1.20	-4.87	0.0	00	0.00
Heavy Trucks: 84.25	-23.01		0.41		-1.20	-5.41	0.0	00	0.00
Unmitigated Noise Levels (with	out Topo and L	oarrier at	tenuat	tion)					
VehicleType Leq Peak Ho	ur Leq Day	Lee	q Even	ing	Leq Nig	ht	Ldn	CI	NEL
Autos: 6	4.6 6	33.4		62.3		58.2	65.8		66.
Medium Trucks: 5	7.4 5	56.8		50.6		50.8	58.5		58
Heavy Trucks: 6	0.4 5	59.6		56.0		54.1	61.6		61.
Vehicle Noise: 6	6.6 6	65.6		63.4		60.1	67.7		68.
Centerline Distance to Noise C	ontour (in feet)								
			70 dBA	1	65 dB/	4	60 dBA	55	dBA
	1	dn.		37		70	171		368
	-	un.		31		15			

	FHWA-RD	D-77-108 HIGH	WAY NO	ISE P	REDIC		DDEL (9/12/20)21)		_
Scenario: Road Name: Road Segment:	Scenario: 2050 FCSP Int WP Road Name: Live Oak Cyn. Rd. Road Segment: s/o I-10 WB Ramps SITE SPECIFIC INPUT DATA						Vame: F	CSP 8	& POCC		
SITE SP	ECIFIC IN	IPUT DATA				N	DISE N	IODE		S	
Highway Data				Si	te Con	ditions (l	Hard =	10, So	ft = 15)		
Average Daily Tra	ffic (Adt):	32,901 vehicle	s					Autos:	15		
Peak Hour Pe	rcentage:	7.70%			Me	dium Tru	cks (2 A	xles):	15		
Peak Hour	Volume:	2,533 vehicles	3		He	avy Truck	ks (3+ A	(xles):	15		
Vehici	le Speed:	45 mph		Va	hiclo	liv					
Near/Far Lane	Distance:	48 feet		ve	Vehi	cleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Barrio	r Hoiaht	0.0 feet			Me	edium Tru	icks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wall	1-Berm):	0.0			ŀ	leavy Tru	icks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist. t	o Barrier:	52.0 feet		No	vice Ce	uree Ele	votion	in fa	of)		
Centerline Dist. to (Observer:	52.0 feet		NC	lise 30	Autoo	valions		<i>el)</i>		
Barrier Distance to (Observer:	0.0 feet			Madiuu	Autos.	. 0.0	000			
Observer Height (Ab	ove Pad):	5.0 feet			Hoov	II TTUCKS.	. 2.4	297	Grade Ad	iuctmont	0.0
Pad I	Elevation:	0.0 feet			neav	y mucks.	0.0	JU4	Graue Au	usunen	0.0
Road I	Elevation:	0.0 feet		La	ne Equ	uivalent	Distand	e (in f	ieet)		
Roa	ad Grade:	0.0%				Autos.	46.4	400			
1	.eft View:	-90.0 degree	s		Mediur	n Trucks.	46.2	209			
Ri	ght View:	90.0 degree	s		Heav	y Trucks.	46.	228			
FHWA Noise Model C	alculation	s		-							
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	el .	Barrier Att	en Ber	m Atten
Autos:	68.46	2.09		0.38		-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-16.08		0.41		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.88		0.41		-1.20		-5.41	0.0	000	0.000
Unmitigated Noise Le	evels (with	out Topo and	barrier a	ttenua	ation)						
VehicleType Le	q Peak Hou	ir Leq Day	Le	q Eve	ning	Leq N	light		Ldn	C	VEL
Autos:	69	.7	68.6		67.4		63.3		70.9	9	71.4
Medium Trucks:	62	6	62.0		55.7		55.9		63.6	3	63.8
Heavy Trucks:	65	.6	64.7		61.1		59.2		66.8	3	67.1
Vehicle Noise:	71	.7	70.7		68.6		65.3		72.9	9	73.3
Centerline Distance t	o Noise Co	ontour (in feet)									
				70 dB	BA	65 d	BA	6	0 dBA	55	dBA
			Ldn:		81		174		375		808
		CI	VEL:		86		186		400		861

	FHWA-R	D-77-108 HIG	HWAY I	NOISE F	REDIC	TION MO	DEL (9	/12/2	021)		
Scenari Road Nam Road Segmer	o: 2050 FCSF e: Live Oak C nt: n/o I-10 W	P NP Cyn. Rd. B Ramps				Project N Job Nui	lame: F nber: 1	CSP 5411	& POCC		
SITE	SPECIFIC IN	NPUT DATA				NC	ISE M	ODE	L INPUTS	3	
Highway Data				Si	ite Con	ditions (H	lard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,311 vehic	les				A	utos:	15		
Peak Hour	Percentage:	7.70%			Ме	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,487 vehicl	es		He	avy Truck	s (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far Lar	ne Distance:	48 feet			Veh	icleType	1)av	Evening	Night	Daily
Site Data					VCII	Au	itos: 1	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			М	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tru	cks: 1	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	52.0 feet		N	nica Si	ource Elev	ations	(in fe	oof)		
Centerline Dist.	to Observer:	52.0 feet		744	0136 30	Autos:	0.0	00	eei)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	00 07			
Observer Height (J	Above Pad):	5.0 feet			Heat	n Trucks:	8.0	04	Grade Adi	ustment	0.0
Pa	ad Elevation:	0.0 feet			near	ly mucho.	0.0	04	,		. 0.0
Roa	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent L	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos:	46.4	00			
	Left View:	-90.0 degr	ees		Mediu	m Trucks:	46.2	09			
	Right View:	90.0 degr	ees		Heav	/y Trucks:	46.2	28			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Atte	en Bei	rm Atten
Autos:	68.46	-0.2	2	0.38		-1.20	-	4.66	0.0	00	0.000
Medium Trucks:	79.45	-18.3	9	0.41		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-20.1	9	0.41		-1.20	-	5.41	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	d barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	iy 🛛	Leq Eve	ening	Leq N	ight		Ldn	С	NEL
Autos:	67	7.4	66.3		65.1		61.0		68.6		69.1
Medium Trucks:	60	0.3	59.7		53.4		53.6		61.3		61.5
Heavy Trucks:	63	3.3	62.4		58.8		56.9		64.5	;	64.8
Vehicle Noise:	69	9.4	68.4		66.3		63.0		70.6		71.0
Centerline Distance	e to Noise C	ontour (in fee	et)							r	
				70 dE	BA	65 dE	BA	6	60 dBA	55	dBA
			Ldn:		57		122		263		567
		(CNEL:		60		130		280		604

	FHWA-RD	-77-108 HIGH	IWAY	NOISE	PREDIC	TION MC	DEL (9/	12/20)21)		
Scenari	io: 2050 FCSP	WP				Project N	lame: F	CSP 8	& POCC		
Road Nam	e: Live Oak C	/n. Rd.				Job Nu	mber: 15	5411			
Road Segmer	<i>nt:</i> n/o I-10 WE	Ramps									
SITE	SPECIFIC IN	PUT DATA				NC	DISE M	ODE		s	
Highway Data				9)	Site Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	41,368 vehicl	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 Ax	(les):	15		
Peak H	lour Volume:	3,185 vehicle	s		He	avy Truck	s (3+ Ax	(les):	15		
Ve	hicle Speed:	45 mph		1	/ehicle I	Mix					
Near/Far La	ne Distance:	48 feet		-	Vehi	icleTvpe	D	av	Evenina	Niaht	Dailv
Site Data					-	AL	itos: 7	0.6%	13.6%	15.8%	97.53%
Bai	rrier Height	0.0 feet			Me	edium Tru	cks: 8	0.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all 1-Rerm)	0.0			ŀ	leavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	52.0 feet									
Centerline Dist.	to Observer:	52.0 feet		,	voise So	ource Elev	ations	(in fe	et)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.00	00			
Observer Height (Above Pad):	5.0 feet			Mediur	m Trucks:	2.29	97	Crada Ad	iuotmont	
Pa	ad Elevation:	0.0 feet			Heav	y Trucks:	8.00)4	Grade Ad	jusiment	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent 🛛	Distance	e (in f	eet)		
1	Road Grade:	0.0%				Autos:	46.40	00			
	Left View:	-90.0 degre	es		Mediur	m Trucks:	46.20	09			
	Right View:	90.0 degre	es		Heav	y Trucks:	46.22	28			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	1	Barrier Att	en Ber	m Atten
Autos:	68.46	3.09		0.38	3	-1.20	-4	4.66	0.0	000	0.000
Medium Trucks:	79.45	-15.09		0.41	1	-1.20	-4	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-16.88		0.41	1	-1.20	-	5.41	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	/ening	Leq N	ight		Ldn	CI	NEL
Autos:	70	.7	69.6		68.4		64.3		71.9	9	72.4
Medium Trucks:	63	.6	63.0		56.7		56.9		64.	6	64.8
Heavy Trucks:	66	.6	65.7		62.1		60.2		67.	В	68.1
Vehicle Noise:	72	.7	71.7		69.6		66.3		73.9	9	74.3
Centerline Distanc	ce to Noise Co	ntour (in feet)	70 0	ID A	65 di	24	6	0 dBA	55	dBA
			I dn	700	04	05 01	202	0	UDA 100	. 35	0/10
									4.7/		942
		0			100		200		466		1 004

Thursday, September 7, 2023

FHWA-RD)-77-108 HIGH\	NAY NO	DISE	PREDIC	TION M	ODEL	(9/12/2	021)		
: 2050 FCSP : Live Oak C : n/o I-10 WE	Int NP yn. Rd. 8 Ramps				Project Job Nu	Name: Imber:	FCSP 15411	& POCC		
PECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S	
			S	Site Con	ditions (Hard =	: 10, Se	oft = 15)		
raffic (Adt):	17,992 vehicle	s					Autos:	15		
ercentage:	7.70%			Mee	dium Tru	cks (2	Axles).	15		
ur Volume:	1,385 vehicles			Hea	avy Truc	ks (3+	Axles):	15		
icle Speed:	45 mph		V	/ehicle M	Mix					
e Distance:	48 feet		F	Vehi	icleTvpe		Dav	Evenina	Night	Dailv
					A	utos:	70.6%	6 13.6%	15.8%	97.539
ior Hoiaht	0.0 feet			Me	edium Tr	ucks:	80.3%	6 4.7%	14.9%	1.49%
II 1-Rerm)	0.0			H	leavy Tr	ucks:	75.9%	6 8.2%	15.9%	0.98%
to Barrier:	52.0 feet						- (- 4	41		
Observer:	52.0 feet		~	voise So	ource Ele	vation		eet)		
Observer:	0.0 feet			Madis	Autos	: 0	.000			
bove Pad):	5.0 feet			Mediur	TI Trucks	: 2 , 0	.297	Grade Ad	iuctmon	H 0 0
Elevation:	0.0 feet			Heav	y mucks	. 0	.004	Grade Au	usunen	. 0.0
d Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in	feet)		
oad Grade:	0.0%				Autos	: 46	.400			
Left View:	-90.0 degree	s		Mediur	n Trucks	: 46	.209			
Right View:	90.0 degree	s		Heav	y Trucks	: 46	.228			
Calculation	5									
REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
68.46	-0.53		0.38	3	-1.20		-4.66	0.0	000	0.00
79.45	-18.70		0.41	1	-1.20		-4.87	0.0	000	0.00
84.25	-20.50		0.41	1	-1.20		-5.41	0.0	000	0.00
Levels (with	out Topo and I	barrier a	tten	uation)					-	
eq Peak Hou	r Leq Day	L	eq Ev	rening	Leq I	vignt	_	Lan	0	NEL
67	.1 t	00.9		64.8		60.	<i>'</i>	08.0	5	68.
60	.0 :	20.4		55.1 E0 E		00. EC	0 6	64.4	1	64
63	.0 6	20.1		00.0		50. 60	6	70.0	1 >	70
09		JO. I		00.0		02.	0	70.3)	70.
to Noise Co	ontour (in feet)		70 d	IRA .	65.0	IRA	1	50 dBA	55	dBA
		1	u		000		1 1			
	,	dn:		54		116	3	251		540
	FHWA-RU FHWA-RU FHWA-RU FHWA-RU FOR STORE STORES FOR ST	FHWA-RD-77-108 HIGH 2050 FCSP Int NP Live Cak (Von. Rd. n/o I-10 WB Ramps PECIFIC INPUT DATA affic (Adl): 17,992 vehicle ercentage: 7.70% ur Volume: 1,385 vehicles ciel Speed: ciel Speed: 10,138 vehicles ciel Speed: 10,138 remp: 0.0 10 Barrier: 52.0 feet 0.0 Sperver: 0.0 feet Elevation: 90.0 degree 79.45 79.45 68.46 -0.53 79.45 67.1 68.46 0.0.5 63.0 63.0 63.0 69.1	FHWA-RD-77-108 HIGHWAY NO 2050 FCSP Int NP Live Oak Cyn, Rd. in/o I-10 WB Ramps PECIFIC INPUT DATA affic (Adf): affic (Adf): 17,992 vehicles ercentage: r.70% ur Volume: 1,385 vehicles cicle Speed: 16: Speed: 10: Jostance: 48 feet Ier Height: 0.0 feet 10: Jostance: 48 feet Ier Height: 0.0 feet 10: Josenver: 52.0 feet 0.0bserver: 0.0 feet 16: Iervation: 90.0 degrees Calculations REMEL Traffic Flow Distar 68.46 -0.53 6.7.1 65.9 60.0 59.4 63.0 62.1 63.0 62.1 69.1 68.1	FHWA-RD-77-108 HIGHWAY NOISE 2050 FCSP Int NP Live Cak Cyn. Rd. 1/00 L10 WB Ramps FECIFIC INPUT DATA 2affic (Adf): 17,992 vehicles arffic (Adf): 1,385 vehicles cicle Speed: 45 mph a Distance: 48 feet Ier Height: 0.0 10 Distance: 50 feet 11 (1-Berm): 0.0 10 Distance: 50 feet 11 (Elevation: 0.0 feet 12 Elevation: 0.0 feet 14 Elevation: 0.0 feet 2 Adf Grade: 0.03 79.45 -18.70 48.425 -20.50 67.1 65.9 60.0 59.4 63.0 62.1 69.1 68.1	FHWA-RD-77-403 HIGHWAY NOISE PREDIC 2050 FCSP Int NP	FHWA-RD-77-108 HIGHWAY NOISE PREDICTION M 2050 FCSP Int NP Project : Live Oak (XP), Rd. Job NL n/o I-10 WB Ramps Job NL PECIFIC INPUT DATA N affic (Adt): 17,992 vehicles ercentage: 7.70% Medium Tru ur Volume: 1,385 vehicles Heavy Truc cle Speed: 45 mph Vehicle Mix v olume: 1,385 vehicles Medium Tru cle Speed: 45 mph Vehicle Mix v olume: 1,385 vehicles Medium Trucking cle Speed: 45 mph Vehicle Mix v oloserver: 0.0 feet lobserver: 0.0 feet Autos bove Pad): 5.0 feet Autos observer: 9.0.0 degrees Medium Truckis right View: 90.0 degrees Heavy Truckis rig	FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL 2050 FCSP Int NP Project Name: Job Number: Viol -10 WB Ramps Project Name: Job Number: PECIFIC INPUT DATA NOISE affic (Adt): 17.992 vehicles affic (Adt): 17.992 vehicles ercentage: 7.70% Wellum Trucks (2 ur Volume: 1.385 vehicles bistance: 48 feet Vehicle Mix Vehicle Mix a Distance: 48 feet Vehicle Mix Vehicle Mix 11.1 Earm): 0.0 10 Barrier: 52.0 feet Noise Source Elevation: 0.0 feet 16 Ilevation: 0.0 feet 16 Reavy Trucks: 46 16 View: -90.0 degrees 68.46 -0.53 0.38 68.45 -0.53 0.38 68.45 <t< td=""><td>FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2 2050 FCSP Int NP Project Name: FCSP Live Oak (Von. Rd. Job Number: 15411 n/o I-10 WB Ramps Site Conditions (Hard = 10, St PECIFIC INPUT DATA NOISE MODE affic (Adt): 17,992 vehicles affic (Adt): 17,992 vehicles ercentage: 7,70% Welver Autos: 205 Speed: 45 mph > Distance: 48 feet Vehicle Mix Vehicle Mix Volume: 1,385 vehicles in 1-Berm): 0.0 to Barrier: 52.0 feet Observer: 0.0 feet Elevation: 0.0 feet Elevation: 0.0 feet Elevation: 0.0 feet Autos: 70.69 Heavy Trucks: 8.004 Left View: 90.0 degrees Autos: 74.60 Totarie: 75.0 feet Leivalion: 0.61 Elevation: 0.0 feet Elevation: 0.33</td><td>FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021) 2050 FCSP Int NP Project Name: FCSP & POCC Job Number: 15411 1v0 L-10 WB Ramps Noise ModDeL INPUT PECIFIC INPUT DATA NOISE MODDEL INPUT affic (Adt): 17,992 vehicles Autos: 15 affic (Adt): 17,992 vehicles Autos: 15 affic (Adt): 17,992 vehicles Autos: 15 cic Speed: 45 mph Vehicle Mix a Distance: 48 feet Vehicle Mix Volume: 1,385 vehicles Vehicle Mix In 1-Bermi): 0.0 Medium Trucks: 20.3% 4.7% In 1-Bermi): 0.0 Heavy Trucks: 80.03% 4.7% Observer: 52.0 feet Noise Source Elevations (in feet) Observer: 0.0 feet Autos: 0.000 IElevation: 0.0 feet Lane Equivalent Distance (in feet) ad Grade: 0.0% Autos: 46.209 Left View: 90.0 degrees Heavy Trucks: 46.209 right View: 90.0 degrees Finite Road Fresnel REMEL Traffic Flow Distance Finite Road Fresnel Get Without Topo and barrier attenuation) eq Peak Hour Leq Vening Leq Night <td< td=""><td>FHWARD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021) 2050 FCSP Int NP Project Name: FCSP & POCC Live Oak Cyn, Rd. Job Number: 15411 n/o I-10 WB Ramps NOISE MODEL INPUTS PECIFIC INPUT DATA NOISE MODEL INPUTS affic (Adt): 17.992 vehicles artos: 15 decis Speed: 45 mph vehicle Type Day Evening Night I: 1.385 vehicles Vehicle Mix velower 48 feet Vehicle Mix Vehicle Mix volume: 0.0 tor Barrier: 52.0 feet Observer: 0.0 feet Elevation: 0.0 degrees <tr< td=""></tr<></td></td<></td></t<>	FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2 2050 FCSP Int NP Project Name: FCSP Live Oak (Von. Rd. Job Number: 15411 n/o I-10 WB Ramps Site Conditions (Hard = 10, St PECIFIC INPUT DATA NOISE MODE affic (Adt): 17,992 vehicles affic (Adt): 17,992 vehicles ercentage: 7,70% Welver Autos: 205 Speed: 45 mph > Distance: 48 feet Vehicle Mix Vehicle Mix Volume: 1,385 vehicles in 1-Berm): 0.0 to Barrier: 52.0 feet Observer: 0.0 feet Elevation: 0.0 feet Elevation: 0.0 feet Elevation: 0.0 feet Autos: 70.69 Heavy Trucks: 8.004 Left View: 90.0 degrees Autos: 74.60 Totarie: 75.0 feet Leivalion: 0.61 Elevation: 0.0 feet Elevation: 0.33	FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021) 2050 FCSP Int NP Project Name: FCSP & POCC Job Number: 15411 1v0 L-10 WB Ramps Noise ModDeL INPUT PECIFIC INPUT DATA NOISE MODDEL INPUT affic (Adt): 17,992 vehicles Autos: 15 affic (Adt): 17,992 vehicles Autos: 15 affic (Adt): 17,992 vehicles Autos: 15 cic Speed: 45 mph Vehicle Mix a Distance: 48 feet Vehicle Mix Volume: 1,385 vehicles Vehicle Mix In 1-Bermi): 0.0 Medium Trucks: 20.3% 4.7% In 1-Bermi): 0.0 Heavy Trucks: 80.03% 4.7% Observer: 52.0 feet Noise Source Elevations (in feet) Observer: 0.0 feet Autos: 0.000 IElevation: 0.0 feet Lane Equivalent Distance (in feet) ad Grade: 0.0% Autos: 46.209 Left View: 90.0 degrees Heavy Trucks: 46.209 right View: 90.0 degrees Finite Road Fresnel REMEL Traffic Flow Distance Finite Road Fresnel Get Without Topo and barrier attenuation) eq Peak Hour Leq Vening Leq Night <td< td=""><td>FHWARD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021) 2050 FCSP Int NP Project Name: FCSP & POCC Live Oak Cyn, Rd. Job Number: 15411 n/o I-10 WB Ramps NOISE MODEL INPUTS PECIFIC INPUT DATA NOISE MODEL INPUTS affic (Adt): 17.992 vehicles artos: 15 decis Speed: 45 mph vehicle Type Day Evening Night I: 1.385 vehicles Vehicle Mix velower 48 feet Vehicle Mix Vehicle Mix volume: 0.0 tor Barrier: 52.0 feet Observer: 0.0 feet Elevation: 0.0 degrees <tr< td=""></tr<></td></td<>	FHWARD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021) 2050 FCSP Int NP Project Name: FCSP & POCC Live Oak Cyn, Rd. Job Number: 15411 n/o I-10 WB Ramps NOISE MODEL INPUTS PECIFIC INPUT DATA NOISE MODEL INPUTS affic (Adt): 17.992 vehicles artos: 15 decis Speed: 45 mph vehicle Type Day Evening Night I: 1.385 vehicles Vehicle Mix velower 48 feet Vehicle Mix Vehicle Mix volume: 0.0 tor Barrier: 52.0 feet Observer: 0.0 feet Elevation: 0.0 degrees <tr< td=""></tr<>

	FHWA-RD	D-77-108 HIGH	WAY NOI	SE PRE		NODEL (S	9/12/20	021)		
Scenario: Road Name: Road Segment:	2050 FCSP Live Oak C n/o I-10 WE	9 Int WP yn. Rd. 3 Ramps			Projec Job N	t Name: F Number: 1	CSP	& POCC		
SITE SF	PECIFIC IN	IPUT DATA			1	NOISE N	IODE	L INPUT	s	
Highway Data				Site C	onditions	(Hard =	10, So	ft = 15)		
Average Daily Tr	affic (Adt):	39,022 vehicle	s				Autos:	15		
Peak Hour Pe	ercentage:	7.70%			Medium Tr	rucks (2 A	(xles):	15		
Peak Hou	ır Volume:	3,005 vehicles	6		Heavy Tru	icks (3+ A	(xles):	15		
Vehio	cle Speed:	45 mph		Vohio	lo Mix					
Near/Far Lane	Distance:	48 feet		Venic	ehicleTvn	•	Dav	Evenina	Niaht	Daily
Site Data				-	onnoio i ypi	Autos:	70.6%	13.6%	15.8%	97.53%
Barri	er Heiaht:	0.0 feet			Medium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wal	. 1-Berm):	0.0			Heavy T	Trucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist.	to Barrier:	52.0 feet		Noise	Sourco E	lovation	(in fo	of		
Centerline Dist. to	Observer:	52.0 feet		NOISE	Source E			el)		
Barrier Distance to	Observer:	0.0 feet		Ma	Auto Aium Truck	/s. 0.0	000			
Observer Height (At	ove Pad):	5.0 feet		IVIC LI	anun Truck	(o. 2.2	04	Grade Ad	iustment	. 0 0
Pad	Elevation:	0.0 feet			eavy much		J04	Orade Au	Justinent	. 0.0
Road	Elevation:	0.0 feet		Lane	Equivalen	t Distanc	e (in f	'eet)		
Ro	ad Grade:	0.0%			Auto	os: 46.4	400			
	Left View:	-90.0 degree	es	Me	dium Truck	ks: 46.2	209			
F	light View:	90.0 degree	es	Н	eavy Truck	(s: 46.2	228			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Fir	ite Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	2.83		0.38	-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-15.34		0.41	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.14		0.41	-1.20		-5.41	0.0	000	0.000
Unmitigated Noise L	evels (with	out Topo and	barrier at	tenuatio	n)					
VehicleType Le	eq Peak Hou	ir Leq Day	Leo	evening	g Leq	Night		Ldn	C	NEL
Autos:	70	.5	69.3	6	3.2	64.1		71.	6	72.1
Medium Trucks:	63	.3	62.7	5	5.4	56.6		64.3	3	64.5
Heavy Trucks:	66	.3	65.5	6	1.8	59.9	1	67.	5	67.8
Vehicle Noise:	72	5	71.4	6	9.3	66.0		73.	6	74.0
Centerline Distance	to Noise Co	ontour (in feet)								-
				70 dBA	65	dBA	6	0 dBA	55	dBA
		-	Ldn:	91 195 420			906			
		CI	VEL:	1	97	208		448	1	965

	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	TION MO	DEL (9	/12/20	121)		
Scenari Road Nam Road Segmer	o: 2050 FCSF e: Oak Glen F nt: s/o Calime	P NP Rd. sa Blvd.				Project N Job Nur	ame: F nber: 1	CSP 8 5411	& POCC		
SITE S	SPECIFIC IN	NPUT DATA				NO	ISE M	ODE		5	
Highway Data				S	Site Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	31,142 vehi	cles				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	2,398 vehic	les		He	avy Truck	s (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		L.	/ehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		F	Veh	icleTvpe	L	Dav	Evenina	Niaht	Dailv
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			M	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy True	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	52.0 feet			Voise Sr	ource Elev	ations	(in fe	ef)		
Centerline Dist.	to Observer:	52.0 feet		-		Autos:	0.0	00	- 1		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Heav	/v Trucks:	8.0	04	Grade Adj	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		-	_				-		
Roa	ad Elevation:	0.0 feet		4	ane Eq	uivaient D	istance		eet)		
F	Road Grade:	0.0%			A de alier	Autos:	46.4	00			
	Left View:	-90.0 degr	ees		Mediu	m Trucks:	46.2	09			
	Right view:	90.0 degr	ees		neav	ly mucks.	40.2	28			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/ 1	Barrier Atte	en Be	rm Atten
Autos:	68.46	i 1.8	15	0.38	3	-1.20	-	4.66	0.0	000	0.000
Medium Trucks:	79.45	-16.3	12	0.41	1	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.1	2	0.41	1	-1.20	-	5.41	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo an	d barrie	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq Ev	rening	Leq Ni	ight		Ldn	С	NEL
Autos:	69	9.5	68.3		67.2		63.1		70.7	7	71.2
Medium Trucks:	62	2.3	61.7		55.5		55.7		63.4	Ļ	63.6
Heavy Trucks:	65	5.3	64.5		60.8		58.9		66.5	5	66.8
Vehicle Noise:	7'	1.5	70.5		68.3		65.0		72.6	6	73.0
Centerline Distanc	e to Noise C	ontour (in fe	et)			0				1	
			L	70 d	<i>iBA</i>	65 dE	BA	6	0 dBA	55	i dBA
			Ldn:		78		168		362		779
			CNEL:		83		179		385		830

	FHWA-RD	-77-108 HIGHV	AY NC	DISE P	REDIC	TION MO	DEL (9	/12/20)21)		
Scenario	2050 FCSP	WP				Project Na	ame: F	CSP a	& POCC		
Road Name	: Oak Glen R	d.				Job Nun	nber: 1	5411			
Road Segmen	t: s/o Calimes	a Blvd.									
SITE S	PECIFIC IN	PUT DATA				NO	ISE M	ODE		s	
Highway Data				Sit	e Conc	ditions (H	ard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	50,232 vehicles					A	Autos:	15		
Peak Hour F	Percentage:	7.70%			Med	lium Truci	ks (2 A	xles):	15		
Peak Ho	our Volume:	3,868 vehicles			Hea	avy Trucks	s (3+ A	xles):	15		
Veh	icle Speed:	45 mph		Vo	hiclo N	lix					
Near/Far Lan	e Distance:	48 feet			Vehic	cleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						Aut	tos:	70.6%	13.6%	15.8%	97.53%
Barr	rior Hoiaht:	0.0 feet			Ме	dium Truc	ks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all 1-Berm)	0.0			н	leavy Truc	ks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	52.0 feet									
Centerline Dist. to	o Observer:	52.0 feet		NC	ise So	urce Elev	ations	(in fe	et)		
Barrier Distance to	o Observer:	0.0 feet				Autos:	0.0	00			
Observer Height (A	bove Pad):	5.0 feet			Meaiun	1 Irucks:	2.2	97	Crada Ad	ivetment	
Pa	d Elevation:	0.0 feet			Heavy	/ Trucks:	8.0	104	Graue Au	usunen	. 0.0
Roa	d Elevation:	0.0 feet		La	ne Equ	ivalent D	istanc	e (in f	eet)		
R	oad Grade:	0.0%				Autos:	46.4	100			
	Left View:	-90.0 degrees			Mediun	n Trucks:	46.2	209			
	Right View:	90.0 degrees			Heavy	/ Trucks:	46.2	228			
FHWA Noise Mode	Calculations										
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite F	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	3.93		0.38		-1.20		4.66	0.0	000	0.00
Medium Trucks:	79.45	-14.24		0.41		-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-16.04		0.41		-1.20		5.41	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrier a	ttenua	tion)						
VehicleType	Leq Peak Hou	 Leq Day 	Le	eq Eve	ning	Leq Ni	ght		Ldn	CI	NEL
Autos:	71.	6 7	0.4		69.3		65.1		72.7	7	73.
Medium Trucks:	64.	4 6	3.8		57.5		57.7		65.4	1	65.
Heavy Trucks:	67.	4 6	6.6		62.9		61.0		68.6	3	68.
Vehicle Noise:	73.	6 7	2.5		70.4		67.1		74.1	7	75.
Centerline Distance	e to Noise Co	ntour (in feet)		70 / 2		05.10		~	0 - 10 4		-(0.4
				70 dB	A 407	65 dB	A	6	U aBA	55	abA 4 070
		L	an:		107		231		497		1,072
		-							500		

Thursday, September 7, 2023

FHWA-R	D-77-108 HIGHW	AY NOI	SE PREI	ICTION MO	ODEL	(9/12/2	021)		
Scenario: 2050 FCS	P Int NP			Project I	Name:	FCSP	& POCC		
Road Name: Oak Glen	Rd.			JOD NI	imper:	15411			
Road Segment: \$/6 Callme	esa Bivo.								
SITE SPECIFIC I	NPUT DATA			N	OISE	MODE	L INPUT	5	
Highway Data			Site C	onditions (Hard =	= 10, Se	oft = 15)		
Average Daily Traffic (Adt):	30,424 vehicles					Autos:	15		
Peak Hour Percentage:	7.70%			Aedium Tru	cks (2	Axles).	15		
Peak Hour Volume:	2,343 vehicles			Heavy Truc	ks (3+	Axles):	15		
Vehicle Speed:	45 mph		Vehic	e Mix					
Near/Far Lane Distance:	48 feet		Venice	ehicleTvpe		Dav	Evenina	Niaht	Dailv
Site Data				A	utos:	70.6%	6 13.6%	15.8%	97.53%
Barrier Height:	0.0 feet			Medium Tri	ucks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tri	ucks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	52.0 feet		Noice	Course Ele	watio	o (in f	not)		
Centerline Dist. to Observer:	52.0 feet		Noise	Source Ele	valio	000	eel)		
Barrier Distance to Observer:	0.0 feet		Mar	AUIOS	: U	.000			
Observer Height (Above Pad):	5.0 feet		IVIEC	ouni Trucks	. 2 . 0	.297	Grade Ad	iustmont	. 0.0
Pad Elevation:	0.0 feet		110	avy mucks	. 0	.004	Orade Auj	usunen	. 0.0
Road Elevation:	0.0 feet		Lane	quivalent	Distan	ice (in	feet)		
Road Grade:	0.0%			Autos	: 46	.400			
Left View:	-90.0 degrees		Med	ium Trucks	: 46	.209			
Right View:	90.0 degrees		He	avy Trucks	: 46	.228			
FHWA Noise Model Calculation	าร		1						
VehicleType REMEL	Traffic Flow	Distanc	e Fin	te Road	Fres	nel	Barrier Atte	en Ber	m Atten
Autos: 68.44	6 1.75	(0.38	-1.20		-4.66	0.0	000	0.00
Medium Trucks: 79.4	5 -16.42	().41	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.2	5 -18.22	().41	-1.20		-5.41	0.0	000	0.00
Unmitigated Noise Levels (with	nout Topo and b	arrier att	enuatio	I)					
VehicleType Leq Peak Ho	ur Leq Day	Leg	Evening	Leq N	light		Ldn	C	NEL
Autos: 6	9.4 6	8.2	67	.1	63.	0	70.6	3	71.
Medium Trucks: 6	2.2 6	1.6	55	.4	55.	6	63.3	3	63.
Heavy Trucks: 6	5.2 6	4.4	60	.7	58.	8	66.4	ŀ	66.
Vehicle Noise: 7	1.4 7	0.4	68	.2	64.	9	72.5	5	72.
Centerline Distance to Noise C	contour (in feet)								
		7	0 dBA	65 a	lΒA	(60 dBA	55	dBA
	L	dn:	7	7	16	5	356		767

	FHWA-RD	0-77-108 HIGH	WAY N	OISE F	PREDIC	TION M	ODEL (9	/12/20	021)		
Scenari Road Nam Road Segmer	o: 2050 FCSP e: Oak Glen R nt: s/o Calimes	PINTWP Rd. Sa Blvd.				Project Job N	Name: F umber: 1	CSP 5411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	ODE		s	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	58,990 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	4,542 vehicles	5		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		14	ahiala l	Mise					
Near/Far La	ne Distance:	48 feet		V	Veh	icleTvne		Jav	Evening	Niaht	Daily
Site Data					VCIII	A	utos:	70.6%	13.6%	15.8%	97.53%
one Data					M	- edium Tr	ucks:	30.3%	4.7%	14.9%	1 49%
Barrier Turne (0.14)	rier Height:	0.0 feet			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Contorlino Di	dii, 1-Derrin).	0.0 52.0 feet									
Centerline Dis	to Observer:	52.0 feet		N	oise So	ource Ele	evations	(in fe	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.0	00			
Observer Height /	Above Radi:	5.0 feet			Mediui	m Trucks	: 2.2	97			
Observer neight (d Elevation:	0.0 feet			Heav	y Trucks	: 8.0	04	Grade Ad	justmen	t: 0.0
Ros	d Elevation:	0.0 feet		Li	ane Ea	uivalent	Distanc	e (in f	feet)		
1.00	Road Grade:	0.0%				Autos	46.4	.00			
	Left View:	-90 0 degree	20		Mediu	m Trucks	46.2	09			
	Right View:	90.0 degree	es		Heav	y Trucks	: 46.2	28			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Att	en Be	rm Atten
Autos:	68.46	4.63		0.38		-1.20		4.66	0.0	000	0.000
Medium Trucks:	79.45	-13.54		0.41		-1.20		4.87	0.0	000	0.000
Heavy Trucks:	84.25	-15.34		0.41		-1.20		5.41	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	' L	.eq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	72	3	71.1		70.0		65.8		73.4	1	73.9
Medium Trucks:	65	.1	64.5		58.2		58.4		66.1	1	66.3
Heavy Trucks:	68	.1	67.3		63.6		61.7		69.3	3	69.6
Vehicle Noise:	74	.2	73.2		71.1		67.8		75.4	1	75.8
Centerline Distance	e to Noise Co	ontour (in feet))								
				70 dl	BA	65 0	1BA	6	60 dBA	55	i dBA
			Ldn:		119		257		554		1,193
		CI	NEL:		127		274		590		1,271

	FHWA-R	D-77-108 HI	GHWA	Y NOISI	E PREDI	CTION MC	DEL (9	/12/20	121)		
Scenari Road Nam Road Segmer	io: 2050 FCSF e: Oak Glen F nt: n/o Calime	P NP Rd. ⊧sa Blvd.				Project N Job Nu	lame: F nber: 1	CSP 8 5411	& POCC		
SITE	SPECIFIC IN	NPUT DAT	A			NC	ISE M	ODE	L INPUT	5	
Highway Data					Site Co.	nditions (H	lard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	19,457 veh	icles				A	utos:	15		
Peak Hour	Percentage:	7.70%			М	edium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,498 vehi	cles		н	eavy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ne Distance:	48 feet			Ve	hicleTvpe	L	Dav	Evenina	Niaht	Dailv
Site Data						AL	tos: 7	70.6%	13.6%	15.8%	97.53%
Bai	rrier Heiaht:	0.0 fee	t		٨	Aedium Tru	cks: 8	30.3%	4.7%	14.9%	5 1.49%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tru	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	52.0 fee	t		Noise S	ource Ele	ations	(in fe	ef)		
Centerline Dist.	to Observer:	52.0 fee	t			Autos	0.0	00	- 1		
Barrier Distance	to Observer:	0.0 fee	t		Medii	im Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 fee	t		Hea	vv Trucks:	8.0	04	Grade Adj	iustmen	t: 0.0
Pa	ad Elevation:	0.0 fee	t						-		
Roa	ad Elevation:	0.0 fee	t		Lane Ed	uivalent L	Istance		eet)		
,	Road Grade:	0.0%			Madi	Autos:	40.4	00			
	Left View:	-90.0 deg	rees		Media	um Trucks:	46.2	09			
	Right view.	90.0 deg	rees		nee	ivy mucks.	40.2	20			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	N D	istance	Finite	e Road	Fresne	el I	Barrier Atte	en Be	rm Atten
Autos:	68.46	i -0.	19	0.3	38	-1.20	-	4.66	0.0	000	0.000
Medium Trucks:	79.45	-18.	36	0.4	41	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-20.	16	0.4	41	-1.20	-	5.41	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo a	nd barr	ier atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq L	Day	Leq E	Evening	Leg N	ight		Ldn	C	NEL
Autos:	67	7.5	66.3		65.3	2	61.0		68.6	6	69.1
Medium Trucks:	60	0.3	59.7		53.4	4	53.6		61.3	3	61.5
Heavy Trucks:	63	3.3	62.4		58.	В	56.9		64.5	5	64.8
Vehicle Noise:	69	9.4	68.4		66.	3	63.0		70.6	6	71.0
Centerline Distance	e to Noise C	ontour (in fe	eet)			1					
				70	dBA	65 dl	BA	6	0 dBA	55	5 dBA
			Ldn:		57		123		264		569
			CNEL:		61		131		282		607

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DEL (9	/12/20)21)		
Scenari	o: 2050 FCSP	WP				Project N	ame: F	CSP	& POCC		
Road Nam	e: Oak Glen R	d.				Job Nur	nber: 1	5411			
Road Segmer	nt: n/o Calimes	a Blvd.									
SITE S	SPECIFIC IN	PUT DATA				NO	ISE M	ODE		s	
Highway Data				4	Site Con	ditions (H	ard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	29,873 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A.	xles):	15		
Peak H	our Volume:	2,300 vehicle	s		Hei	avy Truck	s (3+ A.	xles):	15		
Vel	nicle Speed:	45 mph			Vehicle I	Mix					
Near/Far Lar	ne Distance:	48 feet		F	Vehi	cleType	L	Day	Evening	Night	Daily
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Rar	rier Height:	0.0 feet			Me	edium Truc	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all. 1-Berm)	0.0			F	leavy Truc	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	52.0 feet		H	N 0		- 47	(in \$-	- 41		
Centerline Dist. I	o Observer:	52.0 feet			voise So	ource Elev	ations	(In re	et)		
Barrier Distance t	o Observer:	0.0 feet				Autos:	0.0	00			
Observer Height ()	Above Pad):	5.0 feet			Mediur	n Trucks:	2.2	97	Grade Ad	iustmont	
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	04	Graue Au	usunen.	0.0
Roa	d Elevation:	0.0 feet		1	Lane Equ	uivalent D	istanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	46.4	00			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	46.2	09			
	Right View:	90.0 degree	es		Heav	y Trucks:	46.2	28			
FHWA Noise Mode	l Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	2/	Barrier Att	en Ber	m Atten
Autos:	68.46	1.67		0.3	8	-1.20	-	4.66	0.0	000	0.000
Medium Trucks:	79.45	-16.50		0.4	1	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.30		0.4	1	-1.20	-	5.41	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	<i>(</i>	Leq E	vening	Leq Ni	ght		Ldn	CI	VEL
Autos:	69.	.3	68.1		67.0		62.9		70.	5	71.0
Medium Trucks:	62	.2	61.6		55.3		55.5		63.	2	63.4
Heavy Trucks:	65	2	64.3		60.7		58.8		66.4	1	66.
Vehicle Noise:	71.	.3	70.3		68.2		64.8		72.	D	72.9
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 /	dRΔ	65 dE	Δ	6	0 dBA	55	dB∆
			I dn'	700	76	00 UE	162	0	350	55	759
		0	NEI ·		91		174		375		808
											000

Thursday, September 7, 2023

FHWA	RD-77	-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL	(9/12/2	021)		
Scenario: 2050 FC	SP Int	NP				Project	Name	FCSP	& POCC		
Road Segment: n/o Calir	n Ra. nesa R	tlyd				JOD IN	umber	15411			
Road Beginene. 180 Gam	1034 0	AVG.									
SITE SPECIFIC	INPU	T DATA			0.44 0 0 0 0	N	OISE	MODE	L INPUT	S	
Highway Data					Site Con	aitions	Hara	= 10, 5	οπ = 15)		
Average Daily Traffic (Adt)	: 18,	740 vehicle	s					Autos	: 15		
Peak Hour Percentage	: 7.	.70%			Me	dium Tru	ICKS (2	Axles)	: 15		
Peak Hour Volume	: 1,4	43 vehicles	;		He	avy Truc	:ks (3+	Axles).	: 15		
Vehicle Speed		45 mph		ľ	Vehicle I	Mix					
Near/Far Lane Distance	:	48 feet		ľ	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	6 13.6%	15.8%	97.539
Barrier Height		0.0 feet			Me	edium Tr	ucks:	80.3%	6 4.7%	14.9%	5 1.49%
Barrier Type (0-Wall, 1-Berm)		0.0			ŀ	Heavy Tr	ucks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier	: 5	52.0 feet		-	Noine Co	uree El	ovetie	na (in f	a a fi		
Centerline Dist. to Observer	. 5	52.0 feet		ŀ	Noise Sc	Auto	evalio		eel)		
Barrier Distance to Observer		0.0 feet			Madiu	AUIOS	5: U	207			
Observer Height (Above Pad)	2	5.0 feet			Wealur	II TIUCKS	5. 4 	2.297	Grade Ad	iustmon	+ 0.0
Pad Elevation	2	0.0 feet			Tieav	y mucks	s. (0.004	Orade Au	Jusunen	. 0.0
Road Elevation	2	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
Road Grade	: 0	.0%				Autos	s: 40	5.400			
Left View	: -9	0.0 degree	s		Mediur	m Trucks	s: 40	5.209			
Right View	: 9	90.0 degree	s		Heav	y Trucks	s: 40	5.228			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Tra	affic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Be	rm Atten
Autos: 68.	46	-0.35		0.3	38	-1.20		-4.66	0.0	000	0.00
Medium Trucks: 79.	45	-18.52		0.4	11	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.	25	-20.32		0.4	11	-1.20		-5.41	0.0	000	0.00
Unmitigated Noise Levels (w	thout	Topo and I	barrie	er atter	nuation)						
Vehicle Type Leq Peak F	iour	Leq Day		Leq E	vening	Leq	vignt	_	Lan	0	INEL
Autos:	67.3	t	56.1		65.0		60	.9	68.	5	69.
Medium Trucks:	00.1	:	59.5		53.3		53	.5	01.	2	01.
Heavy Trucks:	03.1		02.3		58.6		00	./	04.	3	04. 70
venicie Noise:	69.3		08.Z		00.1		62	.8	70.4	4	70.
Centerline Distance to Noise	Conto	our (in feet)	1	70	dBA	65 /	₩RΔ		60 dBA	54	dBA
		,	l dn'	,0	56	001	10	0	259	1 00	554
		~	IFI ·		59		12	8	230		500
		01			00		12		210	•	002

	FHWA-R	D-77-108 HIGH	WAY NO	ISE F	PREDIC	TION M	ODEL (S)/12/2	021)		
Scenari Road Nam Road Segmer	o: 2050 FCSF e: Oak Glen F nt: n/o Calimes				Project Job N	Name: F umber: 1	CSP 5411	& POCC			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				Si	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	27,542 vehicle	s					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	2,121 vehicles	;		He	avy Truc	:ks (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		14	ahiala I	Ais.					
Near/Far Lai	ne Distance:	48 feet			Vehi	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data							lutos:	70.6%	5 13.6%	15.8%	97.53%
Bar	rier Height:	0.0 feet			Me	edium Ti	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all. 1-Berm):	0.0			ŀ	leavy Ti	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	52.0 feet		N	nisa Sr	urco Fl	ovations	in fi	oof)		
Centerline Dist.	to Observer:	52.0 feet			0130 00	Auto	. 00	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	. 0.0	007			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s 2.2	04	Grade Ad	iustmen	0.0
Pa	d Elevation:	0.0 feet			mour	,	. 0.0				
Roa	d Elevation:	0.0 feet		La	ane Equ	uivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Auto:	s: 46.4	100			
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 46.2	209			
	Right View:	90.0 degree	s		Heav	y Truck	s: 46.2	228			
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	e/	Barrier Att	en Bei	m Atten
Autos:	68.46	1.32		0.38		-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-16.85		0.41		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.65		0.41		-1.20		-5.41	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	69	0.0	67.8		66.7		62.5		70.1	1	70.6
Medium Trucks:	61	.8	61.2		54.9		55.1		62.8	3	63.0
Heavy Trucks:	64	.8	64.0		60.3		58.4		66.0)	66.3
Vehicle Noise:	70	.9	69.9		67.8		64.5		72.1	1	72.5
Centerline Distance	e to Noise Co	ontour (in feet)								T	
				70 dE	BA	65	dBA	(60 dBA	55	dBA
			Ldn:	72 155		333		718			
		CI	IEL:		77		165		355		765

	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	CTION MO	DEL (9	/12/20	121)		
Scenario Road Name Road Segmen	o: 2050 FCSF e: Colorado S t: e/o 8th St.	P NP St.				Project N Job Nur	lame: F nber: 1	CSP 8 5411	& POCC		
SITE S	PECIFIC IN	NPUT DATA				NO	ISE M	ODE		5	
Highway Data				S	ite Cor	nditions (H	lard = 1	10, So	ft = 15)		
Average Daily 1	Traffic (Adt):	3,305 vehic	les				A	utos:	15		
Peak Hour I	Percentage:	7.70%			Me	edium Truc	ks (2 A	xles):	15		
Peak Ho	our Volume:	254 vehicl	es		He	eavy Truck	s (3+ A	xles):	15		
Vet	icle Speed:	40 mph		L.	(obiclo	Mix					
Near/Far Lar	e Distance:	12 feet		-	Veh	nicleType	1	Dav	Evenina	Niaht	Daily
Site Data						Au	tos: 1	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			М	ledium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tru	cks: 1	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	33.0 feet			loise Si	ource Elev	ations	(in fe	ef)		
Centerline Dist. t	o Observer:	33.0 feet		<u> </u>		Autos	0.0	00			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Hear	vv Trucks:	8.0	04	Grade Adj	iustment	t: 0.0
Pa	d Elevation:	0.0 feet		_							
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent D	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	32.8	33			
	Left View:	-90.0 degr	ees		Mediu	m Trucks:	32.5	62			
	Right View:	90.0 degri	ees		неа	vy Trucks:	32.5	89			
FHWA Noise Mode	I Calculation	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	el I	Barrier Atte	en Bei	rm Atten
Autos:	66.51	-7.3	8	2.64		-1.20	-	4.52	0.0	000	0.000
Medium Trucks:	77.72	-25.5	5	2.69)	-1.20	-	4.86	0.0	000	0.000
Heavy Trucks:	82.99	-27.3	5	2.69)	-1.20	-	5.69	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	d barrie	er attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	ay 🛛	Leq Ev	ening	Leq Ni	ight		Ldn	С	NEL
Autos:	60	0.6	59.4		58.3	5	54.1		61.7	,	62.2
Medium Trucks:	53	3.7	53.0		46.8	5	47.0		54.7	7	54.9
Heavy Trucks:	57	7.1	56.3		52.6	i	50.7		58.3	3	58.6
Vehicle Noise:	62	2.8	61.8		59.6	i	56.3		63.9)	64.3
Centerline Distance	e to Noise C	ontour (in fee	et)								
			L	70 d	BA	65 dE	BA	6	0 dBA	55	i dBA
			Ldn:		13		28		60		130
		(CNEL:		14		30		64		138

	FHWA-RD	-77-108 HIGH	WAY NO	DISE P	REDIC	TION MC	DEL (9/	12/20	21)		
Scenari	io: 2050 FCSP	WP				Project N	lame: FC	SP 8	POCC		
Road Nam	e: Colorado St					Job Nu	mber: 15	411			
Road Segmer	nt: e/o 8th St.										
SITE	SPECIFIC IN	PUT DATA				NC	DISE MO	DEI		s	
Highway Data				Si	te Con	ditions (H	lard = 10), So	ft = 15)		
Average Daily	Traffic (Adt):	3,657 vehicle	es				AL	itos:	15		
Peak Hour	Percentage:	7.70%			Med	dium Truc	ks (2 Ax	les):	15		
Peak H	lour Volume:	282 vehicles	6		Hea	avy Truck	s (3+ Ax	les):	15		
Vei	hicle Speed:	40 mph		V	hicle I	Niv					
Near/Far La	ne Distance:	12 feet			Vehi	cleTvpe	Di	av	Evenina	Niaht	Dailv
Site Data						AL	itos: 70	0.6%	13.6%	15.8%	97.53%
Day	rrior Hoight:	0.0 fect			Ме	edium Tru	cks: 80	0.3%	4.7%	14.9%	1.49%
Barrier Type (0_W	all 1-Berm)	0.0 1001			H	leavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	33.0 feet		-							
Centerline Dist	to Observer:	33.0 feet		N	oise So	urce Ele	vations (in fe	et)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.00	0			
Observer Height (Above Pad):	5.0 feet			Mediun	n Trucks:	2.29	7			
Pa	ad Elevation:	0.0 feet			Heav	y Trucks:	8.00	4	Grade Adj	justmen	. 0.0
Roa	ad Elevation:	0.0 feet		Lá	ane Equ	uivalent E	Distance	(in f	eet)		
F	Road Grade:	0.0%				Autos:	32.83	3			
	Left View:	-90.0 degree	s		Mediun	n Trucks:	32.56	2			
	Right View:	90.0 degree	s		Heav	y Trucks:	32.58	9			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresnel	1	Barrier Atte	en Bei	rm Atten
Autos:	66.51	-6.94		2.64		-1.20	-4	.52	0.0	000	0.000
Medium Trucks:	77.72	-25.11		2.69		-1.20	-4	.86	0.0	000	0.000
Heavy Trucks:	82.99	-26.91		2.69		-1.20	-5	.69	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Eve	ening	Leq N	ight		Ldn	С	NEL
Autos:	61.	.0	59.8		58.7		54.6		62.2	2	62.7
Medium Trucks:	54	.1	53.5		47.2		47.4		55.1	1	55.3
I I a a sur a Tan salsas	E7	.6	56.7		53.1		51.2		58.8	3	59.1
Heavy Trucks:	57.				60.0		56.8		64.4	1	64.8
Vehicle Noise:	63	.2	62.2		00.0		00.0				
Vehicle Noise: Centerline Distanc	63. ce to Noise Co	2 ntour (in feet)	62.2		00.0						
Vehicle Noise:	63. ce to Noise Co	2 ntour (in feet)	62.2	70 dE	BA	65 dl	BA	6	0 dBA	55	dBA
Vehicle Noise: Centerline Distanc	63. ce to Noise Co	2 ntour (in feet,	62.2 Ldn:	70 dE	BA 14	65 dl	30 30	6	0 dBA 64	55	<i>dBA</i> 139

Thursday, September 7, 2023

Scenari	AL 2050 ECOD										
Road Nam Road Segmer	e: Colorado Si nt: e/o 8th St.	Int NP				Project N Job Nur	ame: nber:	FCSP 15411	& POCC		
SITE S	SPECIFIC IN	PUT DATA				NO	ISE	MODE		5	
Highway Data					Site Con	ditions (H	lard =	= 10, So	oft = 15)		
Average Daily	Traffic (Adt):	3,614 vehicle	s					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2	Axles):	15		
Peak H	our Volume:	278 vehicles	6		He	avy Truck	s (3+	Axles):	15		
Vel	hicle Speed:	40 mph		-	Vehicle I	<i>Ni</i> v					
Near/Far Lar	ne Distance:	12 feet		-	Venicie i	cleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.539
Bar	rior Hoight:	0.0 foot			Me	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all 1-Berm)	0.0 1001			F	leavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t to Barrier:	33.0 feet		-							
Centerline Dist. t	to Observer:	33.0 feet		4	Noise So	urce Elev	ation	is (in fe	eet)		
Barrier Distance t	to Observer:	0.0 feet				Autos:	0	.000			
Observer Height (Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet				Meaiur	n Trucks:	2	.297	Crada Ad	ivetment	
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8	.004	Grade Auj	usunen	. 0.0
Roa	d Elevation:	0.0 feet			Lane Equ	ivalent D)istan	ice (in i	feet)		
F	Road Grade:	0.0%				Autos:	32	.833			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	32	.562			
	Right View:	90.0 degree	s		Heav	y Trucks:	32	.589			
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.99		2.6	4	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-25.16		2.6	9	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	82.99	-26.96		2.6	9	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)			-			
Venicie i ype	Leq Peak Hou	r Leq Day		Leq E	vening	Leq Ni	gnt	_	Lan	0	NEL
Autos:	61	.0	59.8		58.7		54.	5	62.	1	62.
Medium Trucks:	54	.U	53.4 56.7		47.2		47.	4	55.	7	50.
Vehicle Meice:	57	.5	00.7 60.4		53.0		51.	7		, >	59.
venicie noise.	03	.2	02.1		59.9		50.		04.3	>	04.
Centerline Distanc	e to Noise Co	ntour (in feet)		70	dRA	65 de	2.4	-	SO dBA	55	dBA
			I dn'	701	1/	33 UL	30))	6A	55	139
					14		50	-	04		130

	FHWA-RI	D-77-108 HIGH	WAYN	OISE	PREDIC	TION M	IODEL (S)/12/20	021)			
Scenar Road Nor	io: 2050 FCSF	P Int WP				Project	Name: F	CSP	& POCC			
Road Segme	nt: e/o 8th St.	L.				JUD N	uniber: 1	5411				
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	5		
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	4,056 vehicle	es					Autos:	15			
Peak Hour	Percentage:	7.70%			Me	dium Tr	ucks (2 A	xles):	15			
Peak H	lour Volume:	312 vehicle	5		He	avy Tru	cks (3+ A	xles):	15			
Ve	hicle Speed:	40 mph		1	/ohiclo I	Mix						
Near/Far La	ne Distance:	12 feet		Ľ	VehicleType Day Evening Night Dai							
Site Data						/	Autos:	70.6%	13.6%	15.8%	97.53%	
Bai	rrier Heiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49%	
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%	
Centerline Di	st. to Barrier:	33.0 feet		1	Voise So	ource El	evations	; (in fe	eet)			
Centerline Dist.	to Observer:	33.0 feet				Auto	s: 0.0	000	1			
Barrier Distance	to Observer:	0.0 feet			Mediur	m Truck	s: 2.2	297				
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8.0	004	Grade Ad	iustment:	0.0	
Pa	ad Elevation:	0.0 feet		L.	_							
Roa	ad Elevation:	0.0 feet		1	.ane Equ	uivalent	Distanc	e (in i	reet)			
	Road Grade:	0.0%				Auto	s: 32.8	333				
	Left View:	-90.0 degree	es		Mediur	m Truck	s: 32.5	562				
	Right View:	90.0 degree	es		Heav	y Truck	s: 32.5	589				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten	
Autos:	66.51	-6.49		2.64	4	-1.20		-4.52	0.0	000	0.000	
Medium Trucks:	77.72	-24.66		2.69	9	-1.20		-4.86	0.0	000	0.000	
Heavy Trucks:	82.99	-26.46		2.69	9	-1.20		-5.69	0.0	000	0.000	
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)							
VehicleType	Leq Peak Hou	ır Leq Day	r .	Leq Ev	/ening	Leq	Night		Ldn	CI	VEL	
Autos:	61	.5	60.3		59.2		55.0		62.6	6	63.1	
Medium Trucks:	54	.5	53.9		47.7		47.9		55.6	6	55.8	
Heavy Trucks:	58	8.0	57.2		53.5		51.6		59.2	2	59.5	
Vehicle Noise:	63	5.7	62.6		60.4		57.2		64.8	3	65.2	
Centerline Distant	e to Noise Co	ontour (in feet										
			L	70 c	iBA	65	dBA	6	i0 dBA	55	dBA	
		-	Ldn:		15		32		69		149	
		Ci	CNEL:						74		158	

	FHWA-RI	D-77-108 HIGH	IWAY N	IOISE F	PREDIC	CTION MC	DDEL (S	9/12/2	021)		
Scenar Road Nan Road Segme	io: 2050 FCSF ne: Wildwood (nt: n/o Calime	P NP Cyn. Rd. sa Blvd.				Project N Job Nu	lame: F mber: 1	=CSP 15411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	IODE	L INPUT	5	
Highway Data				Si	ite Con	ditions (F	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	7,653 vehicl	es				/	Autos.	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	(xles	15		
Peak H	lour Volume:	589 vehicle	s		He	avy Truck	(S (3+ A	Axles).	15		
Ve	hicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						AL	itos:	70.6%	6 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			M	edium Tru	icks:	80.3%	6 4.7%	14.9%	5 1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	icks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	200			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	/v Trucks:	8.0	004	Grade Adj	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Lä	ane Eq	uivalent L	Jistanc	e (In	feet)		
	Road Grade:	0.0%				Autos:	40.4	460			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	/y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	-4.24		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-22.41		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-24.21		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	С	NEL
Autos:	64	1.3	63.1		62.0		57.9)	65.5	5	66.0
Medium Trucks:	57	7.1	56.5		50.3		50.5	;	58.2	2	58.4
Heavy Trucks:	60).1	59.3		55.7		53.8	1	61.3	3	61.6
Vehicle Noise:	66	6.3	65.3		63.1		59.8		67.4	Ļ	67.8
Centerline Distant	ce to Noise C	ontour (in fee	9								
				70 dE	BA	65 dl	BA		60 dBA	55	5 dBA
			Ldn:		30		64		138		297
		С	NEL:		32		68		147		316

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DEL (9	/12/20	021)		
Scenari	o: 2050 FCSP	WP				Project N	lame: F	CSP	& POCC		
Road Nam	e: Wildwood C	yn. Rd.				Job Nu	nber: 1	5411			
Road Segmer	nt: n/o Calimes	a Blvd.									
SITE	SPECIFIC IN	PUT DATA				NC	ISE M	ODE	L INPUT	s	
Highway Data				5	Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	13,271 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,022 vehicles	6		He	avy Truck	s (3+ A	xles):	15		
Ve	nicle Speed:	45 mph		1	Vehicle I	Nix					
Near/Far Lai	ne Distance:	36 feet		F	Vehi	cleType	1	Day	Evening	Night	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Bar	rior Hoiaht:	0.0 feet			Me	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all. 1-Berm)	0.0			ŀ	leavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet		- F				6	- 41		
Centerline Dist.	o Observer:	44.0 feet		4	voise So	ource Elev	auons	(IN TE	eet)		
Barrier Distance	o Observer:	0.0 feet				Autos:	0.0	00			
Observer Height (Above Pad):	5.0 feet			Mediur	n Trucks:	2.2	97	Crada Ad	iuotmont	
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	104	Grade Ad	justinent	0.0
Roa	d Elevation:	0.0 feet		1	Lane Equ	uivalent D)istanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	40.2	241			
	Right View:	90.0 degree	s		Heav	y Trucks:	40.2	262			
FHWA Noise Mode	I Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.85		1.2	8	-1.20		4.61	0.0	000	0.000
Medium Trucks:	79.45	-20.02		1.3	1	-1.20		4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.82		1.3	1	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leg Ev	vening	Leq N	ight		Ldn	CI	VEL
Autos:	66.	.7	65.5		64.4		60.3		67.9	9	68.4
Medium Trucks:	59.	.5	58.9		52.7		52.9		60.	6	60.
Heavy Trucks:	62	5	61.7		58.0		56.1		63.	7	64.
Vehicle Noise:	68.	.7	67.6		65.5		62.2		69.	В	70.2
Centerline Distanc	e to Noise Co	ntour (in feet)		70 -	10.4	05 -1	24		0.404		-/0.4
			Ldn	70 0	104	65 dE	02	c	100 UDA	00	400
		~			43		92		195	,	428
									21.2		45/

Thursday, September 7, 2023

	FHWA-RD)-77-108 HIGHV	VAY NOIS	SE PRED	ICTION M	ODEL ((9/12/2	2021)		
Scenario Road Name Road Segment	2050 FCSP Wildwood C n/o Calimes	Int NP Cyn. Rd. sa Blvd.			Project Job N	Name: umber:	FCSP 15411	& POCC		
SITE S	PECIFIC IN	PUT DATA			N	OISE	MODE	EL INPUT	5	
Highway Data				Site Co	nditions	(Hard =	: 10, S	oft = 15)		
Average Daily T	raffic (Adt):	11,288 vehicles	5				Autos	: 15		
Peak Hour P	ercentage:	7.70%		N	ledium Tru	ucks (2	Axles)	: 15		
Peak Ho	ur Volume:	869 vehicles			leavy Truc	cks (3+ .	Axles)	: 15		
Vehi	cle Speed:	45 mph		Vehicl	Mix					
Near/Far Lane	e Distance:	36 feet		Ve	hicleType		Day	Evening	Night	Daily
Site Data					A	Autos:	70.69	% 13.6%	15.8%	97.539
Barn	ier Heiaht:	0.0 feet			Medium Tr	ucks:	80.3%	% 4.7%	14.9%	1.49%
Barrier Type (0-Wa	II. 1-Berm);	0.0			Heavy Tr	ucks:	75.9%	% 8.2%	15.9%	0.98%
Centerline Dist.	to Barrier:	44.0 feet		Noice	Source El	ovetion	o (in f	fa a fi		
Centerline Dist. to	Observer:	44.0 feet		NOISE	Source Li		000	eelj		
Barrier Distance to	Observer:	0.0 feet		Mad	Auto:	s. U.	207			
Observer Height (A	Observer Height (Above Pad): 5.0 feet				ann Truck	ο. 2. Γ· Ω	004	Grade Ad	iustmeni	. 0 0
Pac	Elevation:	0.0 feet		110	avy much	3. 0.	.004	0/000/10	aounom	. 0.0
Road	Elevation:	0.0 feet		Lane E	quivalent	Distan	ce (in	feet)		
R	oad Grade:	0.0%			Auto	s: 40	.460			
	Left View:	-90.0 degrees	6	Med	um Truck	s: 40	.241			
1	Right View:	90.0 degrees	6	He	avy Truck	s: 40	.262			
FHWA Noise Model	Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	e Fini	e Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	-2.55	1	.28	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-20.73	1	.31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-22.53	1	.31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier att	enuation)					
VehicleType L	eq Peak Hou	r Leq Day	Leq	Evening	Leq	Night		Ldn	С	NEL
Autos:	66	.0 6	4.8	63	7	59.	6	67.2	2	67.
Medium Trucks:	58	.8 5	8.2	52	0	52.	2	59.9	9	60.
Heavy Trucks:	61	.8 6	1.0	5/	3	55.	4	63.0		63.
Venicle Noise:	68	.0 6	6.9	64	8	61.	5	69.	1	69.
Centerline Distance	to Noise Co	ntour (in feet)	-	0 -10 4		-04	1	CO -/DA		-10.4
		,	/	U aBA	65	OBA OC		00 aBA	55	aBA
			un: = .	3	1	83	5	1/8		385
		CN		4	1	88	2	190		410

	FHWA-RI	D-77-108 HIGH	WAY NO	DISEF	PREDIC		IODEL (9/12/2	021)					
Scenari Road Nam Road Segmen	Scenario: 2050 FCSP Int WP Road Name: Wildwood Cyn. Rd. Road Segment: n/o Calimesa Blvd.						Project Name: FCSP & POCC Job Number: 15411							
SITE S	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	S				
Highway Data				Si	ite Con	ditions	(Hard =	10, Sc	oft = 15)					
Average Daily	Traffic (Adt):	26,328 vehicle	s		Autos: 15									
Peak Hour	Percentage:	7.70%			Me	dium Tr	ucks (2 A	(xles)	15					
Peak H	our Volume:	2,027 vehicles	6		He	avy Tru	cks (3+ A	(xles)	15					
Vel	nicle Speed:	45 mph		14	obiclo	Mix								
Near/Far Lar	ne Distance:	36 feet			VehicleType Day Evening Night Da									
Site Data						,	Autos:	70.6%	13.6%	15.89	97.53%			
Bar	rior Hoight:	0.0 feet			Me	edium Ti	rucks:	80.3%	4.7%	14.9%	5 1.49%			
Barrier Type (0-W	all. 1-Berm):	0.0			F	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%			
Centerline Dis	t. to Barrier:	44.0 feet		A/	oico Sa	urco El	ovation	r (in f	ootl					
Centerline Dist. t	o Observer:	44.0 feet		74	0/36 30	Auto	evalion:		eel)					
Barrier Distance t	o Observer:		Medium Trucks: 2 207											
Observer Height (Above Pad):	5.0 feet			Heav	n Truck	5. Z.i	201	Grade An	liustman	t: 0.0			
Pa	d Elevation:	0.0 feet			neav	y much	3. 0.1	504	Orade Ad	justinen	. 0.0			
Roa	d Elevation:	0.0 feet		Lá	ane Equ	uivalent	Distanc	e (in i	feet)					
F	Road Grade:	0.0%				Auto	s: 40.4	460						
	Left View:	-90.0 degree	es		Mediur	m Truck	s: 40.	241						
	Right View:	90.0 degree	s		Heav	y Truck	s: 40.:	262						
FHWA Noise Mode	I Calculation	s												
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Att	ten Be	rm Atten			
Autos:	68.46	1.12		1.28		-1.20		-4.61	0.	000	0.000			
Medium Trucks:	79.45	-17.05		1.31		-1.20		-4.87	0.	000	0.000			
Heavy Trucks:	84.25	-18.85		1.31		-1.20		-5.50	0.	000	0.000			
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)									
VehicleType	Leq Peak Hou	ir Leq Day	Le	eq Eve	ening	Leq	Night		Ldn	0	NEL			
Autos:	69	.7	68.5		67.4		63.2	-	70.	8	71.3			
Medium Trucks:	62		61.9		55.6		55.8	5	63.	5	63.7			
Heavy Trucks:	65	.5	64.7		61.0		59.1		66.	7	67.0			
Vehicle Noise:	Vehicle Noise: 71.6 70.6					68.5 65.2 72.8 7					73.2			
Centerline Distanc	enterline Distance to Noise Contour (in feet)													
				70 dBA 65 dBA 60 dBA 55 d			5 dBA							
			Ldn:	68 146 314				676						
		CI	VEL:		72		155		335	5	721			

	FHWA-RI	D-77-108 HIGH	IWAY N	OISE P	REDIC	TION MO	DEL (9	/12/20	21)		
Scenario Road Name Road Segmen	o: 2050 FCSF e: County Line t: w/o I-10 EE	P NP e Rd. 3 Ramps				Project N Job Nur	ame: F nber: 1	CSP 8 5411	& POCC		
SITE S	SPECIFIC IN	IPUT DATA				NO	ISE N	ODE		s	
Highway Data				Si	te Con	ditions (H	ard =	10, So	ft = 15)		
Average Daily 1	Traffic (Adt):	5,749 vehicl	es				1	Autos:	15		
Peak Hour I	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak Ho	our Volume:	443 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Vet	nicle Speed:	45 mph		Ve	hiclo I	Mix					
Near/Far Lar	ne Distance:	36 feet		ve	Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	Heavy True	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet		No	ise Sc	ource Elev	ations	in fe	ef)		
Centerline Dist. t	o Observer:	44.0 feet				Autos:	0.0	00			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks	8.0	04	Grade Ad	iustment	t: 0.0
Pa	d Elevation:	0.0 feet			11001	<i>y maono</i> .	0.0				
Roa	d Elevation:	0.0 feet		La	ne Equ	uivalent D	istanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mode	l Calculation	s		_							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	e/ I	Barrier Atte	en Bei	rm Atten
Autos:	68.46	-5.49		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-23.66		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-25.46		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenua	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ L	.eq Eve	ning	Leq Ni	ght		Ldn	С	NEL
Autos:	63	3.1	61.9		60.8		56.6		64.2	2	64.7
Medium Trucks:	55	5.9	55.3		49.0		49.2		56.9	9	57.1
Heavy Trucks:	58	3.9	58.1		54.4		52.5		60.1	1	60.4
Vehicle Noise:	65	5.0	64.0		61.9		58.6		66.2	2	66.6
Centerline Distance	e to Noise C	ontour (in feet	9								
				70 dB	A	65 dE	3A	6	0 dBA	55	dBA
			Ldn:		25		53		114		245
		С	NEL:		26		56		121		261

	FHWA-RD	-77-108 HIGH\	VAY N	OISE	PREDIC	TION MO	DEL (S)/12/20)21)		
Scenario	: 2050 FCSP	WP				Project Na	ame: F	CSP	& POCC		
Road Name	County Line	Rd.				Job Nun	nber: 1	5411			
Road Segment	: w/o I-10 EB	Ramps									
SITE S	PECIFIC IN	PUT DATA				NO	ISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (H	ard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	18,967 vehicle	s				,	Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Truci	ks (2 A	xles):	15		
Peak Ho	ur Volume:	1,460 vehicles			Hei	avy Trucks	s (3+ A	xles):	15		
Veh	icle Speed:	45 mph		v	ehicle A	Aix					
Near/Far Lan	e Distance:	36 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Barr	ier Heiaht:	0.0 feet			Me	edium Truc	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	II. 1-Berm):	0.0			F	leavy Truc	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist	to Barrier:	44.0 feet					- 47	(in \$-	- 41		
Centerline Dist. to	Observer:	44.0 feet		N	01se 50	urce Elev	ations		et)		
Barrier Distance to	Observer:	0.0 feet				Autos:	0.0	000			
Observer Height (A	bove Pad):	5.0 feet			Mediur	n Trucks:	2.4	297	Grade Ad	iuctmont	0.0
Pad	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	104	Graue Au	usunen.	0.0
Road	d Elevation:	0.0 feet		L	ane Equ	ivalent D	istanc	e (in f	eet)		
R	oad Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	40.2	241			
	Right View:	90.0 degree	s		Heav	y Trucks:	40.2	262			
FHWA Noise Model	Calculations	3									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.30		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-18.47		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-20.27		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and L	arrier a	attenu	ation)						
VehicleType L	.eq Peak Hou	r Leq Day	L	eq Ev	ening	Leq Ni	ght		Ldn	CI	VEL
Autos:	68	.2 6	67.1		65.9		61.8		69.4	1	69.9
Medium Trucks:	61.	.1 €	60.5		54.2		54.4		62.	1	62.3
Heavy Trucks:	64	.1 6	3.2		59.6		57.7		65.	3	65.
Vehicle Noise:	70.	.2 6	9.2		67.1		63.8		71.4	1	71.
Centerline Distance	e to Noise Co	ntour (in feet)		70.1		05.15					10.4
			. 🗆	70 di	BA	65 dB	A	6	U dBA	55	aBA E to
		1	.an:		54		117		252		543
		~ ~ ~			= 0		105				

Thursday, September 7, 2023

FHWA-R	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION MO	DDEL	(9/12/2	021)		
Scenario: 2050 FCS Road Name: County Lin Road Segment: w/o I-10 E	P Int NP e Rd. 3 Ramps				Project I Job Nu	Vame: Imber:	FCSP 15411	& POCC		
SITE SPECIFIC II	NPUT DATA				N	DISE	MODE		s	
Highway Data			S	ite Con	ditions (Hard	= 10, S	oft = 15)	-	
Average Daily Traffic (Adt):	4,791 vehicle	s					Autos	15		
Peak Hour Percentage:	7.70%			Me	dium Tru	cks (2	Axles)	: 15		
Peak Hour Volume:	369 vehicles			He	avy Truci	ks (3+	Axles).	15		
Vehicle Speed:	45 mph			(obiolo I	Aire					
Near/Far Lane Distance:	36 feet		V	Vehi	nix cleTvne	1	Dav	Evenina	Night	Daily
Site Data				VCIII	A	utos:	70.6%	6 13.6%	15.8%	97.539
Barriar Hainhti	0.0 feet			Me	edium Tru	icks:	80.39	6 4.7%	14.9%	1.499
Barrier Height: Barrier Type (0-Wall 1-Permi)	0.0 feet			F	leavy Tru	icks:	75.9%	6 8.2%	15.9%	0.989
Centerline Dist to Barrier	44.0 feet									
Centerline Dist. to Observer:	44.0 feet		N	loise So	urce Ele	vatio	ns (in f	eet)		
Barrier Distance to Observer:	0.0 feet				Autos	: 0	0.000			
Observer Height (Above Pad):	5.0 feet			Meaiur	n Trucks	2		Crada Ad	ivetment	
Pad Elevation:	0.0 feet			Heav	y Trucks	. 8	.004	Graue Au	Justinent	. 0.0
Road Elevation:	0.0 feet		L	ane Equ	ivalent	Distar	nce (in	feet)		
Road Grade:	0.0%				Autos	: 40	.460			
Left View:	-90.0 degree	s		Mediur	n Trucks	: 40).241			
Right View:	90.0 degree	s		Heav	y Trucks	: 40	0.262			
FHWA Noise Model Calculation	IS									
VehicleType REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 68.46	-6.28		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 79.45	-24.45		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.25	-26.25		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (with	out Topo and	barrier a	ttenu	uation)						
VehicleType Leq Peak Ho	ur Leq Day	L	eq Ev	ening	Leq N	light		Ldn	C	NEL
Autos: 6	2.3	51.1		60.0		55	.8	63.4	4	63.
Medium Trucks: 5	5.1	54.5		48.2		48	.4	56.	1	56.
Heavy Trucks: 5	8.1	57.3		53.6		51	.7	59.3	3	59.
Vehicle Noise: 6	4.2	53.2		61.1		57	.8	65.4	4	65.
Centerline Distance to Noise C	ontour (in feet)									
			70 di	BA	65 d	BA		60 dBA	55	dBA
		Ldn:		22		4	7	101		217
	-									00.

	FHWA-RI	D-77-108 HIGH	WAY N	OISE	PREDIC	TION M	ODEL (9/12/2	021)			
Scenar Road Nam Road Segme	Scenario: 2050 FCSP Int WP Road Name: County Line Rd. Road Segment: w/o I-10 EB Ramps					Project Job Ni	Name: umber:	-CSP 15411	& POCC			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5		
Highway Data				S	ite Cond	ditions ((Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	9,183 vehicle	s					Autos:	15			
Peak Hour	Percentage:	7.70%			Med	dium Tru	icks (2 /	(xles	15			
Peak H	lour Volume:	707 vehicles			Hea	avy Truc	:ks (3+)	(xles	15			
Ve	hicle Speed:	45 mph		V	ohiclo N	liv						
Near/Far La	ne Distance:	36 feet		-	VehicleType Day Evening Night Daily							
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%	
Ba	rrier Heiaht:	0.0 feet			Me	dium Tr	ucks:	80.3%	4.7%	14.9%	1.49%	
Barrier Type (0-W	/all, 1-Berm):	0.0			н	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%	
Centerline Di	st. to Barrier:	44.0 feet		N	loise So	urce Ele	evation	s (in fi	pet)			
Centerline Dist.	to Observer:	44.0 feet		-	0.00 00	Autos	. 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks	. 0.	297				
Observer Height	(Above Pad):	5.0 feet			Heavy Trucks: 8,004 Grade Adjustment: 0.0							
P	ad Elevation:	0.0 feet			moury	,	. 0.					
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	s: 40.	460				
	Left View:	-90.0 degree	s		Mediun	n Trucks	s: 40.	241				
	Right View:	90.0 degree	s		Heavy	y Trucks	s: 40.	262				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite I	Road	Fresr	el	Barrier Att	en Ber	m Atten	
Autos:	68.46	-3.45		1.28		-1.20		-4.61	0.0	000	0.000	
Medium Trucks:	79.45	-21.62		1.31		-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	84.25	-23.42		1.31		-1.20		-5.50	0.0	000	0.000	
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)							
VehicleType	Leq Peak Hou	ir Leq Day	L	Leq Eve	ening	Leq I	Night		Ldn	C	NEL	
Autos:	65	.1	53.9		62.8		58.7	,	66.3	3	66.8	
Medium Trucks:	57	.9	57.3		51.1		51.3	5	59.0)	59.2	
Heavy Trucks:	60	.9	50.1		56.4		54.5	;	62.1		62.4	
Vehicle Noise:	67	.1	56.0		63.9		60.6	5	68.2	2	68.6	
Centerline Distant	enterline Distance to Noise Contour (in feet)											
				70 dBA 65 dBA 60 dBA 55 d			dBA					
	Ldn:					34 72 156 3				335		
		CI	IEL:		36 77 166 357						357	
	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	TION MO	DEL (9)	/12/20	021)			
------------------------------------	---	--------------------------	----------	-----------	----------	----------------------	-------------------	---------------	--------------	---------	----------	
Scenari Road Nam Road Segmer	o: 2050 FCSF e: County Lin nt: e/o I-10 W	P NP e Rd. B Ramps				Project N Job Nur	ame: F nber: 1	CSP 6 5411	& POCC			
SITES	SPECIFIC IN	NPUT DATA				NO	ISE M	ODE	L INPUT	5		
Highway Data				S	ite Con	ditions (H	lard = 1	10, So	ft = 15)			
Average Daily	Traffic (Adt):	18,764 vehic	les				A	utos:	15			
Peak Hour	Percentage:	7.70%			Me	aium Truc	KS (2 A)	xies):	15			
Peak H	our Volume:	1,445 vehicl	es		He	avy Truck	s (3+ A)	xles):	15			
Vei	hicle Speed:	45 mph		V	ehicle l	Mix						
Near/Far Lar	ne Distance:	36 feet			Veh	icleType	Ľ	Day	Evening	Night	Daily	
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%	
Bar	rier Height:	0.0 feet			M	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%	
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy True	cks: 7	75.9%	8.2%	15.9%	0.98%	
Centerline Dis	st. to Barrier:	44.0 feet		٨	loise So	ource Elev	ations	(in fe	et)			
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	00	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97				
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	iustmen	t: 0.0	
Pa	ad Elevation:	0.0 feet		-								
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent D	istance	e (in f	eet)			
F	Road Grade:	0.0%				Autos:	40.4	60				
	Left View:	-90.0 degr	ees		Mediu	m Trucks:	40.2	41				
	Right View:	90.0 degr	ees		Heav	y Trucks:	40.2	62				
FHWA Noise Mode	el Calculation	IS		I								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/ .	Barrier Atte	en Be	rm Atten	
Autos:	68.46	-0.3	5	1.28	3	-1.20	-	4.61	0.0	000	0.000	
Medium Trucks:	79.45	-18.5	2	1.31		-1.20	-	4.87	0.0	000	0.000	
Heavy Trucks:	84.25	-20.3	2	1.31		-1.20	-	5.50	0.0	000	0.000	
Unmitigated Noise	Levels (with	out Topo and	d barrie	er attenu	uation)							
VehicleType	Leq Peak Ho	ur Leq Da	ay	Leq Ev	ening	Leq Ni	ght		Ldn	С	NEL	
Autos:	68	8.2	67.0		65.9		61.8		69.4	Ļ	69.9	
Medium Trucks:	61	1.0	60.4		54.2		54.4		62.1	I	62.3	
Heavy Trucks:	64	4.0	63.2		59.5		57.6		65.2	2	65.5	
Vehicle Noise:	70	0.2	69.2		67.0		63.7		71.3	3	71.7	
Centerline Distanc	e to Noise C	ontour (in fee	et)									
			L	70 d	BA	65 dE	3A	6	0 dBA	55	i dBA	
			Ldn:		54		116		250		540	
		(ONEL:		58		124		267		575	

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DEL (9	12/20)21)		
Scenari	o: 2050 FCSP	WP				Project N	<i>ame:</i> F	CSP	& POCC		
Road Nam	e: County Line	Rd.				Job Nu	nber: 1	5411			
Road Segmer	nt: e/o I-10 WB	Ramps									
SITE	SPECIFIC IN	PUT DATA				NC	ISE M	ODE		s	
Highway Data				5	Site Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	26,250 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	(les):	15		
Peak H	our Volume:	2,021 vehicle	s		Hei	avy Truck	s (3+ A.	kles):	15		
Vei	hicle Speed:	45 mph		,	Vehicle N	Nix					
Near/Far Lai	ne Distance:	36 feet		F	Vehi	cleTvpe	[Dav	Evenina	Niaht	Dailv
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Ra	rier Height:	0.0 feet			Me	edium Tru	cks: 8	0.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all. 1-Berm)	0.0			F	leavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	44.0 feet		L.	Naina C			6 m 6	- 41		
Centerline Dist.	to Observer:	44.0 feet		Ľ	voise So	ource Elev	ations	(In fe	etj		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	00			
Observer Height (Above Pad):	5.0 feet			Mediur	T Trucks:	2.2	97	Grade Ad	iuctmont	
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	04	Graue Au	usunen.	0.0
Roa	d Elevation:	0.0 feet		1	Lane Equ	uivalent D)istanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	40.2	41			
	Right View:	90.0 degree	es		Heav	y Trucks:	40.2	62			
FHWA Noise Mode	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	1	Barrier Att	en Ber	m Atten
Autos:	68.46	1.11		1.2	8	-1.20	-	4.61	0.0	000	0.000
Medium Trucks:	79.45	-17.06		1.3	1	-1.20	-	4.87	0.0	000	0.00
Heavy Trucks:	84.25	-18.86		1.3	1	-1.20	-	5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	<i>(</i>	Leq E	vening	Leq N	ight		Ldn	CI	VEL
Autos:	69.	.6	68.5		67.3		63.2		70.	3	71.3
Medium Trucks:	62	.5	61.9		55.6		55.8		63.	5	63.
Heavy Trucks:	65	5	64.6		61.0		59.1		66.	(67.
Vehicle Noise:	71.	.6	70.6		68.5		65.2		72.	3	73.
Centerline Distanc	e to Noise Co	ntour (in feet)	70 /	ND A	65 de	24	6	0 dBA	55	ARA
			I dn'	701	67	05 UE	1/15	0	0 UDA 919	55	675
		0			70		140		313		710
			VI L				1.222		334		/ 19

Thursday, September 7, 2023

Thursday, September 7, 2023

FHWA-F	RD-77-108 HIGH	NAY NOI	SE PRED	CTION MO	DEL (9/12/	2021)		
Scenario: 2050 FCS	P Int NP			Project N	lame: FCSF	P & POCC		
Road Name: County Li	ne Rd.			JOD NUI	mber: 1541	1		
Road Segment: e/6 I-10 V	/B Ramps							
SITE SPECIFIC I	NPUT DATA			NC	ISE MOD	EL INPUTS	3	
Highway Data			Site Co	nditions (H	lard = 10, S	Soft = 15)		
Average Daily Traffic (Adt):	17,478 vehicle	s			Autos	s: 15		
Peak Hour Percentage:	7.70%		M	edium Truc	ks (2 Axles): 15		
Peak Hour Volume:	1,346 vehicles		H	eavy Truck	s (3+ Axles): 15		
Vehicle Speed:	45 mph		Vehicle	Mix				
Near/Far Lane Distance:	36 feet		Ve	hicleTvpe	Dav	Evenina	Night	Dailv
Site Data				Au	tos: 70.6	% 13.6%	15.8%	97.53%
Barrier Height:	0.0 feet		/	ledium Tru	cks: 80.3	% 4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	cks: 75.9	% 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	44.0 feet		Noine	ouros Ela	ationa (in	fact)		
Centerline Dist. to Observer:	44.0 feet		Noise	Autoo		leel)		
Barrier Distance to Observer:	0.0 feet		Madi	Autos.	0.000			
Observer Height (Above Pad):	5.0 feet		Weur	uni mucks.	2.257	Grade Adi	ustment	. 0 0
Pad Elevation:	0.0 feet		Tied	ivy mucks.	0.004	Orade Auj	usunon	0.0
Road Elevation:	0.0 feet		Lane E	quivalent E	Distance (in	i feet)		
Road Grade:	0.0%			Autos:	40.460			
Left View:	-90.0 degree	s	Medi	um Trucks:	40.241			
Right View:	90.0 degree	s	Hea	vy Trucks:	40.262			
FHWA Noise Model Calculatio	ns							
VehicleType REMEL	Traffic Flow	Distanc	e Finit	e Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos: 68.4	6 -0.66		1.28	-1.20	-4.61	1 0.0	00	0.00
Medium Trucks: 79.4	5 -18.83		1.31	-1.20	-4.87	7 0.0	00	0.00
Heavy Trucks: 84.2	5 -20.63		1.31	-1.20	-5.50	0.0	00	0.00
Unmitigated Noise Levels (wit	hout Topo and I	barrier at	tenuation					
VehicleType Leq Peak He	our Leq Day	Leo	q Evening	Leq N	ight	Ldn	CI	NEL
Autos: 6	7.9 6	6.7	65.	6	61.5	69.1		69.
Medium Trucks: 6	i0.7 6	50.1	53.	9	54.1	61.8		61.
Heavy Trucks: 6	3.7 6	52.9	59.	2	57.3	64.9)	65.
Vehicle Noise: 6	i9.9 (68.8	66.	7	63.4	71.0)	71.
Centerline Distance to Noise (Contour (in feet)							
			70 dBA	65 dE	BA	60 dBA	55	dBA
	l	_dn:	51		111	239		515
						-		

	FHWA-RD	0-77-108 HIGH	WAY NO	ISE PRED		IODEL (S)/12/20	21)		
Scenari Road Nam Road Segmer	o: 2050 FCSP e: County Line nt: e/o I-10 WE	Int WP Rd. Ramps			Project Job N	Name: F lumber: 1	CSP 8	POCC		
SITE	SPECIFIC IN	PUT DATA	-		N	IOISE N	IODEL	INPUT	s	-
Highway Data			_	Site Co	nditions	(Hard =	10, Soi	ft = 15)		
Average Daily	Traffic (Adt):	19,296 vehicle	s				Autos:	15		
Peak Hour	Percentage:	7.70%		N	ledium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	1,486 vehicles	6	F	leavy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Vohick	Mix					
Near/Far La	ne Distance:	36 feet		Venicie	hicleType		Dav	Evenina	Niaht	Daily
Site Data					incic i ypc	Autos	70.6%	13.6%	15.8%	6 97 53%
Ba	vier Height	0.0 feet		_	Medium Ti	rucks:	80.3%	4.7%	14.99	6 1.49%
Barrier Type (0-W	all 1-Berm)	0.0 1001			Heavy T	rucks:	75.9%	8.2%	15.9%	6 0.98%
Centerline Dis	st. to Barrier:	44.0 feet								
Centerline Dist.	to Observer:	44.0 feet		Noise 3	Source El	evations	(in te	et)		
Barrier Distance	to Observer:	0.0 feet			Auto	s: 0.0	000			
Observer Height (Above Pad):	5.0 feet		Mea	um Truck	S: 2.2	297	0		4.00
Pá	ad Elevation:	0.0 feet		He	avy Truck	s: 8.0	04	Grade Adj	usimer	<i>t:</i> 0.0
Roa	ad Elevation:	0.0 feet		Lane E	quivalent	Distanc	e (in fe	eet)		
1	Road Grade:	0.0%			Auto	s: 40.4	160			
	Left View:	-90.0 degree	es	Medi	um Truck	s: 40.2	241			
	Right View:	90.0 degree	s	He	avy Truck	s: 40.2	262			
FHWA Noise Mode	el Calculations	s								
VehicleType	REMEL	Traffic Flow	Distant	e Finit	e Road	Fresn	el E	Barrier Att	en Be	rm Atten
Autos:	68.46	-0.23		1.28	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-18.40		1.31	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-20.20		1.31	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier at	tenuation)					
VehicleType	Leq Peak Hou	r Leq Day	Le	q Evening	Leq	Night		Ldn	(NEL
Autos:	68	.3	67.1	66.	0	61.9		69.5	5	70.0
Medium Trucks:	61	.2	60.6	54.	3	54.5		62.2	2	62.4
Heavy Trucks:	64	.2	63.3	59.	7	57.8		65.4	1	65.7
Vehicle Noise:	70	.3	69.3	67.	1	63.8		71.5	ō	71.9
Centerline Distance	e to Noise Co	ontour (in feet)				(0.4			-	
			L	/U aBA	65	aba 440	60	лавА	5	D aBA
		0	Lan:	5	2	118		255		550
		CI	VEL:	5	J	126		272		586

Thursday, September 7, 2023

	FHWA-R	D-77-108 HI	GHWA	NOISE	PREDIC	CTION MO	DEL (9/	12/202	21)		
Scenari Road Nam Road Segmer	o: 2050 FCSF e: County Lin nt: e/o Calime	P NP ie Rd. isa Blvd.				Project N Job Nur	lame: FC mber: 15	CSP & 5411	POCC		
SITE S	SPECIFIC II	NPUT DAT	A			NO	ISE MO	ODEL	INPUTS	3	
Highway Data					Site Cor	nditions (H	lard = 10	0, Sofi	t = 15)		
Average Daily	Traffic (Adt):	13,157 veh	icles				AL	utos:	15		
Peak Hour	Percentage:	7.70%			Me	edium Truc	ks (2 Ax	(les):	15		
Peak H	our Volume:	1,013 vehic	cles		He	avy Truck	s (3+ Ax	(les):	15		
Vei	hicle Speed:	45 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	36 feet		F	Veh	icleTvpe	D	av E	Evenina	Niaht	Dailv
Site Data						Au	tos: 7	0.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 fee	t		М	edium Tru	cks: 81	0.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0	-			Heavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet			Noise S	ource Elev	vations	(in fee	t)		
Centerline Dist.	to Observer:	44.0 feet		F		Autos:	0.00	00	-		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height (Above Pad):	5.0 feet			Hea	vv Trucks:	8.00)4 0	Grade Adj	ustment	: 0.0
Pa	d Elevation:	0.0 feet		-							
Roa	d Elevation:	0.0 feet		4	Lane Eq	uivalent D	Distance	(in fe	et)		
F	Road Grade:	0.0%				Autos:	40.46	50			
	Left View:	-90.0 deg	rees		Meaiu	m Trucks:	40.24	11			
	Right View:	90.0 deg	rees		неа	vy Trucks:	40.26	52			
FHWA Noise Mode	Calculation	ıs									
VehicleType	REMEL	Traffic Flow	v Di	istance	Finite	Road	Fresnel	I B	arrier Atte	en Bei	rm Atten
Autos:	68.46	6 -1.	89	1.2	8	-1.20	-4	4.61	0.0	00	0.000
Medium Trucks:	79.45	5 -20.	06	1.3	1	-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	84.25	5 -21.	86	1.3	1	-1.20	-5	5.50	0.0	00	0.000
Unmitigated Noise	Levels (with	nout Topo ar	nd barr	ier atten	uation)						
VehicleType	Leq Peak Ho	ur Leq D	Day	Leq E	vening	Leq Ni	ight	L	dn	С	NEL
Autos:	66	6.6	65.5		64.3		60.2		67.8	:	68.3
Medium Trucks:	59	9.5	58.9		52.6		52.8		60.5	;	60.7
Heavy Trucks:	62	2.5	61.6		58.0		56.1		63.7	·	64.0
Vehicle Noise:	68	8.6	67.6		65.5		62.2		69.8		70.2
Centerline Distance	e to Noise C	ontour (in fe	eet)			I.					
				70	dBA	65 dE	BA	60	dBA	55	dBA
			Ldn:		43		92		198		426
			CNEL:		45		98		211		454

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DEL (9	/12/20)21)		
Scenario	: 2050 FCSP	WP				Project N	ame: F	CSP	& POCC		
Road Name	: County Line	Rd.				Job Nur	nber: 1	5411			
Road Segment	: e/o Calimes	a Blvd.									
SITE S	PECIFIC IN	PUT DATA				NO	ISE N	ODE		S	
Highway Data				5	Site Con	ditions (H	ard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	16,675 vehicle	s				A	Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak Ho	ur Volume:	1,284 vehicles	6		Hei	avy Truck	s (3+ A	xles):	15		
Veh	icle Speed:	45 mph		1	/ehicle M	Nix					
Near/Far Lan	e Distance:	36 feet		F	Vehi	cleType	1	Day	Evening	Night	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Barr	ier Heiaht:	0.0 feet			Me	edium Truc	ks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	II. 1-Berm):	0.0			F	leavy Truc	ks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist	to Barrier:	44.0 feet		H	laiaa C-		otior -	lin f-	of		
Centerline Dist. to	Observer:	44.0 feet		/	voise So	urce Elev	ations	(IN FE	el)		
Barrier Distance to	Observer:	0.0 feet			Martin	Autos:	0.0	00			
Observer Height (A	bove Pad):	5.0 feet			Mealur	TTTUCKS:	2.2	97	Grade Ad	iustment	
Pad	d Elevation:	0.0 feet			Heav	y mucks.	0.0	104	Orade Au	Justinent	0.0
Road	d Elevation:	0.0 feet		L	ane Equ	uivalent D	istanc	e (in f	eet)		
R	oad Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	40.2	241			
	Right View:	90.0 degree	s		Heav	y Trucks:	40.2	262			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.86		1.28	8	-1.20		4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.03		1.31	1	-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-20.83		1.31	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	r atten	uation)	-	-				-
VehicleType L	.eq Peak Hou	r Leq Day		Leq Ev	/ening	Leq Ni	ght		Ldn	CI	VEL
Autos:	67.	.7	66.5		65.4		61.3		68.	В	69.3
Medium Trucks:	60.	.5	59.9		53.7		53.9		61.	6	61.
Heavy Trucks:	63.	5	62.7		59.0		57.1		64.	7	65.
Vehicle Noise:	69.	.7	68.6		66.5		63.2		70.8	В	71.2
Centerline Distance	to Noise Co	ntour (in feet)		70 -	(0.4	CE -1			0 - 10 4		-/0.4
			L	70 d	IBA	65 dE	A 407	6	U aBA	55	abA 400
			Lan:		50		107		232		499
					50				0.47		500

Thursday, September 7, 2023

Thursday, September 7, 2023

							V -	,		
Scenario: 2050 FCS	P Int NP				Project I	Vame:	FCSP	& POCC		
Road Name: County Li	ne Rd.				Job Nu	mber:	15411			
Road Segment: e/o Calimi	esa Blvd.									
SITE SPECIFIC I	NPUT DATA				N	DISE	MODE	L INPUT	S	
Highway Data			Si	te Con	ditions (l	Hard :	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	13,090 vehicle	s					Autos.	15		
Peak Hour Percentage:	7.70%			Me	dium Tru	cks (2	Axles)	: 15		
Peak Hour Volume:	1,008 vehicles	3		He	avy Trucl	ks (3+	Axles)	15		
Vehicle Speed:	45 mph		Ve	hicle I	Mix					
Near/Far Lane Distance:	36 feet		-	Vehi	icleType		Day	Evening	Night	Daily
Site Data					A	utos:	70.6%	6 13.6%	15.8%	97.53%
Barrier Height	0.0 feet			Me	edium Tru	icks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-Berm);	0.0			ŀ	leavy Tru	icks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	44.0 feet						(4	41		
Centerline Dist. to Observer:	44.0 feet		NC	oise so	ource Ele	vatio		eet)		
Barrier Distance to Observer:	0.0 feet				Autos.		0007			
Observer Height (Above Pad):	5.0 feet			Mediur	TTTUCKS.			Crada Ad	ivetment	
Pad Elevation:	0.0 feet			neav	y mucks.	c	0.004	Graue Au	Justinent	. 0.0
Road Elevation:	0.0 feet		La	ane Equ	uivalent l	Distar	nce (in	feet)		
Road Grade:	0.0%				Autos.	40	.460			
Left View:	-90.0 degree	s		Mediur	n Trucks.	40).241			
Right View:	90.0 degree	s		Heav	y Trucks.	40	0.262			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 68.4	6 -1.91		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 79.4	5 -20.08		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.2	5 -21.88		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (wit	hout Topo and	barrier at	ttenua	ation)						
VehicleType Leq Peak Ho	our Leq Day	Le	q Eve	ening	Leq N	light		Ldn	CI	NEL
Autos: 6	6.6	65.5		64.3		60	.2	67.	8	68.
Medium Trucks: 5	9.5	58.9		52.6		52	.8	60.	5	60.
Heavy Trucks: 6	2.5	61.6		58.0		56	.1	63.	7	64.
Vehicle Noise: 6	8.6	67.6		65.5		62	.2	69.8	8	70.
Centerline Distance to Noise C	Contour (in feet)									
		L	70 dB	3A	65 d	BA		60 dBA	55	dBA
		Ldn:		42		9	1	197		424
	-						_			

	FHWA-R	D-77-108 HIGH	WAY NO	DISE F	REDIC	TION M	ODEL (9/12/2	021)		
Scenari Road Nam Road Segmen	o: 2050 FCSF e: County Line nt: e/o Calimes				Project Job N	Name: I umber:	CSP 15411	& POCC			
SITE S	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	LINPUT	S	
Highway Data				Si	te Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,042 vehicle	s				,	Autos.	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	ucks (2 A	xles).	15		
Peak H	our Volume:	1,235 vehicles			He	avy Truc	cks (3+ A	xles).	15		
Vel	hicle Speed:	45 mph		14	hiele I	Mix					
Near/Far Lar	ne Distance:	36 feet			Vehi	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data					1011	, , , , , , , , , , , , , , , , , , ,	Autos:	70.6%	6 13.6%	15.8%	97.53%
Bar	rier Height:	0.0 feet			Me	edium Ti	rucks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-W	all. 1-Berm):	0.0			ŀ	leavy Ti	rucks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet		N	oico Sa		ovation	(in f	oot)		
Centerline Dist. t	to Observer:	44.0 feet		14	0136 30	Auto		000	een		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck	5. U.I	000			
Observer Height (Above Pad):	5.0 feet			Heav	n Truck	5. Z.J	104	Grade Ad	iustment	. 0 0
Pa	d Elevation:	0.0 feet			neav	y muck.	5. 0.1	J04	Orade Au	usunen	. 0.0
Roa	d Elevation:	0.0 feet		Lá	ane Equ	uivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Auto	s: 40.4	460			
	Left View:	-90.0 degree	s		Mediur	m Truck	s: 40.	241			
	Right View:	90.0 degree	s		Heav	y Truck	s: 40.	262			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.03		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.20		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.00		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	67	.5	66.3		65.2		61.1		68.7	7	69.2
Medium Trucks:	60).4	59.8		53.5		53.7		61.4	1	61.6
Heavy Trucks:	63	5.4	62.5		58.9		57.0		64.6	6	64.9
Vehicle Noise:	69	0.5	68.5		66.3		63.0		70.6	6	71.1
Centerline Distanc	e to Noise Co	ontour (in feet)									
				70 dE	BA	65	dBA		60 dBA	55	dBA
			Ldn:	49 105 226			486				
		CI	IEL:		52		112		240		518

Thursday, September 7, 2023

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION MC	DEL (S	9/12/20	021)		
Scenar	rio: E					Project N	<i>lame:</i> F	CSP	& POCC		
Road Nan	ne: 16th St.	_				Job Nu	mber: 1	15411			
Road Segme	nt: s/o Avenue	ε									
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	IODE	L INPUTS	5	
Highway Data				s	Site Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	2,820 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	(xles):	15		
Peak H	lour Volume:	217 vehicle	s		He	avy Truck	is (3+ A	(xles):	15		
Ve	ehicle Speed:	40 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	12 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	33.0 feet			loise Se	ource Ele	vations	s (in fe	et)		
Centerline Dist.	to Observer:	33.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks:	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet			5				(4)		
Ro	ad Elevation:	0.0 feet		4	ane Eq	uivaient L	Jistanc	e (in i	eet)		
	Road Grade:	0.0%				Autos:	32.8	333			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	32.5	562			
	Right View:	90.0 degre	es		Heat	y Trucks:	32.5	589			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	-8.07	,	2.64	Ļ	-1.20		-4.52	0.0	00	0.000
Medium Trucks:	77.72	-26.24	ł	2.69	9	-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	82.99	-28.04	ł	2.69	9	-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	rening	Leq N	light		Ldn	CI	NEL
Autos:	59	9.9	58.7		57.6		53.5		61.1		61.6
Medium Trucks:	53	3.0	52.4		46.1		46.3		54.0)	54.2
Heavy Trucks:	56	6.4	55.6		51.9		50.0	1	57.6	;	57.9
Vehicle Noise:	62	2.1	61.1		58.9		55.6		63.2		63.6
Centerline Distan	ce to Noise C	ontour (in fee	t)			0					
			L	70 d	BA	65 di	BA	6	i0 dBA	55	dBA
		_	Ldn:		12		25		54		117
		C	NEL:		12		27		58		124

	FHWA-RD	-//-108 HIGH	WAT	NUISI				011212			
Scenario:	OY NP					Project	Name: I	CSP	& POCC		
Road Name:	16th St.					Job Ni	umber: *	15411			
Road Segment:	s/o Avenue I	E									
SITE SP	ECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data					Site Cond	ditions ('Hard =	10, Sc	oft = 15)		
Average Daily Tra	ffic (Adt):	2,955 vehicle	es				,	Autos:	15		
Peak Hour Per	rcentage:	7.70%			Med	dium Tru	icks (2 A	(xles)	15		
Peak Hour	Volume:	228 vehicle	s		Hea	avy Truc	ks (3+ A	(xles):	15		
Vehicl	e Speed:	40 mph			Vehicle N	lix					
Near/Far Lane I	Distance:	12 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Barrie	r Heiaht:	0.0 feet			Me	dium Tr	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wall,	1-Berm):	0.0			H	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist. t	o Barrier:	33.0 feet			Noise So	urce Ele	vations	in fe	eet)		
Centerline Dist. to C	Observer:	33.0 feet				Autos	. 0.0	000			
Barrier Distance to C	Observer:	0.0 feet			Mediun	n Trucks	: 23	97			
Observer Height (Abo	ove Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Ad	justment	0.0
Pad E		Lana Fai		Distant		· · · · ·					
Road E	Elevation:	0.0 feet			Lane Equ	ivalent	Distanc	e (in i	reet)		
Roa	d Grade:	0.0%				Autos	:: 32.0	333			
L	ent View:	-90.0 degree	es		Mediun	n Trucks	. 32.	202			
RI	grit view:	90.0 degree	es		neav	y TTUCKS	i. 32.i	009			
FHWA Noise Model C	alculations										
VehicleType I	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	66.51	-7.86		2.6	54	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-26.04		2.6	69	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	82.99	-27.83		2.6	59	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise Le	evels (witho	ut Topo and	barri	er attei	nuation)						
VehicleType Lee	q Peak Hour	r Leq Day	<i>(</i>	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	60.	1	58.9		57.8		53.7		61.3	3	61.
Medium Trucks:	53.	2	52.6		46.3		46.5		54.3	2	54.
Heavy Trucks:	56.	b 0	55.8		52.1		50.3		57.0	5	58.
venicie Noise:	62.	3	01.3		59.1		55.8		63.4	+	63.
Centerline Distance to	o Noise Coi	ntour (in feet,)								
			. L	70	dBA	65 c	1BA	6	60 dBA	55	dBA
		-	Ldn:		12		26		56		120
		C	NEL		12		20		60		128

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHV	VAY NOI	SE F	PREDIC	TION M	ODEL	(9/12/2	2021)			
Scenar Road Narr Road Segme	io: OY WP ne: 16th St. nt: s/o Avenue	E				Project Job N	Name: umber:	FCSP 15411	& POCC			
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	EL INPU	rs		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	3,256 vehicles	5					Autos	: 15			
Peak Hour	Percentage:	7.70%			Me	dium Tru	ucks (2	Axles)	: 15			
Peak H	lour Volume:	251 vehicles			He	avy Truc	cks (3+	Axles)	: 15			
Ve	hicle Speed:	40 mph			ahiala I	Mise						
Near/Far La	ne Distance:	12 feet		V	Veh	icleType		Dav	Evening	Nii	aht	Daily
Site Data				-	ven	icie i ype	Autos	70.69	6 13.6%	1	5.8%	97.76%
one Data		0.0.6			M	edium Ti	ucks:	80.39	6 4.7%	14	4.9%	1.35%
Ba Demise Terre (0.14	rrier Height:	0.0 feet			F	leavy Ti	ucks:	75.99	6 8.2%	1	5.9%	0.89%
Centerline Di	ist to Barrier	0.0 33.0 foot										
Centerline Dist	to Observer:	33.0 feet		N	oise Sc	ource El	evatior	ns (in f	'eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0	.000				
Observer Height	(Above Pad):	5.0 feet			Mediu	m Truck	s: 2	.297				
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade A	djusti	ment:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%			,	Auto	s: 32	.833	,			
	Left View:	-90.0 degrees	s		Mediu	m Truck	s: 32	.562				
	Right View:	90.0 degrees	s		Heav	y Truck	s: 32	.589				
FHWA Noise Mod	el Calculations	6		_								
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos:	66.51	-7.43	1	2.64		-1.20		-4.52	0	.000		0.00
Medium Trucks:	77.72	-26.04	1	2.69		-1.20		-4.86	0	.000		0.00
Heavy Trucks:	82.99	-27.83	1	2.69		-1.20		-5.69	0	.000		0.00
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	tenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	Leq	q Eve	ening	Leq	Night		Ldn		CN	IEL
Autos:	60	.5 5	9.3		58.2		54.	.1	61	.7		62.3
Medium Trucks:	53	.2 5	2.6		46.3		46.	5	54	.2		54.4
Heavy Trucks:	56	.6 5	5.8		52.1		50.	.3	57	.8		58.
Vehicle Noise:	62	.5 6	1.5		59.4		56.	.1	63	.7		64.
Centerline Distant	ce to Noise Co	ntour (in feet)										
			7	70 dl	BA	65	dBA	1	60 dBA		55	dBA
		L	.dn:		13		2	7	5	8		126
		CN	EL:		13		29	9	6	2		134

	FHWA-RD	-77-108 HIGHWA	AY NOISE	PREDIC	TION MC	DEL (9	/12/2	021)		
Scenar Road Nan Road Segme	<i>io:</i> OY Int NP ne: 16th St. nt: s/o Avenue I	E			Project I Job Nu	lame: F mber: 1	CSP 5411	& POCC		
SITE	SPECIFIC IN	PUT DATA			N	DISE N	IODE	L INPUTS	5	
Highway Data			5	Site Con	ditions (l	lard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	2,955 vehicles				A	Autos.	15		
Peak Hour	Percentage:	7.70%		Me	dium Tru	cks (2 A	xles).	15		
Peak H	our Volume:	228 vehicles		He	avy Truck	(3+ A	xles).	15		
Ve	hicle Speed:	40 mph		(ahiala l	Mix					
Near/Far La	ne Distance:	12 feet	Ľ	Veh	icleTvne		Dav	Evening	Night	Daily
Site Data				Ven	icie i ype	itos:	70 6%	13.6%	15.9%	07.53%
Sile Dala				14	n adium Tri	nus. icks:	RO 39	6 47%	1/ 0%	1/10%
Ba	rrier Height:	0.0 feet		1	Heavy Tri	icks:	75.9%	6 82%	15.9%	0.98%
Barrier Type (0-V	vall, 1-Berm):	0.0			1041) 110	onto.	. 0.0 /	0.270	10.070	, 0.0070
Centenine Di	st. to Barrier:	33.0 feet	1	Voise So	ource Ele	vations	(in f	eet)		
Centenine Dist.	to Observer:	33.0 feet			Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet		Mediur	m Trucks.	2.2	97			
Observer Height	(Above Pad):	5.0 feet		Heav	y Trucks	8.0	04	Grade Adju	ustment	t: 0.0
r Da	ad Elevation.	0.0 feet		ano Ea	uivalent l	Distanc	o (in	foot)		
RU	au Elevalion. Rood Grade:	0.0 1661	-	une Ly	Autos	32.8	133	1000		
	Loft View:	0.0.0 dogroop		Mediu	m Trucks	32.0	562			
	Right View:	90.0 degrees		Heav	y Trucks	32.5	589			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	e/	Barrier Atte	n Bei	rm Atten
Autos:	66.51	-7.86	2.64	4	-1.20		-4.52	0.0	00	0.000
Medium Trucks:	77.72	-26.04	2.69	Э	-1.20		4.86	0.0	00	0.000
Heavy Trucks:	82.99	-27.83	2.69	9	-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and bar	rier atten	uation)						
VehicleType	Leq Peak Hour	r Leq Day	Leg Ev	/ening	Leq N	light		Ldn	С	NEL
Autos:	60.	1 58.	9	57.8		53.7		61.3		61.8
Medium Trucks:	53.	2 52.	6	46.3		46.5		54.2		54.4
Heavy Trucks:	56.	6 55.	8	52.1		50.3		57.8		58.1
Vehicle Noise:	62.	3 61.	3	59.1		55.8		63.4		63.8
Centerline Distan	ce to Noise Co	ntour (in feet)	70.0		65 d	DA.		60 dRA	55	d R A
		1 de	2. 100	12	03 0	2/1 26	· · ·	50 UDA	33	120
		CNEI		12		20 28		60		120
		CIVEL		15		20		00		120

	FHWA-R	D-77-108 HIGH	IWAY N	OISE	PREDIC	TION MO	DDEL (9/12/2	021)		
Scena	rio: OY Int WP					Project I	Vame: I	CSP	& POCC		
Road Nar	ne: 16th St.					Job Nu	mber:	15411			
Road Segme	ent: s/o Avenue	ε									
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	3,045 vehicl	es				,	Autos:	15		
Peak Hou	Percentage:	7.70%			Me	dium Tru	cks (2 A	(xles	15		
Peak I	Hour Volume:	234 vehicle	s		He	avy Truc	ks (3+ A	(xles	15		
Ve	ehicle Speed:	40 mph		v	ehicle I	Mix					
Near/Far La	ane Distance:	12 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.60%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	80.3%	4.7%	14.9%	1.44%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	75.9%	8.2%	15.9%	0.95%
Centerline D	ist. to Barrier:	33.0 feet		N	loise So	ource Ele	vations	s (in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.3	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Adj	iustment	0.0
F	Pad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	e (in	feet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediu	m Trucks	32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	32.	589			
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos	66.51	-7.73		2.64		-1.20		-4.52	0.0	000	0.000
Medium Trucks	77.72	-26.04		2.69	1	-1.20		-4.86	0.0	000	0.000
Heavy Trucks	82.99	-27.83		2.69		-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	Leq Ev	ening	Leq N	light		Ldn	С	NEL
Autos:	6	0.2	59.0		57.9		53.8	3	61.4	1	61.9
Medium Trucks:	5	3.2	52.6		46.3		46.5	5	54.2	2	54.4
Heavy Trucks	5	6.6	55.8		52.1		50.3	5	57.8	3	58.1
Vehicle Noise:	6	2.4	61.3		59.2		55.9)	63.5	5	63.9
Centerline Distan	ce to Noise C	ontour (in feel	9					r			
				70 di	BA	65 d	BA	(60 dBA	55	dBA
		-	Ldn:		12		26		57		122
		С	NEL:		13 28 60					130	

	FHWA-RL	0-77-108 HIGH	IWAT	NUISE	PREDIC			12/20	J21)		
Scenari	Scenario: 2050 NP						Name: F	CSP	& POCC		
Road Nam	e: 16th St.					Job N	umber: 1	5411			
Road Segmer	nt: s/o Avenue	E									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	5,536 vehicle	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	426 vehicle	s		He	avy Truc	:ks (3+ A	xles):	15		
Vel	hicle Speed:	40 mph		١	/ehicle l	Nix					
Near/Far Lar	ne Distance:	12 feet		_	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Bar	rier Height:	0.0 feet			M	edium Ti	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			I	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	33.0 feet			laisa Sr	urco El	ovations	(in fe	oot)		
Centerline Dist.	to Observer:	33.0 feet				Autor	. 00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	. 0.0	97			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	04	Grade Ad	iustment:	0.0
Pa	Pad Elevation: 0.0 feet										
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in i	'eet)		
F	Road Grade:	0.0%				Autos	5: 32.8	333			
	Left View:	-90.0 degre	es		Mediu	n Truck	32.5	62			
	Right View:	90.0 degre	es		Heav	y Trucks	32.5	89			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	66.51	-5.14		2.64	1	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-23.31		2.69	9	-1.20		4.86	0.0	000	0.00
Heavy Trucks:	82.99	-25.11		2.69	9	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	CI	VEL
Autos:	62	.8	61.6		60.5		56.4		64.0)	64.
Medium Trucks:	55	.9	55.3		49.0		49.2		56.9	Э	57.
Heavy Trucks:	59	.4	58.5		54.9		53.0		60.6	6	60.
Vehicle Noise:	65	.0	64.0		61.8		58.6		66.2	2	66.
Centerline Distanc	e to Noise Co	ontour (in feet)							1	
			[70 a	IBA	65 (dBA	6	60 dBA	55	dBA
		~	Ldn:		18		39		85		183
		C	NEL:		20		42		91		195

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHW	AY NO	ISE	PREDIC	TION M	ODEL (9/12/2	:021)			
Scenar Road Nam Road Segme	io: 2050 WP le: 16th St. nt: s/o Avenue I	E				Project Job N	Name: umber:	FCSP 15411	& POCC			
SITE	SPECIFIC INI	PUT DATA				N	IOISE N	NODE	L INPUT	s		
Highway Data				S	Site Con	ditions	(Hard =	10, Se	oft = 15)			
Average Daily	Traffic (Adt):	5,837 vehicles						Autos:	: 15			
Peak Hour	Percentage:	7.70%			Me	dium Tru	ucks (2 /	Axles).	: 15			
Peak H	lour Volume:	449 vehicles			He	avy Truc	cks (3+)	Axles).	: 15			
Ve	hicle Speed:	40 mph		1	(obiclo)	Mix						
Near/Far La	ne Distance:	12 feet		-	Veh	icleTvne		Dav	Evenina	Nie	aht	Daily
Site Data					10/1	,0,0,1,9,00 /	Autos:	70.6%	6 13.6%	15	5.8%	97.66%
Pa	rrior Hoight:	0.0 foot			М	edium Ti	rucks:	80.3%	6 4.7%	14	1.9%	1.41%
Barrier Type (0-M	all 1-Berm)	0.0 1001				Heavy Ti	rucks:	75.9%	6 8.2%	15	5.9%	0.93%
Centerline Di	st. to Barrier:	33.0 feet		-								
Centerline Dist.	to Observer:	33.0 feet		^	loise So	burce El	evation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000				
Observer Height (Above Pad):	5.0 feet			Mediu	m Truck	s: 2.	297	0	1 A.		0.0
Pa	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	ijusti	nent	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 32.	833				
	Left View:	-90.0 degrees			Mediu	m Truck	s: 32.	562				
	Right View:	90.0 degrees			Heav	y Truck	s: 32.	589				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresr	nel	Barrier At	ten	Berr	m Atten
Autos:	66.51	-4.90		2.64	Ļ	-1.20		-4.52	0.	000		0.000
Medium Trucks:	77.72	-23.31		2.69	9	-1.20		-4.86	0.	000		0.000
Heavy Trucks:	82.99	-25.11		2.69)	-1.20		-5.69	0.	000		0.000
Unmitigated Noise	e Levels (witho	ut Topo and ba	arrier at	tenı	uation)							
VehicleType	Leq Peak Hour	Leq Day	Le	q Ev	rening	Leq	Night		Ldn		CN	VEL
Autos:	63.	0 6	1.9		60.7		56.6	5	64.	2		64.7
Medium Trucks:	55.	9 5	5.3		49.0		49.2	2	56.	9		57.1
Heavy Trucks:	59.4	4 54	3.5		54.9		53.0)	60.	6		60.9
Vehicle Noise:	65.	1 64	1.1		62.0		58.7	7	66.	3		66.7
Centerline Distand	ce to Noise Col	ntour (in feet)				-		-		_		
				70 d	IBA .	65	dBA	1	60 dBA		55	dBA
		L	dn:		19		40		8	7		187
		CNE	L:		20		43		93	3		199

	FHWA-RI	0-77-108 HIGH	WAY NO	SE PRED	ICTION M	ODEL (9/12/2	021)		
Scenari Road Nam Road Segmer	o: 2050 Int NF e: 16th St. nt: s/o Avenue	E			Project Job N	Name: I umber:	FCSP 15411	& POCC		
SITE	SPECIFIC IN	IPUT DATA			N	IOISE N	IODE	L INPUT	S	
Highway Data				Site Co	onditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	6,066 vehicle	s				Autos:	15		
Peak Hour	Percentage:	7.70%		/	Aedium Tri	ucks (2 A	Axles):	15		
Peak H	our Volume:	467 vehicles	5	1	Heavy True	cks (3+ A	Axles):	15		
Vel	hicle Speed:	40 mph		Vehicl	o Miy					
Near/Far Lar	ne Distance:	12 feet		Venici	hicleType		Dav	Evenina	Nia	ht Daily
Site Data				-		Autos:	70.6%	6 13.6%	15.	8% 97.53%
Bar	rier Height:	0.0 feet			Medium Ti	rucks:	80.3%	6 4.7%	14.	9% 1.49%
Barrier Type (0-W	all 1-Berm)	0.0			Heavy Ti	rucks:	75.9%	6 8.2%	15.	9% 0.98%
Centerline Dis	st. to Barrier:	33.0 feet		Maina	0 FI		- (in \$	41		
Centerline Dist.	to Observer:	33.0 feet		Noise	Source Er	evalions	200	eelj		
Barrier Distance	to Observer:	0.0 feet		Mad	AULU: ium Truck	5. U.I	207			
Observer Height (Above Pad):	5.0 feet		IVIEU	awy Truck	5. Z.i	201	Grade Ad	iustm	ent: 0.0
Pa	ad Elevation:	0.0 feet		110	avy mach	3. 0.1	504	0/000/10	Juoun	0.0
Roa	ad Elevation:	0.0 feet		Lane E	quivalent	Distanc	ce (in	feet)		
F	Road Grade:	0.0%			Auto	s: 32.	833			
	Left View:	-90.0 degree	s	Med	ium Truck	s: 32.	562			
	Right View:	90.0 degree	s	He	avy Truck	s: 32.	589			
FHWA Noise Mode	el Calculation	s		1						
VehicleType	REMEL	Traffic Flow	Distand	e Fini	te Road	Fresn	el	Barrier Att	en	Berm Atten
Autos:	66.51	-4.74		2.64	-1.20		-4.52	0.0	000	0.000
Medium Trucks:	77.72	-22.91		2.69	-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-24.71		2.69	-1.20		-5.69	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier at	tenuation)					
VehicleType	Leq Peak Hou	r Leq Day	Le	q Evening	Leq	Night		Ldn		CNEL
Autos:	63	.2 (62.0	60	.9	56.8	3	64.4	4	64.9
Medium Trucks:	56	.3	55.7	49	.4	49.6	6	57.3	3	57.5
Heavy Trucks:	59	.8	58.9	55	.3	53.4	ļ.	61.	0	61.3
Vehicle Noise:	65	.4	64.4	62	.2	59.0)	66.	6	67.0
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 dBA	65	dBA	(60 dBA		55 dBA
			Ldn:	1	9	42		90)	195
		CI	IEL:	21 45 96				207		

	FHWA-R	D-77-108 HIGH	IWAY N	NOISE	PREDIC	TION MO	ODEL (9/12/2	021)		
Scena	rio: 2050 Int W	P				Project I	Name: I	FCSP	& POCC		
Road Nar	ne: 16th St.	_				Job Nu	imber:	15411			
Road Segme	ent: s/o Avenue	ε									
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions (Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	6,156 vehicl	es				,	Autos:	15		
Peak Hou	r Percentage:	7.70%			Me	dium Tru	cks (2 A	Axles).	15		
Peak I	Hour Volume:	474 vehicle	s		He	avy Truc	ks (3+ A	Axles)	15		
Ve	ehicle Speed:	40 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	12 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	6 13.6%	15.8%	97.57%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	80.3%	6 4.7%	14.9%	1.46%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	ucks:	75.9%	6 8.2%	15.9%	0.97%
Centerline D	ist. to Barrier:	33.0 feet		N	loise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.1	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Ad	iustmen	t: 0.0
F	Pad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediu	m Trucks	32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	: 32.	589			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	iel	Barrier Att	en Be	rm Atten
Autos	66.51	-4.68		2.64	ļ	-1.20		-4.52	0.0	000	0.000
Medium Trucks	77.72	-22.91		2.69)	-1.20		-4.86	0.0	000	0.000
Heavy Trucks	82.99	-24.71		2.69)	-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y .	Leq Ev	ening	Leq N	light		Ldn	С	NEL
Autos:	63	3.3	62.1		61.0		56.9)	64.4	1	64.9
Medium Trucks:	56	5.3	55.7		49.4		49.6	6	57.3	3	57.5
Heavy Trucks	59	9.8	58.9		55.3		53.4	1	61.0)	61.3
Vehicle Noise:	6	5.4	64.4		62.2		59.0)	66.6	3	67.0
Centerline Distan	ce to Noise C	ontour (in feel	9								
				70 di	BA	65 d	IBA	1	60 dBA	55	i dBA
			Ldn:		20 42 91			196			
		С	NEL:		21		45		97		209

Road Name	16th St					Ioh N	lumher:	15411	a. 500		
Road Segment	s/o Avenue	E				000 1	umber.	10-111			
SITE S	PECIFIC IN	PUT DATA					OISE	MODE		s	
Highway Data					Site Con	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily Ti	raffic (Adt):	1,255 vehicle	s					Autos:	15		
Peak Hour P	ercentage:	7.70%			Me	dium Tr	ucks (2	Axles):	15		
Peak Ho	ur Volume:	97 vehicles	6		He	avy Tru	cks (3+	Axles):	15		
Vehi	cle Speed:	40 mph		1	Vehicle I	Nix					
Near/Far Lane	e Distance:	12 feet		F	Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.539
Barn	ier Height:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49
Barrier Type (0-Wa	ll, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.989
Centerline Dist.	to Barrier:	33.0 feet		-	Noise So	ource E	levatior	is (in fe	eet)		
Centerline Dist. to	Observer:	33.0 feet				Auto	s: 0	.000			
Barrier Distance to	Observer:	0.0 feet			Mediu	n Truck	s: 2	297			
Observer Height (A	bove Pad):	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	ljustment	0.0
Pad	Pad Elevation: 0.0 f						6 Die 6e	(f41		
Road	Elevation:	0.0 feet			Lane Equ	livalen	Distan	ce (in i	reet)		
R	bad Grade:	0.0%			Marthur	Auto	S: 32	.833			
	Left View:	-90.0 degree	s		Mediui	TI I TUCK	S: 32	.502			
,	tigni view.	90.0 degree	:5		neav	y much	3. 32	.305			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	ten Ber	m Atten
Autos:	66.51	-11.58		2.6	4	-1.20		-4.52	0.	000	0.00
Medium Trucks:	77.72	-29.75		2.6	9	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	82.99	-31.55		2.6	9	-1.20		-5.69	0.	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	er atten	uation)						
VehicleType L	eq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	56	.4	55.2		54.1		49	9	57.	5	58
Medium Trucks:	49	.5	48.8		42.6		42	8	50.	5	50.
Heavy Trucks:	52	.9	52.1		48.4		46.	5	54.	1	54.
venicie ivoise:	58	.0	01.5		55.4		52	1	59.	I .	60.
Centerline Distance	to Noise Co	ntour (in feet)		70 /	d D A	65	dRA		SO dBA	55	dRA
			l dn'	700	7	05	11		20	1 35	GDA 61
							16	,	32	-	

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHW	AY NOISE	E PREDIC	TION MC	DEL (9/1	12/2021)			
Scenar Road Nam Road Segmei	io: OY NP ne: 16th St. nt: s/o Avenue	E			Project N Job Nui	lame: FC nber: 15	SP & POC 411	C		
SITE	SPECIFIC IN	PUT DATA			NC	DISE MO	DEL INP	UTS		
Highway Data				Site Con	ditions (H	lard = 10), Soft = 15	5)		
Average Daily	Traffic (Adt):	1,355 vehicles				Au	itos: 15			
Peak Hour	Percentage:	7.70%		Me	dium Truc	ks (2 Axl	les): 15			
Peak H	lour Volume:	104 vehicles		He	avy Truck	s (3+ Axi	<i>les):</i> 15			
Ve	hicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ne Distance:	12 feet		Veh	icleType	Da	ay Eveni	ing N	ight	Daily
Site Data					AL	itos: 70	0.6% 13.	6% 1	5.8%	97.53%
Ba	rrier Height:	0.0 feet		М	edium Tru	cks: 80	0.3% 4.	7% 1	4.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0		1	Heavy Tru	cks: 75	5.9% 8.3	2% 1	5.9%	0.98%
Centerline Di	st. to Barrier:	33.0 feet		Noise Sc	ource Elev	vations (in feet)			
Centerline Dist.	to Observer:	33.0 feet		10/30 00	Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2 20	7			
Observer Height (Above Pad):	5.0 feet		Heat	/v Trucks:	8.00	4 Grade	Adiust	ment	0.0
Pa	ad Elevation:	0.0 feet			<i>y maono.</i>	0.00				
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance	(in feet)			
1	Road Grade:	0.0%			Autos:	32.83	3			
	Left View:	-90.0 degrees		Mediu	m Trucks:	32.56	2			
	Right View:	90.0 degrees		Heav	vy Trucks:	32.58	9			
FHWA Noise Mode	el Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier	r Atten	Berr	n Atten
Autos:	66.51	-11.25	2.6	54	-1.20	-4	.52	0.000		0.000
Medium Trucks:	77.72	-29.42	2.6	69	-1.20	-4	.86	0.000		0.000
Heavy Trucks:	82.99	-31.22	2.6	69	-1.20	-5	. 69	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and ba	arrier attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	ight	Ldn		C٨	IEL
Autos:	56	.7 55	5.5	54.4		50.3		57.9		58.4
Medium Trucks:	49	.8 49	9.2	42.9		43.1		50.8		51.0
Heavy Trucks:	53	.3 52	2.4	48.8		46.9		54.4		54.8
Vehicle Noise:	58	.9 57	7.9	55.7		52.4		60.1		60.5
Centerline Distant	ce to Noise Co	ntour (in feet)								
			70	dBA	65 dl	BA	60 dBA		55 (dBA
		Lo	dn:	7		15		33		72
		CNE	EL:	8		16		35		76

	FHWA-RD	-77-108 HIGHWA	AY NOIS			DEL (9/12	2/2021)			
Scenan Road Nam	io: OY WP ne: 16th St.				Project Na Job Num	ame: FCS	SP & POCC 11	;		
Road Segme	nt: s/o Avenue	E								
SITE	SPECIFIC IN	PUT DATA			NO	ISE MO	DEL INPU	ITS		
Highway Data				Site Con	ditions (H	ard = 10,	Soft = 15)			
Average Daily	Traffic (Adt):	1,692 vehicles				Aut	os: 15			
Peak Hour	Percentage:	7.70%		Me	dium Truck	is (2 Axle	es): 15			
Peak H	lour Volume:	130 vehicles		He	avy Trucks	: (3+ Axle	es): 15			
Ve	hicle Speed:	40 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	12 feet		Veh	icleType	Da	y Evenin	g Ni	ght	Daily
Site Data					Aut	os: 70.	6% 13.6	% 1	5.8%	98.02%
Bai	rrier Heiaht:	0.0 feet		M	edium Truc	ks: 80.	3% 4.7	% 1	4.9%	1.19%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Truc	ks: 75.	9% 8.2	% 1	5.9%	0.79%
Centerline Dis	st. to Barrier:	33.0 feet		Noise So	ource Elev	ations (ii	n feet)			
Centerline Dist.	to Observer:	33.0 feet			Autos:	0.000	,			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.297				
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.004	Grade	Adjust	ment:	0.0
Pa	ad Elevation:	0.0 feet								
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in feet)			
1	Road Grade:	0.0%			Autos:	32.833				
	Left View:	-90.0 degrees		Mediu	m Trucks:	32.562				
	Right View:	90.0 degrees		Heav	y Trucks:	32.589)			
FHWA Noise Mode	el Calculations	;								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier J	Atten	Bern	n Atten
Autos:	66.51	-10.26	2.	64	-1.20	-4.	52	0.000		0.000
Medium Trucks:	77.72	-29.42	2.	69	-1.20	-4.	86	0.000		0.000
Heavy Trucks:	82.99	-31.22	2.	69	-1.20	-5.	69	0.000		0.000
Unmitigated Noise	e Levels (witho	out Topo and bar	rrier atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq Nig	ght	Ldn		CN	EL
Autos:	57.	7 56.	5	55.4		51.3	5	8.9		59.4
Medium Trucks:	49.	8 49.	2	42.9		43.1	5	0.8		51.0
Heavy Trucks:	53.	3 52.	4	48.8		46.9	5	4.4		54.8
Vehicle Noise:	59.	5 58.	5	56.4		53.1	6	0.7		61.1
Centerline Distance	ce to Noise Co	ntour (in feet)								
			70) dBA	65 dB.	A	60 dBA		55 c	1BA
		Ldr	n:	8		17		37		79
		CNEL		8		18		39		84

	FHWA-RI	D-77-108 HIGH	WAY NO	DISE F	PREDIC	TION MO	ODEL (9/12/2	021)		
Scenar	io: OY Int NP					Project I	Name:	FCSP	& POCC		
Road Nan	ne: 16th St.					Job Nu	imber:	15411			
Road Segme	nt: s/o Avenue	E									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	IODE		s	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	1,355 vehicl	es					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	104 vehicle	s		He	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle I	Nix					
Near/Far La	ne Distance:	12 feet			Vehi	icleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	33.0 feet		N	oise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	. 0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	. 0.	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	. 81	004	Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet			mour	<i>y</i> 1100110	. 0.				
Ro	ad Elevation:	0.0 feet		Li	ane Equ	uivalent	Distand	ce (in :	feet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediur	n Trucks	32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	: 32.	589			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresr	el	Barrier Att	en Bei	rm Atten
Autos:	66.51	-11.25		2.64		-1.20		-4.52	0.0	000	0.000
Medium Trucks:	77.72	-29.42		2.69		-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-31.22		2.69		-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Daj	/ L	eq Eve	ening	Leq N	light		Ldn	С	NEL
Autos:	56	6.7	55.5		54.4		50.3	3	57.9	9	58.4
Medium Trucks:	49	.8	49.2		42.9		43.1	I	50.0	В	51.0
Heavy Trucks:	53	1.3	52.4		48.8		46.9)	54.4	4	54.8
Vehicle Noise:	58	1.9	57.9		55.7		52.4	ļ.	60.	1	60.5
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 dl	BA	65 d	IBA	(60 dBA	55	dBA
			Ldn:		7		15		33		72
		С	NEL:		8		16		35		76

FHWA-	RD-77-10	8 HIGHV	AT NU	ISE P	REDIC		IUDEL	(9/12/2	021)		
Scenario: OY Int W	P					Project	Name:	FCSP	& POCC		
Road Name: 16th St.						Job N	lumber:	15411			
Road Segment: s/o Aven	ue E										
SITE SPECIFIC	INPUT I	АТА				1	IOISE	MODE	L INPUT	s	
Highway Data				Sit	te Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily Traffic (Adt)	1,445	vehicles						Autos.	15		
Peak Hour Percentage	7.70	%			Me	dium Tr	ucks (2	Axles).	15		
Peak Hour Volume	111	vehicles			He	avy Tru	cks (3+	Axles).	15		
Vehicle Speed	40	mph		Ve	hicle I	Mix					-
Near/Far Lane Distance	12	feet			Veh	icleType	1	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	6 13.6%	15.8%	97.68%
Barrier Height	0.0	feet		1	Me	edium T	rucks:	80.3%	6 4.7%	14.9%	1.39%
Barrier Type (0-Wall, 1-Berm)	0.0)			ŀ	Heavy T	rucks:	75.9%	6 8.2%	15.9%	0.92%
Centerline Dist. to Barrier	33.0	feet		No	oise Sc	ource E	evatior	is (in f	eet)		
Centerline Dist. to Observer	33.0	feet				Auto	s: 0	.000	,		
Barrier Distance to Observer	0.0	feet			Mediui	m Truck	s: 2	.297			
Observer Height (Above Pad)	5.0	feet			Heav	y Truck	s: 8	.004	Grade Ad	ljustment	: 0.0
Pad Elevation	0.0	feet					Distan	6	6 61		
Road Elevation	0.0	feet		La	ne Equ	uivaien	Distan	ce (In	reet)		
Road Grade	0.0%					Auto	s: 32	.833			
Left View	-90.0	degrees			Meaiui	m Truck	S: 32	.502			
Right view	90.0	degrees			neav	y muck	5. 32	.009			
FHWA Noise Model Calculation	ons										-
VehicleType REMEL	Traffic	: Flow	Distan	ce	Finite	Road	Fres	nel	Barrier At	ten Bei	rm Atten
Autos: 66.	51	-10.97		2.64		-1.20		-4.52	0.	000	0.00
Medium Trucks: 77.	72	-29.42		2.69		-1.20		-4.86	0.	000	0.000
Heavy Trucks: 82.	99	-31.22		2.69		-1.20		-5.69	0.	000	0.00
Unmitigated Noise Levels (wi	thout Top	oo and b	arrier at	ttenua	ation)						
VehicleType Leq Peak H	our l	.eq Day	Le	q Eve	ning	Leq	Night		Ldn	С	NEL
Autos:	57.0	5	5.8		54.7		50.	6	58.	2	58.
Meaium Trucks:	49.8	4	9.2		42.9		43.	1	50.	8	51.0
rieavy Trucks:	53.3 50.1	5	2.4		48.8		46.	9	54.	4 0	54.
venicie ivoise:	39.1	5	5.U		55.9		52.	0	60.	2	0.00
Centerline Distance to Noise	Contour	(in feet)									
			. ட	70 dB	A	65	dBA		60 dBA	55	dBA
		L	an:		7		16	j	34	Ļ	74
		() / /					41	1		7	70

Thursday, August 17, 2023

	FHWA-RI	D-77-108 HIGHV	VAY NO	ISE	PREDIC	TION N	IODEL (9/12/20	021)		
Scena	rio: 2050 NP					Project	Name:	FCSP	& POCC		
Road Nar	ne: 16th St.					Job N	lumber:	15411			
Road Segme	ent: s/o Avenue	E									
SITE	SPECIFIC IN	IPUT DATA				ľ	IOISE N	IODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	2,817 vehicles	;					Autos:	15		
Peak Hou	r Percentage:	7.70%			Me	dium Tr	ucks (2 /	Axles):	15		
Peak I	Hour Volume:	217 vehicles			He	avy Tru	cks (3+ /	Axles):	15		
V	ehicle Speed:	40 mph		1	/ehicle I	Mix				-	
Near/Far La	ane Distance:	12 feet		F	Vehi	icleType	>	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53%
Ba	arrier Height:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	33.0 feet			laise Sa	urco E	lovation	s (in fa	of)		
Centerline Dist	to Observer:	33.0 feet		-		Auto	s' 0	000	.00		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	's: 8	004	Grade Ad	liustment	t: 0.0
F	Pad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distand	ce (in f	feet)		
	Road Grade:	0.0%				Auto	s: 32.	833			
	Left View:	-90.0 degrees	6		Mediur	m Truck	s: 32.	562			
	Right View:	90.0 degrees	6		Heav	y Truck	s: 32.	589			
FHWA Noise Mod	lel Calculation	s		-						-	
VehicleType	REMEL	Traffic Flow	Distanc	ce	Finite	Road	Fresr	iel	Barrier Att	en Bei	rm Atten
Autos	66.51	-8.07		2.64	1	-1.20		-4.52	0.0	000	0.00
Medium Trucks	77.72	-26.24		2.69	9	-1.20		-4.86	0.0	000	0.00
Heavy Trucks	82.99	-28.04		2.69	9	-1.20		-5.69	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier at	ten	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Ev	rening	Leq	Night		Ldn	С	NEL
Autos	59	.9 5	8.7		57.6		53.5	5	61.	1	61.
Medium Trucks	53	5.0 5	2.4		46.1		46.3	3	54.0	С	54.:
Heavy Trucks	56	6.4 5	5.6		51.9		50.0)	57.0	3	57.
Vehicle Noise	62	2.1 6	1.1		58.9		55.6	6	63.3	2	63.
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 a	IBA	65	dBA	6	60 dBA	55	dBA
		L	dn:		12		25		54	,	117
		CN	EL:		12		27		58	j.	124

	FHWA-RD	-77-108 HIGHV	VAY NOIS	SE PREDIC	TION MC	DEL (9/1	12/2021)			
Scenar	io: 2050 WP				Project N	lame: FC	SP & POC	2		
Road Nam Road Segme	ne: 16th St. nt: s/o Avenue I	E			Job Nu	mber: 15	411			
SITE	SPECIFIC IN	PUT DATA			N	DISE MO	DDEL INPU	JTS		
Highway Data				Site Con	ditions (F	lard = 10), Soft = 15)			
Average Daily	Traffic (Adt):	3,154 vehicles				Au	itos: 15			
Peak Hour	Percentage:	7.70%		Me	dium Truc	cks (2 Ax	les): 15			
Peak H	lour Volume:	243 vehicles		He	avy Truck	(3+ Ax	<i>les):</i> 15			
Ve	hicle Speed:	40 mph		Vehiele	Mise					
Near/Far La	ne Distance:	12 feet		Vehicle I	icleType	Di	av Evenir	a Ni	aht	Daily
Site Data					AI	itos: 70	0.6% 13.6	% 1	5.8%	97.80%
Ba	rrior Hoight:	0.0 foot		M	edium Tru	cks: 80	0.3% 4.7	% 14	4.9%	1.33%
Barrier Type (0-M	/all_1_Rerm):	0.0 1001		1	Heavy Tru	icks: 75	5.9% 8.2	% 1	5.9%	0.88%
Centerline Di	st. to Barrier:	33.0 feet								
Centerline Dist.	to Observer:	33.0 feet		Noise Sc	ource Ele	vations (in teet)			
Barrier Distance	to Observer:	0.0 feet		1 4 m all 1 m	Autos:	0.00	0			
Observer Height	Above Pad):	5.0 feet		Wealu	m Trucks:	2.29	/ A Crada	Adjust	mont	
P	ad Elevation:	0.0 feet		Heav	y Trucks:	8.00	4 Grade	Aujusi	nent.	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%			Autos:	32.83	3			
	Left View:	-90.0 degrees		Mediu	m Trucks:	32.56	2			
	Right View:	90.0 degrees		Heav	y Trucks:	32.58	19			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier	Atten	Bern	n Atten
Autos:	66.51	-7.57	2	2.64	-1.20	-4	.52	0.000		0.000
Medium Trucks:	77.72	-26.24	2	2.69	-1.20	-4	.86	0.000		0.000
Heavy Trucks:	82.99	-28.04	2	2.69	-1.20	-5	. 69	0.000		0.000
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier att	enuation)						
VehicleType	Leq Peak Hour	· Leq Day	Leq	Evening	Leq N	light	Ldn		CN	EL
Autos:	60	4 5	9.2	58.1		54.0	6	61.6		62.1
Medium Trucks:	53.	0 5	2.4	46.1		46.3	5	54.0		54.2
Heavy Trucks:	56.	4 5	5.6	51.9		50.0	5	57.6		57.9
Vehicle Noise:	62.	4 6	1.4	59.2		55.9	6	53.5		64.0
Centerline Distant	ce to Noise Co	ntour (in feet)								
			7	U aBA	65 di	BA	60 dBA	57	55 0	IBA 400
		L	an:	12		26		5/		122
		CN	EL:	13		28		01		130

	FHWA-R	D-77-108 HIGI	IWAY N	IOISE F	PREDIC	TION M	ODEL (S	9/12/2	021)		
Scenar Road Nan	rio: 2050 Int N	P				Project	Name: I	-CSP	& POCC		
Road Nam Road Segme	ent: s/o Avenue	ε				JOD NU	inder.	13411			
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE	L INPUTS	3	
Highway Data				S	ite Con	ditions (Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	3,088 vehic	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 A	Axles).	15		
Peak H	Hour Volume:	238 vehicle	s		He	avy Truc	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far La	ane Distance:	12 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	5 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			M	edium Tri	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	33.0 feet		N	oise Sc	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.1	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	e (In	teet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediui	m Trucks	32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	32.	589			
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	-7.67		2.64		-1.20		-4.52	0.0	00	0.000
Medium Trucks:	77.72	-25.84	ŀ	2.69		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	82.99	-27.64	Ļ	2.69		-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y i	Leq Eve	ening	Leq I	light		Ldn	C	NEL
Autos:	60	0.3	59.1		58.0		53.9)	61.4	ŀ	61.9
Medium Trucks:	53	3.4	52.8		46.5		46.7	,	54.4		54.6
Heavy Trucks:	56	5.8	56.0		52.3		50.4	ł	58.0)	58.3
Vehicle Noise:	62	2.5	61.5		59.3		56.0)	63.6	5	64.0
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 "		05	0.4	_			-/0.4
				/U dl	5A	65 0	IBA	I '	DU dBA	55	aBA 15
			Lan:		12		27		58		124
		C	NEL:		13		28		61		132

	THWAND		WAT	NUISE	PREDIC		ODEL (S	9/12/2	021)		
Scenario:	2050 Int WF	2				Project	Name: I	CSP	& POCC		
Road Name:	16th St.					Job N	umber: *	15411			
Road Segment:	s/o Avenue	E									
SITE SP	ECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUT	s	
Highway Data				4	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	3,178 vehicle	es				,	Autos:	15		
Peak Hour Pe	ercentage:	7.70%			Me	dium Tri	ucks (2 A	(xles)	15		
Peak Hou	r Volume:	245 vehicle	s		He	avy Tru	cks (3+ A	(xles):	15		
Vehic	le Speed:	40 mph		١	/ehicle l	Mix					
Near/Far Lane	Distance:	12 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.60%
Barri	er Heiaht:	0.0 feet			M	edium Ti	rucks:	80.3%	4.7%	14.9%	1.44%
Barrier Type (0-Wal	, 1-Berm):	0.0			I	Heavy Ti	rucks:	75.9%	8.2%	15.9%	0.95%
Centerline Dist.	to Barrier:	33.0 feet			Voise Sr	ource Fl	evation	: (in fe	pet)		
Centerline Dist. to	Observer:	33.0 feet		F	10,00 00	Auto	e' 0 (000			
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck	s: 0.0	297			
Observer Height (Al	ove Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	justment	: 0.0
Pad	Pad Elevation: 0.0 feet										
Road	Elevation:	0.0 feet		1	ane Eq	uivalent	Distanc	e (in i	feet)		
Ro	ad Grade:	0.0%				Auto	s: 32.0	333			
_	Left View:	-90.0 degree	es		Mediu	m Truck	s: 32.	562			
F	light View:	90.0 degree	es		Heav	y Truck	s: 32.	589			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	66.51	-7.55		2.64	4	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	77.72	-25.84		2.69	Э	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	82.99	-27.64		2.69	9	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise L	evels (witho	out Topo and	barrie	er atten	uation)						
VehicleType Le	eq Peak Hou	r Leq Day	<i>(</i>	Leg Ev	ening/	Leq	Night		Ldn	С	NEL
Autos:	60	.4	59.2		58.1		54.0		61.	6	62.
Medium Trucks:	53	.4	52.8		46.5		46.7		54.4	4	54.
Heavy Trucks:	56	.8	56.0		52.3		50.4		58.	0	58.
Vehicle Noise:	62	.5	61.5		59.4		56.1		63.	7	64.
Centerline Distance	to Noise Co	ntour (in feet,)								
			L	70 c	IBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		13		27		58		126
		0	NFI		12		20		62		13/

Thursday, August 17, 2023

	FHWA-RD	0-77-108 HIGHV	VAY NOIS	SE PREDIO	CTION M	ODEL (9	/12/20	21)		
Scena Road Nar	rio: E me: Live Oak C	vn Brl			Project	Name: F	CSP 8	& POCC		
Road Segme	ent: s/o Outer H	ighway 10 S								
SITE	SPECIFIC IN	PUT DATA			N	OISE M	ODEI		s	
Highway Data				Site Cor	ditions	(Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	6,170 vehicles	5			Α	utos:	15		
Peak Hou	r Percentage:	7.70%		Me	dium Tru	icks (2 A	xles):	15		
Peak I	Hour Volume:	475 vehicles		He	avy Truc	:ks (3+ A	xles):	15		
V	ehicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ane Distance:	36 feet		Veh	icleType	Ĺ	Day	Evening	Night	Daily
Site Data					A	Autos: 7	70.6%	13.6%	15.8%	97.53%
Ba	arrier Height:	0.0 feet		M	edium Tr	ucks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tr	ucks: 7	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	44.0 feet		Noise S	ource El	ovations	(in fo	of)		
Centerline Dist	to Observer:	44.0 feet			Autos	s' 0.0	00	00	-	
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck	s. 0.0	97			
Observer Height	(Above Pad):	5.0 feet		Hea	v Truck	s 80	04	Grade Ad	iustment	t: 0.0
F	Pad Elevation:	0.0 feet			<i>,</i> , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. 0.0	•••	,		
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in fe	eet)		
	Road Grade:	0.0%			Autos	s: 40.4	60			
	Left View:	-90.0 degrees	6	Mediu	m Trucks	s: 40.2	41			
	Right View:	90.0 degrees	6	Hea	vy Trucks	s: 40.2	62			
FHWA Noise Mod	lel Calculation:	5								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	el L	Barrier Att	en Bei	rm Atten
Autos	68.46	-5.18	1	.28	-1.20	-	4.61	0.0	000	0.00
Medium Trucks	79.45	-23.35	1	.31	-1.20	-	4.87	0.0	000	0.00
Heavy Trucks	84.25	-25.15	1	.31	-1.20	-	5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	enuation)						-
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq	Night		Ldn	С	NEL
Autos	63	.4 6	2.2	61.1		56.9		64.5	5	65.
Medium Trucks	56	.2 5	5.6	49.3		49.5		57.2	2	57.4
Heavy Trucks	59	.2 5	8.4	54.7		52.8		60.4	1	60.
Vehicle Noise	65	.3 6	4.3	62.2		58.9		66.5	5	66.
Centerline Distan	ce to Noise Co	ontour (in feet)								
			70	0 dBA	65 (dBA	6	0 dBA	55	dBA
		L	dn:	26		55		119		257
		CN	EL:	27		59		127		274

	FHWA-RD-	-77-108 HIGHW	AY NOI	SE PREDIO	CTION M	ODEL (9	9/12/2	021)		
Scenar Road Nan Road Segme	io: OY NP ne: Live Oak Cy nt: s/o Outer Hig	n. Rd. ghway 10 S			Project Job N	Name: I umber: 1	CSP	& POCC		
SITE	SPECIFIC INI	PUT DATA			N	IOISE N	IODE	L INPUTS	5	
Highway Data				Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	6,555 vehicles				,	Autos:	15		
Peak Hour	Percentage:	7.70%		Me	edium Tri	ucks (2 A	(xles)	15		
Peak H	lour Volume:	505 vehicles		He	eavy Truc	cks (3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		Venicle	nicleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						Autos:	70.6%	5 13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet		M	ledium Ti	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Ti	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet		Noise S	ource Fl	evation	: (in fi	eet)		
Centerline Dist.	to Observer:	44.0 feet			Auto	s [.] 0 (000			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck	s: 21	297			
Observer Height	(Above Pad):	5.0 feet		Hea	vv Truck	s: 8.0	004	Grade Adi	ustment	: 0.0
P	ad Elevation:	0.0 feet			.,					
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%			Auto	s: 40.4	460			
	Left View:	-90.0 degrees		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degrees		Hea	vy Truck	s: 40.1	262			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-4.92		1.28	-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-23.09		1.31	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-24.89		1.31	-1.20		-5.50	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier at	enuation)						
VehicleType	Leq Peak Hour	Leq Day	Leo	Evening	Leq	Night		Ldn	C	NEL
Autos:	63.0	5 63	2.5	61.3		57.2		64.8	3	65.3
Medium Trucks:	56.	5 5	5.9	49.6		49.8		57.5	5	57.7
Heavy Trucks:	59.	5 5	3.6	55.0)	53.1		60.7	·	61.0
Vehicle Noise:	65.0	6 6	1.6	62.5		59.2		66.8	5	67.2
Centerline Distant	ce to Noise Cor	ntour (in feet)								
			7	'0 dBA	65	dBA		60 dBA	55	dBA
		L	dn:	27		58		124		268
		CNI	EL:	29		61		132		285

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION M	ODEL (S	9/12/20	021)		
Scenar	io: OY WP					Project	Name: I	CSP	& POCC		
Road Nam	ne: Live Oak C	yn. Rd.				Job Ni	umber:	15411			
Road Segme	nt: s/o Outer ⊢	lighway 10 S									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	Site Con	nditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	8,637 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	edium Tru	icks (2 A	Axles):	15		
Peak H	lour Volume:	665 vehicle	s		He	eavy Truc	:ks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	36 feet		F	Veh	nicleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	70.6%	13.6%	15.8%	89.02%
Ba	rrier Heiaht:	0.0 feet			М	ledium Tr	ucks:	80.3%	4.7%	14.9%	2.68%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tr	ucks:	75.9%	8.2%	15.9%	8.30%
Centerline Di	st. to Barrier:	44.0 feet		٨	loise Se	ource Ele	evations	s (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos	. 01	000	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 0.	207			
Observer Height	(Above Pad):	5.0 feet			Hear	W Trucks	. 2.1 . 81	104	Grade Adi	iustment	: 0.0
P	ad Elevation:	0.0 feet			nea	vy macka	. 0.	504	,		0.0
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distanc	e (in f	feet)		
	Road Grade:	0.0%				Autos	s: 40.4	460			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 40.:	241			
	Right View:	90.0 degre	es		Hear	vy Trucks	s: 40.:	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-4.11		1.28	3	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.34		1.31	I	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-14.42		1.31	I	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Da	Y	Leq Ev	rening	Leq I	Night		Ldn	CI	NEL
Autos:	64	.4	63.3		62.1		58.0)	65.6	3	66.1
Medium Trucks:	60).2	59.6		53.4		53.6	6	61.3	3	61.4
Heavy Trucks:	69).9	69.1		65.4		63.5	i	71.1	1	71.4
Vehicle Noise:	71	.4	70.5		67.3		64.9)	72.5	5	72.9
Centerline Distant	ce to Noise Co	ontour (in feel	9								
				70 d	BA	65 0	'BA	6	0 dBA	55	dBA
			Ldn:		65		140		302		650
		С	NEL:		68 147 318				684		

	FHWA-RL	-//-108 HIGH	IVVA	NUISE	REDIC		IODEL	(9/12/2	021)		
Scenario	o: OY Int NP					Project	Name:	FCSP	& POCC		
Road Name	e: Live Oak C	yn. Rd.				Job N	lumber:	15411			
Road Segmen	t: s/o Outer H	ighway 10 S									
SITE S	SPECIFIC IN	PUT DATA				N	IOISE	MODE		S	
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily 1	Traffic (Adt):	6,020 vehicle	es					Autos.	15		
Peak Hour I	Percentage:	7.70%			Mee	dium Tr	ucks (2	Axles).	15		
Peak Ho	our Volume:	464 vehicle	s		Hea	avy Tru	cks (3+	Axles).	15		
Veh	nicle Speed:	45 mph		V	ehicle N	lix					
Near/Far Lar	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	6 13.6%	15.8%	97.53
Bar	rier Heiaht:	0.0 feet			Me	dium T	rucks:	80.3%	6 4.7%	14.9%	1.499
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy T	rucks:	75.9%	6 8.2%	15.9%	0.98
Centerline Dis	t. to Barrier:	44.0 feet		N	oise So	urce El	evation	is (in f	eet)		
Centerline Dist. t	o Observer:	44.0 feet				Auto	s: 0	.000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Truck	s: 2	.297			
Observer Height (/	Above Pad):	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justment	: 0.0
Pa	d Elevation:	0.0 feet					Distan	6	6		
Roa	d Elevation:	0.0 feet		Le	ane Equ	iivaieiii	Distan	ce (m	ieel)		
F	koad Grade:	0.0%				Auto	s: 40	.460			
	Len View:	-90.0 degre	es		Heav	v Truck	5. 40 c [.] 40	262			
	Right view.	90.0 degre	es		Tieav	y much	3. 40	.202			
FHWA Noise Mode	l Calculations	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	-5.29		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-23.46		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-25.26		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	ier attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	63	.3	62.1		61.0		56.	8	64.4	4	64.
Medium Trucks:	56	.1	55.5		49.2		49.	4	57.	1	57.
Heavy Trucks:	59	.1	58.3		54.6		52.	7	60.3	3	60.
Vehicle Noise:	65	.2	64.2		62.1		58.	8	66.4	4	66.
Centerline Distanc	e to Noise Co	ntour (in feet)				10.4				
			Lata	70 dE	SA OF	65	aBA _		bU dBA	55	aBA
		0	Ldn:		25		54	1	117		253
		C	NEL:		27		58	5	125		270

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHW	AY NOI	SEI	PREDIC	TION M	ODEL (9	9/12/2	021)			
Scenario: Road Name: Road Segment:	OY Int WP Live Oak Cy s/o Outer Hi	m. Rd. ghway 10 S				Project Job N	Name: F umber: 1	-CSP 15411	& POCC			
SITE SP	ECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPU	ſS		
Highway Data				S	ite Con	ditions	(Hard =	10, Se	oft = 15)			
Average Daily Tra	ffic (Adt):	6,767 vehicles					A	Autos:	15			
Peak Hour Pe	rcentage:	7.70%			Me	dium Tru	ucks (2 A	xles).	15			
Peak Hour	Volume:	521 vehicles			He	avy Truc	cks (3+ A	xles).	15			
Vehici	e Speed:	45 mph		v	ehicle l	Mix						
Near/Far Lane	Distance:	36 feet		F	Veh	icleTvpe		Dav	Evenina	Nie	aht	Dailv
Site Data							Autos:	70.6%	6 13.6%	15	5.8%	93.27%
Barrie	r Heiaht:	0.0 feet			M	edium Ti	rucks:	80.3%	6 4.7%	14	1.9%	2.09%
Barrier Type (0-Wall.	1-Berm):	0.0			ŀ	leavy Ti	rucks:	75.9%	6 8.2%	15	5.9%	4.64%
Centerline Dist. t	o Barrier:	44.0 feet			laiaa Ca	uree El	ovetiene	in f	a a fi			
Centerline Dist. to (Observer:	44.0 feet		~	ioise sc	Auto		000	eel)			
Barrier Distance to	Observer:	0.0 feet			Madiu	Aulo: m Truck	s. 0.0	000				
Observer Height (Ab	ove Pad):	5.0 feet			Heat	N Truck	s. 2.2 e [.] 80	104	Grade A	diustr	ment [.]	0.0
Pad I	Elevation:	0.0 feet			near	y mack.	3. 0.0	704	0/440 / 1	ajuoti	none.	0.0
Road I	Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)			
Roa	ad Grade:	0.0%				Auto:	s: 40.4	460				
1	.eft View:	-90.0 degrees			Mediu	m Truck	s: 40.2	241				
Ri	ght View:	90.0 degrees			Heav	y Truck	s: 40.2	262				
FHWA Noise Model C	alculations										_	
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fresn	el	Barrier A	ten	Berr	n Atten
Autos:	68.46	-4.97		1.28	3	-1.20		-4.61	0	.000		0.000
Medium Trucks:	79.45	-21.46		1.31		-1.20		-4.87	0	.000		0.000
Heavy Trucks:	84.25	-18.01		1.31		-1.20		-5.50	0	.000		0.000
Unmitigated Noise Le	evels (witho	ut Topo and b	arrier att	tenu	uation)			r				
VehicleType Le	q Peak Hou	r Leq Day	Leq	l Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	63.	6 6	2.4		61.3		57.1		64	.7		65.2
Medium Trucks:	58.	1 5	7.5		51.2		51.4		59	.1		59.3
Vehicle Noise:	66.	4 6 6 6	5.5 7.7		61.9		60.0		67	.5 .8		67.8 70.1
Centerline Distance t	o Noise Co	ntour (in feet)										
bonne Distance i	0.10.30 00	inter in reey	7	70 d	BA	65	dBA		60 dBA		55 (dBA
		L	dn:		42		91		19	7		424
		CN	EL:		45		97		20	8		448

	FHWA-R	D-77-108 HIGH	WAY NC	DISE P	REDIC	TION MO	DEL (9	/12/20)21)		
Scenar Road Nam Road Segme	io: 2050 NP ne: Live Oak C nt: s/o Outer H	yn. Rd. lighway 10 S				Project N Job Nur	ame: F nber: 1	CSP 8 5411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				NO	ISE M	ODE	LINPUTS	5	
Highway Data				Si	te Con	ditions (H	lard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	20,549 vehicle	es				A	lutos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	1,582 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Ve	hicle I	Aix					
Near/Far La	ne Distance:	36 feet			Vehi	cleTvpe	1	Dav	Evenina	Niaht	Dailv
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			Me	edium Truc	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	(all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet		No	nise So	urce Flev	ations	(in fe	ef)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	00	00		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height	Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	ustment.	0.0
Pi	ad Elevation:	0.0 feet		-							
Roi	ad Elevation:	0.0 feet		La	ne Equ	iivalent D	istanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	es		Meaiur	n Trucks:	40.2	41			
	Right View:	90.0 degree	es		Heav	y Trucks:	40.2	02			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	0.05		1.28		-1.20		4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.12		1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-19.92		1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenua	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	Le	eq Eve	ening	Leq Ni	ght		Ldn	CI	VEL
Autos:	68	.6	67.4		66.3		62.2		69.8	5	70.3
Medium Trucks:	61	.4	60.8		54.6		54.8		62.5		62.7
Heavy Trucks:	64	.4	63.6		59.9		58.0		65.6	,	65.9
venicie ivolse:	70	.0	09.5		07.4		04.1		/1./		72.1
Centerline Distant	ce to Noise Co	ontour (in feet,)	70 dE	24	65 dE		6	0 dBA	55	dBA
			I dn:	70 UE	57	35 UE	12/	0	266	55	572
		0	NEL ·		61		132		200		611
			VLL.		01		102		204		011

	FHWA-R	D-77-108 HIG	HWAY	NOISE I	PREDIC	CTION MO	DEL (9	/12/20	21)		
Scenar Road Nam Road Segme	io: 2050 WP ne: Live Oak C nt: s/o Outer H	Syn. Rd. Highway 10 S				Project N Job Nui	lame: F mber: 1	CSP 8 5411	POCC		
SITE	SPECIFIC II	NPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	ite Con	ditions (H	lard = 1	0, Soi	ft = 15)		
Average Daily	Traffic (Adt):	22,630 vehic	cles				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	1,743 vehicl	es		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleTvpe	Ĺ	Dav	Evenina	Niaht	Dailv
Site Data						AL	itos: 7	0.6%	13.6%	15.8%	94.28%
Ba	rrier Heiaht	0.0 feet			М	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.94%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 7	75.9%	8.2%	15.9%	3.78%
Centerline Di	st. to Barrier:	44.0 feet		N	loise Se	ource Elev	vations	(in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	00	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Hear	vy Trucks:	8.0	04	Grade Adj	ustment:	0.0
Po	ad Elevation:	0.0 feet			ane Fo	uivalent l	Distanci	e (in fe	pet)		
Not	Road Grade:	0.0 100		F	uno 24	Autos:	40.4	60			
	Left View:	0.0 /0	000		Mediu	m Trucks:	40.7	41			
	Right View:	90.0 degr	ees		Hear	vy Trucks:	40.2	62			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/ E	Barrier Atte	en Ben	m Atten
Autos:	68.46	0.3	2	1.28		-1.20	-	4.61	0.0	000	0.000
Medium Trucks:	79.45	-16.5	5	1.31		-1.20		4.87	0.0	000	0.000
Heavy Trucks:	84.25	-13.6	6	1.31		-1.20	-	5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo an	d barrie	er attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	ay	Leq Ev	ening	Leq N	ight		Ldn	CI	VEL
Autos:	68	3.9	67.7		66.6		62.4		70.0)	70.5
Medium Trucks:	63	3.0	62.4		56.1		56.3		64.0)	64.2
Heavy Trucks:	70).7	69.8		66.2		64.3		71.9)	72.2
Vehicle Noise:	73	3.3	72.4		69.6		66.9		74.5	5	74.8
Centerline Distant	ce to Noise C	ontour (in fee	et)	70.4		05.11					
			Lata	70 di	БA	65 di	5A	60	J aBA	55	aBA 070
			Lan:		88		189		406		876
			UNEL:		93		200		430		926

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9/12/2	021)		
Scenario	: 2050 Int NF	0				Project	Name: I	CSP	& POCC		
Road Name	e: Live Oak C	yn. Rd.				Job N	umber:	15411			
Road Segmen	t: s/o Outer H	ighway 10 S									
SITE S	PECIFIC IN	IPUT DATA				N	OISE	IODE	L INPUT	S	
Highway Data				;	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily 7	Traffic (Adt):	22,649 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Tru	ıcks (2 A	(xles)	15		
Peak Ho	our Volume:	1,744 vehicle	s		He	avy Truc	cks (3+ A	(xles)	15		
Veh	icle Speed:	45 mph			Vehicle I	Nix					
Near/Far Lan	e Distance:	36 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	Autos:	70.6%	13.6%	15.8%	97.53%
Bari	rier Heiaht:	0.0 feet			Me	edium Ti	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	t. to Barrier:	44.0 feet		1	Noise So	urce El	evation	s (in f	eet)		
Centerline Dist. to	o Observer:	44.0 feet				Auto:	s: 0.0	000			
Barrier Distance to	o Observer:	0.0 feet			Mediur	n Truck:	s: 2.1	297			
Observer Height (A	Above Pad):	5.0 feet			Heav	y Trucks	s: 8.0	004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet		-	ano Equ	uivalont	Dictory	o (in	foot)		
Roa	d Elevation:	0.0 teet		- F	Lane Ly	Auto		e (m	ieel)		
	Loft Views	0.0%			Modiu	m Truck	s. 40. s. 40.	+00			
	Right View:	-90.0 degree	25 26		Heav	v Truck	s 40.	262			
	ragin view.	50.0 degree			nour	<i>y</i>		-02			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	0.47		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-17.70		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-19.50		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	ier atten	uation)					T	
VehicleType	Leq Peak Hou	ir Leq Day	<i>(</i>	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	69	.0	67.8		66.7		62.6		70.:	2	70.
Medium Trucks:	61	.9	61.3		55.0		55.2		62.	9	63.
rieavy Trucks:	64	.9	04.U		60.4		58.5		66.	J 1	56.4
venicie Noise:	/1	.0	70.0		67.8		64.5	•	12.	I	72.0
Centerline Distance	e to Noise Co	ontour (in feet,)	70		65	ND A		C dBA	55	dDA
			I dn'	700	JDA 61	00 (122		20 UDA	55	UDA 610
		0			01		132		284		012
		0	¥ L L .		00		140		303		052

Thursday, August 17, 2023

	FHWA-RI	0-77-108 HIGHV	VAY NOIS	E PREDIO	TION MOD	EL (9/12/	2021)		
Scenar	io: 2050 Int W	P			Project Na	me: FCSF	& POCC		
Road Nam	ne: Live Oak C	yn. Rd.			Job Num	ber: 1541	1		
Road Segme	nt: s/o Outer ⊢	lighway 10 S							
SITE	SPECIFIC IN	IPUT DATA			NOI	SE MOD	EL INPUT	s	
Highway Data				Site Con	ditions (Ha	rd = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	23,396 vehicles	5			Autos	s: 15		
Peak Hour	Percentage:	7.70%		Me	dium Truck	s (2 Axles,): 15		
Peak H	lour Volume:	1,802 vehicles		He	avy Trucks	(3+ Axles): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data					Auto	os: 70.6	% 13.6%	15.8%	96.30%
Ba	rrier Heiaht:	0.0 feet		М	edium Truck	(s: 80.3	% 4.7%	14.9%	1.66%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Truck	(s: 75.9	% 8.2%	15.9%	2.04%
Centerline Di	st. to Barrier:	44.0 feet		Noise Su	ource Eleva	tions (in	feet)		
Centerline Dist.	to Observer:	44.0 feet			Autos:	0.000			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2 297			
Observer Height	(Above Pad):	5.0 feet		Hear	v Trucks:	8.004	Grade Ad	liustment	: 0.0
P	ad Elevation:	0.0 feet			,				
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (in	feet)		
	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees	5	Mediu	m Trucks:	40.241			
	Right View:	90.0 degrees	5	Hear	vy Trucks:	40.262			
FHWA Noise Mod	el Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road F	resnel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.56	1.	.28	-1.20	-4.61	0.0	000	0.00
Medium Trucks:	79.45	-17.08	1	.31	-1.20	-4.87	° 0.0	000	0.00
Heavy Trucks:	84.25	-16.19	1	.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	enuation)					
VehicleType	Leq Peak Hou	ir Leq Day	Leq	Evening	Leq Nig	ht	Ldn	C	NEL
Autos:	69	.1 6	7.9	66.8		62.7	70.3	3	70.
Medium Trucks:	62	.5 6	1.9	55.6		55.8	63.	5	63.
Heavy Trucks:	68	.2 6	7.3	63.7		61.8	69.4	4	69.
Vehicle Noise:	72	.2 7	1.2	68.7		65.7	73.3	3	73.
Centerline Distant	ce to Noise Co	ontour (in feet)							
			70	0 dBA	65 dBA	1	60 dBA	55	dBA
		L	dn:	73		158	340		733
		CN	EL:	78		168	361		778

	FHWA-RD)-77-108 HIGH\	NAY NO	SE PRED	ICTION M	ODEL (9/12/2	:021)		
Scenar	io: E				Project	Name: I	FCSP	& POCC		
Road Nan	e: Live Oak C	yn. Rd.			Job Ni	imber:	15411			
Road Segme	nt: s/o I-10 WB	Ramps								
SITE	SPECIFIC IN	PUT DATA			N	OISE N	IODE	L INPUT	5	
Highway Data				Site Co	nditions ('Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	7,285 vehicle	s				Autos.	: 15		
Peak Hour	Percentage:	7.70%		٨	ledium Tru	cks (2 A	Axles).	: 15		
Peak H	lour Volume:	561 vehicles		F	leavy Truc	ks (3+ A	Axles).	: 15		
Ve	hicle Speed:	45 mph		Vohick	Mix					
Near/Far La	ne Distance:	48 feet		Venicie	hicleType		Dav	Evenina	Niaht	Daily
Site Data						utos:	70.6%	6 13.6%	15.8%	6 97.53%
Ba	rrier Height:	0.0 feet			Medium Tr	ucks:	80.3%	6 4.7%	14.9%	6 1.49%
Barrier Type (0-W	/all_1-Berm):	0.0			Heavy Tr	ucks:	75.9%	6 8.2%	15.9%	6 0.98%
Centerline Di	st. to Barrier:	52.0 feet		Noine	Source El	votion	n /im f	in a fl		-
Centerline Dist.	to Observer:	52.0 feet		Noise	Source Ele	valion	200	eelj		
Barrier Distance	to Observer:	0.0 feet		Mod	Autos	. 0.	207			
Observer Height	(Above Pad):	5.0 feet		Ho	ann Trucks	. 2.	201	Grade Ad	iustmar	nt: 0.0
P	ad Elevation:	0.0 feet		110	avy muchs	. 0.	504	Orade Haj	usunen	1. 0.0
Ro	ad Elevation:	0.0 feet		Lane E	quivalent	Distand	e (in	feet)		
	Road Grade:	0.0%			Autos	: 46.	400			
	Left View:	-90.0 degree	s	Med	um Trucks	: 46.	209			
	Right View:	90.0 degree	s	He	avy Trucks	46.	228			
FHWA Noise Mod	el Calculations	6								
VehicleType	REMEL	Traffic Flow	Distand	e Finit	e Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	-4.46		0.38	-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-22.63		0.41	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-24.43		0.41	-1.20		-5.41	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and L	oarrier at	tenuation)				-	-
VehicleType	Leq Peak Hou	r Leq Day	Lee	evening	Leq I	Vight		Ldn	0	NEL
Autos:	63	.2 6	62.0	60	9	56.8	3	64.4	Ļ	64.9
Medium Trucks:	56	.0 5	55.4	49	2	49.4	ŀ	57.1	í.	57.2
Heavy Trucks:	59	.0 5	58.2	54	5	52.6	6	60.2	2	60.5
Vehicle Noise:	65	.2 6	64.1	62	0	58.7	,	66.3	\$	66.7
Centerline Distant	ce to Noise Co	ntour (in feet)								
				70 dBA	65 c	IBA	1	60 dBA	5	5 dBA
		L	dn:	3)	64		137		296
		CN	IEL:	3	2	68		146		315

Thursday, August 17, 2023

	FHWA-R	D-77-108 HIGH	IWAY N	IOISE P	REDIC	TION MC	DEL (S	9/12/2	021)		
Scenar Road Nam Road Segme	io: OY NP ne: Live Oak C nt: s/o I-10 WI	yn. Rd. 3 Ramps				Project N Job Nu	lame: F mber: 1	-CSP 15411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	IODE		3	
Highway Data				Si	te Con	ditions (F	lard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	7,945 vehicl	es			dium Tru	1	Autos:	15		
Peak Hour	Percentage:	7.70% C40	-		IVIE		:KS (2 F	wes).	10		
Peak n	our voiume:	612 venicie	s		пе	avy much	S (3+ F	ixies).	15		
Ve Maar/Carlo	nicie Speea:	45 mpn		Ve	ehicle	Mix					
ivear/Far La	ne Distance:	48 ieet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	6 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		N	oise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height (Above Pad):	5.0 feet			Hear	y Trucks:	8.0	004	Grade Adj	ustment	0.0
Pa	ad Elevation:	0.0 feet							6		
Roa	ad Elevation:	0.0 feet		Lä	ine Eq	uivaient L	Jistanc	e (In	reet)		
	Road Grade:	0.0%				Autos:	46.4	400			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	46.2	209			
	Right View:	90.0 degre	es		неа	y Trucks:	40.4	228			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-4.08		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks:	79.45	-22.25		0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-24.05		0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	63	3.6	62.4		61.3		57.1		64.7		65.2
Medium Trucks:	56	3.4	55.8		49.5		49.7		57.4		57.6
Heavy Trucks:	59	9.4	58.6		54.9		53.0	1	60.6	i	60.9
Vehicle Noise:	6	5.5	64.5		62.4		59.1		66.7		67.1
Centerline Distant	ce to Noise C	ontour (in fee)								
				70 dE	BA	65 di	BA		60 dBA	55	dBA
		_	Ldn:		31		68		145		313
	CNEL:				33		72		155		334

Scenario: OY WP			Project N	<i>lame:</i> F	CSP	& POCC				
Road Name: Live Oak Cyn. Rd.			Job Nu	mber: 1	5411					
Road Segment: s/o I-10 WB Ramps										
SITE SPECIFIC INPUT DATA			N	DISE N	IODE	L INPUT	S			
Highway Data		Site Cond	ditions (F	lard =	10, So	ft = 15)				
Average Daily Traffic (Adt): 9,855 vehicles					Autos:	15				
Peak Hour Percentage: 7.70%		Medium Trucks (2 Axles): 15								
Peak Hour Volume: 759 vehicles		Hea	avy Truck	's (3+ A	xles):	15				
Vehicle Speed: 45 mph		Vehicle N	lix							
Near/Far Lane Distance: 48 feet		Vehi	cleType		Day	Evening	Night	Daily		
Site Data			AL	itos:	70.6%	13.6%	15.8%	90.03		
Barrier Height: 0.0 feet		Me	dium Tru	cks:	80.3%	4.7%	14.9%	2.55%		
Barrier Type (0-Wall, 1-Berm): 0.0		H	leavy Tru	cks:	75.9%	8.2%	15.9%	7.419		
Centerline Dist. to Barrier: 52.0 feet		Noise So	urce Ele	vations	; (in fe	et)				
Centerline Dist. to Observer: 52.0 feet			Autos	0.0	000	.,				
Barrier Distance to Observer: 0.0 feet		Medium Trucks: 2 297								
Observer Height (Above Pad): 5.0 feet		Heav	Trucks:	8.0	004	Grade Ad	justment	: 0.0		
Pad Elevation: 0.0 feet		Long Equ		Viotona	o (in f	(act)				
Road Elevation: 0.0 feet		Lane Equ	Autor	Istanc		eel)				
Road Grade: 0.0%		Madium	Autos:	40.4	100					
Left View: -90.0 degrees		Heav	Trucks.	40.4	209					
right view. 50.0 degrees		neav.	y macks.	40.2	20					
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow L	Distance	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten		
Autos: 68.46 -3.49	0	.38	-1.20		-4.66	0.0	000	0.00		
Medium Trucks: 79.45 -18.96	0	.41	-1.20		-4.87	0.0	000	0.00		
Heavy Trucks: 84.25 -14.34	0	.41	-1.20		-5.41	0.0	000	0.00		
Unmitigated Noise Levels (without Topo and bar	rier atte	enuation)								
VehicleType Leq Peak Hour Leq Day	Leq	Evening	Leq N	ight		Ldn	С	NEL		
Autos: 64.2 63.)	61.9		57.7		65.3	3	65.		
Medium Trucks: 59.7 59.	1	52.8		53.0		60.	7	60.		
Heavy Trucks: 69.1 68.	3	64.6		62.7		70.	3	70.		
Vehicle Noise: 70.7 69.	3	66.7		64.3		71.	9	72.		
Centerline Distance to Noise Contour (in feet)										
	70) dBA	65 di	ЗA	6	i0 dBA	55	dBA		
						004		601		
Ldr	C.	69		149		321		092		

Thursday, August 17, 2023

	FHWA-RD	0-77-108 HIGH	NAY NO	ISE F	PREDIC	TION MO	DEL (9	/12/20	021)		
Scenari Road Nam Road Segmen	o: OY Int NP e: Live Oak C nt: s/o I-10 WB	yn. Rd. 8 Ramps				Project N Job Nur	ame: F nber: 1	CSP 5411	& POCC		
SITE S	SPECIFIC IN	PUT DATA				NO	ISE M	ODE		s	
Highway Data				S	ite Con	ditions (H	ard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt):	7,452 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	574 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		V	ehicle I	Nix					
Near/Far Lar	ne Distance:	48 feet		-	Vehi	icleType	1	Day	Evening	Night	Daily
Site Data						Au	tos: 1	70.6%	13.6%	15.89	6 97.53%
Bar	rier Height:	0.0 feet			Me	edium Truc	cks: 8	30.3%	4.7%	14.99	% 1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Truc	cks: 1	75.9%	8.2%	15.99	% 0.98%
Centerline Dis	st. to Barrier:	52.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist. t	to Observer:	52.0 feet				Autos:	0.0	00	.,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Ad	iustmer	nt: 0.0
Pa	ad Elevation:	0.0 feet				,					
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent D	istanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos:	46.4	00			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	46.2	09			
	Right View:	90.0 degree	s		Heav	y Trucks:	46.2	28			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresne	e/	Barrier Att	en Be	erm Atten
Autos:	68.46	-4.36		0.38		-1.20	-	4.66	0.0	000	0.000
Medium Trucks:	79.45	-22.53		0.41		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-24.33		0.41		-1.20		5.41	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and I	oarrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	q Eve	ening	Leq Ni	ght		Ldn	(CNEL
Autos:	63	.3 (52.1		61.0		56.9		64.	5	65.0
Medium Trucks:	56	.1	55.5		49.3		49.5		57.3	2	57.3
Heavy Trucks:	59	.1 !	58.3		54.6		52.7		60.3	3	60.6
venicie ivoise:	60	.3 1	04.2		62.1		58.8		00.4	+	00.8
Centerline Distanc	e to Noise Co	ontour (in feet)		70 di	24	65 dE		6	OdPA	5	5 dPA
			dn	10 01	30	00 UE	65	0	120 120	1 5	300
		CN	IEL:		32		69		149		320

	FHWA-RL	J-77-108 HIGH	WATN	UISE	PREDIC	TION MC	JDEL (9/12/2	021)		
Scenar	io: OY Int WP					Project N	lame: I	FCSP	& POCC		
Road Nan	ne: Live Oak C	yn. Rd.				Job Nu	mber:	15411			
Road Segme	nt: s/o I-10 WE	3 Ramps									
SITE	SPECIFIC IN	IPUT DATA				N	DISEN	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,029 vehicle	s					Autos.	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 A	Axles).	15		
Peak H	lour Volume:	618 vehicles	6		He	avy Truck	(S (3+ A	Axles).	15		
Ve	hicle Speed:	45 mph		v	ehicle I	<i>lix</i>					-
Near/Far La	ne Distance:	48 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	5 13.6%	15.8	% 93.89%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	80.3%	4.7%	14.9	% 2.03%
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Tru	icks:	75.9%	8.2%	15.9	% 4.08%
Centerline Di	st. to Barrier:	52.0 feet			laise Sa	urco Elo	vation	s (in f	oof)		
Centerline Dist.	to Observer:	52.0 feet			10130 00	Autos	01	200			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 2	207			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	81	207	Grade Ad	iustme	nt: 0.0
P	ad Elevation:	0.0 feet			neav	y macho.	0.	504	0/000/10	aouno	
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	46.	400			
	Left View:	-90.0 degree	s		Mediur	n Trucks.	46.	209			
	Right View:	90.0 degree	s		Heav	y Trucks.	46.	228			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	68.46	-4.20		0.38	3	-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-20.85		0.41		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.82		0.41		-1.20		-5.41	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenı	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	L	Leq Ev	ening	Leq N	light		Ldn		CNEL
Autos:	63	.4	62.3		61.1		57.0)	64.6	3	65.1
Medium Trucks:	57	.8	57.2		50.9		51.1		58.8	3	59.0
Heavy Trucks:	65	.6	64.8		61.1		59.2	2	66.8	3	67.1
Vehicle Noise:	68	.1	67.2		64.4		61.7	,	69.3	3	69.6
Centerline Distant	ce to Noise Co	ontour (in feet)	1								
				70 d	BA	65 d	BA	1	60 dBA	5	55 dBA
			Ldn:		47		100		216	j.	466
		CI	VEL:		49		106		229	1	493

	FHWA-RI	D-77-108 HIGH	IWAY N	OISE F	PREDIC	TION MO	ODEL (9/12/2	021)				
Scenar	io: 2050 NP					Project I	Name:	FCSP	& POCC				
Road Nam	ne: Live Oak C	yn. Rd.				Job Nu	imber:	15411					
Road Segme	nt: s/o I-10 WI	3 Ramps											
SITE	SPECIFIC IN	IPUT DATA				N	OISE	IODE		5			
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)				
Average Daily	Traffic (Adt):	21,434 vehicl	es					Autos:	15				
Peak Hour	Percentage:	7.70%			Medium Trucks (2 Axles): 15								
Peak H	lour Volume:	1,650 vehicle	s		He	avy Truc	ks (3+ /	Axles):	15				
Ve	hicle Speed:	45 mph		V	ehicle l	Mix							
Near/Far La	ne Distance:	48 feet		-	VehicleType Day Evening Night Dail;								
Site Data						A	utos:	70.6%	6 13.6%	15.8%	97.53%		
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	80.3%	6 4.7%	14.9%	1.49%		
Barrier Type (0-W	/all, 1-Berm):	0.0			- 1	Heavy Tru	ucks:	75.9%	6 8.2%	15.9%	0.98%		
Centerline Di	st. to Barrier:	52.0 feet		N	oise So	ource Ele	vation	s (in fe	eet)				
Centerline Dist.	to Observer:	52.0 feet		-		Autos	. 0	000	,				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2	297					
Observer Height	Observer Height (Above Pad): 5.0 feet					v Trucks	. 8	004	Grade Ad	iustment	: 0.0		
P	Pad Elevation: 0.0 feet												
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distand	ce (in	feet)				
	Road Grade:	0.0%				Autos	: 46.	400					
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 46.	209					
	Right View:	90.0 degre	es		Heav	y Trucks	: 46.	228					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	el	Barrier Att	en Bei	rm Atten		
Autos:	68.46	0.23		0.38		-1.20		-4.66	0.0	000	0.000		
Medium Trucks:	79.45	-17.94		0.41		-1.20		-4.87	0.0	000	0.000		
Heavy Trucks:	84.25	-19.74		0.41		-1.20		-5.41	0.0	000	0.000		
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)								
VehicleType	Leq Peak Hou	ur Leq Day	/ L	leq Eve	ening	Leq N	light		Ldn	С	NEL		
Autos:	67	7.9	66.7		65.6		61.5	5	69.0)	69.5		
Medium Trucks:	60).7	60.1		53.8		54.0)	61.7	7	61.9		
Heavy Trucks:	63	3.7	62.9		59.2		57.3	3	64.9	9	65.2		
Vehicle Noise:	69	9.9	68.8		66.7		63.4	Ļ	71.0)	71.4		
Centerline Distant	ce to Noise Co	ontour (in feet)										
				70 dl	BA	65 d	IBA	(60 dBA	55	dBA		
			Ldn:		61		131		282		607		
		С	NEL:		65		139		300		647		

Scenario:	2050 WP										
Road Name:	Scenario: 2050 WP Road Name: Live Oak Cyn. Rd. Road Segment: s/o I-10 WB Ramps						Name: F Imber: 1	CSP 5411	& POCC		
Road Segment:	S/0 I-10 WB					N		ODE		•	
JILE SI Highway Data	FEOIFIC IN	DATA		s	ite Con	N ditions i	Hard =	10 Sc	= 10001	3	
Average Deily T	offic (Adt):	02 242 vehicle			110 0011	unions (nara =	utos:	15		
Average Daily Tr	amic (Adt):	23,343 Venicie 7 70%	es		Mo	dium Tru	r ckc (2 A	viec)	15		
Peak Hour F	ur Volume:	1.707 vohiclo	c.		He	awy Truc	cn3 (2 Λ ke (3+ Δ	vlac).	15		
Vehi	cle Sneed	45 mph	5		110	avy mac	N3 (3 · A	xico).	10		
Near/Far Lane	Distance:	48 feet		v	ehicle l	lix					
	Diotanoo.	40 1001			Vehi	cleType	1	Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	94.37
Barri	er Height:	0.0 feet			Me	edium Tr	ucks:	30.3%	4.7%	14.9%	1.94
Barrier Type (0-Wal	l, 1-Berm):	0.0			ŀ	ieavy Tr	ucks:	(5.9%	8.2%	15.9%	3.70
Centerline Dist.	to Barrier:	52.0 feet		٨	loise So	urce Ele	vations	(in fe	eet)		
Centerline Dist. to	Observer:	52.0 feet				Autos	: 0.0	00			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks	2.2	97			
Observer Height (Al	bove Pad):	5.0 feet			Heav	y Trucks	: 8.0	04	Grade Ad	iustment.	0.0
Pad	Elevation:	0.0 feet					Distant	- 6 1	f 41		
Road	Elevation:	0.0 feet		L	ane Equ	livalent	Distanc	e (in i	reet)		
Ro	oad Grade:	0.0%				Autos	: 46.4	00			
	Left View:	-90.0 degree	es		Meaiur	n Trucks	46.2	209			
F	Right View:	90.0 degree	es		Heav	y Trucks	40.2	28			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	68.46	0.46		0.38	3	-1.20		4.66	0.0	000	0.00
Medium Trucks:	79.45	-16.42		0.41	I	-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-13.61		0.41		-1.20		5.41	0.0	000	0.00
Unmitigated Noise L	evels (witho	ut Topo and	barri	er attenı	uation)						
VehicleType L	eq Peak Hour	· Leq Day	<i>'</i>	Leq Ev	ening	Leq I	Vight		Ldn	CI	VEL
Autos:	68.	1	66.9		65.8		61.7		69.3	3	69
Medium Trucks:	62.	2	61.6		55.4		55.6		63.3	3	63
Heavy Trucks:	69.	8	69.0		65.4		63.5		71.0)	71.
Vehicle Noise:	72.	5	71.6		68.8		66.1		73.7	7	74.
Centerline Distance	to Noise Col	ntour (in feet,)								
				70 d	BA	65 0	IBA	e	60 dBA	55	dBA
			Ldn:		91		197		424		914
			CNEL:				97 208 449 9				

Thursday, August 17, 2023

	FHWA-RD	0-77-108 HIGHW	AY NOI	SE PRED	CTION N	ODEL	(9/12/20	021)							
Scena Road Nar Road Segme	rio: 2050 Int NF ne: Live Oak C ent: s/ol-10 WE	yn. Rd. 8 Ramps			Projec Job N	t Name: lumber:	FCSP 15411	& POCC							
SITE	SPECIFIC IN	PUT DATA			1	NOISE	MODE	L INPUT	S						
Highway Data				Site Co	nditions	(Hard =	= 10, Sc	oft = 15)							
Average Daily	Traffic (Adt):	23,079 vehicles					Autos:	15							
Peak Hou	Percentage:	7.70%		N	edium Tr	ucks (2	Axles):	15							
Peak I	Hour Volume:	1,777 vehicles		E	eavy Tru	cks (3+	Axles):	15							
Ve	ehicle Speed:	45 mph		Vohicle	Mix										
Near/Far La	ane Distance:	48 feet		Venicle	hicleTvp	9	Dav	Evenina	Niaht	Dailv					
Site Data						Autos:	70.6%	13.6%	15.8%	97.53%					
Ba	urrier Height:	0.0 feet		1	/ledium 1	rucks:	80.3%	4.7%	14.9%	1.49%					
Barrier Type (0-V	Vall 1-Berm)	0.0			Heavy 7	rucks:	75.9%	8.2%	15.9%	0.98%					
Centerline D	ist. to Barrier:	52.0 feet		Maina			- (in f	4							
Centerline Dist.	to Observer:	52.0 feet		Noise 3	ource E	levation		eet)							
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Autos: 0.000									
Observer Height	Observer Height (Above Pad): 5.0 feet					(S: 2	.297	Crada Ad	livetment						
F	ad Elevation:		Hea	ivy Truck	(S. 8	.004	Grade Au	Jusuneni	. 0.0						
Ro	ad Elevation:	0.0 feet		Lane E	quivalen	t Distan	ice (in t	feet)							
	Road Grade:	0.0%			Auto	os: 46	.400								
	Left View:	-90.0 degrees		Medi	um Truck	(s: 46	.209								
	Right View:	90.0 degrees		Hea	avy Truck	(s : 46	.228								
FHWA Noise Mod	lel Calculation:	5		1											
VehicleType	REMEL	Traffic Flow	Distanc	e Finit	e Road	Fres	nel	Barrier Att	en Bei	rm Atten					
Autos	68.46	0.55	(0.38	-1.20		-4.66	0.0	000	0.00					
Medium Trucks	79.45	-17.62	().41	-1.20		-4.87	0.0	000	0.00					
Heavy Trucks:	84.25	-19.42	(0.41	-1.20		-5.41	0.0	000	0.00					
Unmitigated Nois	e Levels (with	out Topo and b	arrier att	enuation											
VehicleType	Leq Peak Hou	r Leq Day	Leg	Evening	Leq	Night		Ldn	С	NEL					
Autos	68	.2 6	7.0	65.	9	61.	.8	69.4	4	69.					
Medium Trucks	61	.0 6	0.4	54.	2	54.	4	62.	1	62.					
Heavy Trucks	64	.0 6	3.2	59.	5	57.	.6	65.3	2	65.					
Vehicle Noise:	70	.2 6	9.2	67.	D	63.	7	71.3	3	71.					
Centerline Distan	ce to Noise Co	ontour (in feet)													
-			7	'0 dBA	65	dBA	6	60 dBA	55	dBA					
		L	dn:	64	+	13	7	296	<i>i</i>	638					
		CN	EL:	68	3	14	7	316	j	680					

	FHWA-RD	9-77-108 HIGH	WAY N	IOISE	PREDIC	TION MO	DDEL (S	9/12/2	021)			
Scenari	io: 2050 Int WI	c				Project I	Vame: F	FCSP	& POCC			
Road Nam	e: Live Oak C	yn. Rd.				Job Nu	mber: *	15411				
Road Segmer	nt: s/o I-10 WE	Ramps										
SITE	SPECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUT	s		
Highway Data				S	Site Con	ditions (Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	23,655 vehicle	s				,	Autos:	15			
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 A	(xles)	15			
Peak H	our Volume:	1,821 vehicles	6		He	avy Truci	ks (3+ A	Axles):	15			
Vei	hicle Speed:	45 mph		V	/ohiclo I	Mix						
Near/Far La	ne Distance:	48 feet		F	Veh	icleTvpe		Dav	Evenina	Nial	ht	Dailv
Site Data						A	utos:	70.6%	13.6%	15.	8%	96.30%
Bai	rrier Height:	0.0 feet			Me	edium Tru	icks:	80.3%	4.7%	14.	9%	1.67%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	icks:	75.9%	8.2%	15.	9%	2.03%
Centerline Dis	st. to Barrier:	52.0 feet			loise Sc	ource Fle	vations	s (in fi	eet)			
Centerline Dist.	to Observer:	52.0 feet		~	10/30 00	Autos	0.0	200				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 21	297				
Observer Height (Observer Height (Above Pad): 5.0 feet					n Trucks	. 2.4	104	Grade Ad	liustm	ent [.]	0.0
Pa	ad Elevation:	0.0 feet			near	y macks.	. 0.0	-00	0/000/10	Juoun	0//12.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in	feet)			
ŀ	Road Grade:	0.0%				Autos	46.4	400				
	Left View:	-90.0 degree	s		Mediur	m Trucks	: 46.	209				
	Right View:	90.0 degree	s		Heav	ry Trucks	46.	228				
FHWA Noise Mode	el Calculation	6										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier At	ten	Berm	Atten
Autos:	68.46	0.60		0.38	3	-1.20		-4.66	0.	000		0.000
Medium Trucks:	79.45	-17.01		0.41	1	-1.20		-4.87	0.	000		0.000
Heavy Trucks:	84.25	-16.15		0.41	I	-1.20		-5.41	0.	000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day	· 1	Leq Ev	rening	Leq N	light		Ldn		CN	EL
Autos:	68	.2	67.1		65.9		61.8	3	69.	4		69.9
Medium Trucks:	61	.7	61.0		54.8		55.0)	62.	7		62.9
Heavy Trucks:	67	.3	66.5		62.8		60.9)	68.	5		68.8
Vehicle Noise:	71	.3	70.3		67.9		64.9)	72.	5		72.9
Centerline Distance	e to Noise Co	ntour (in feet)										
				70 d	IBA 🛛	65 d	BA	(50 dBA		55 d	BA
			Ldn:		76		164		353	3		761
	CNEL:				81		174		37	5		807

	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	CTION MC	DEL (9	/12/20)21)		
Scenar	rio: E					Project N	<i>lame:</i> F	CSP	& POCC		
Road Nan	ne: Live Oak C	Cyn. Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: n/o I-10 W	в катрs									
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	ODE	L INPUTS	6	
Highway Data				S	Site Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	14,220 vehic	les				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	lour Volume:	1,095 vehicle	es		He	avy Truck	is (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	1	Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	52.0 feet		٨	loise Se	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks:	8.0	04	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet			ana Fa	uivolont l	Viotono	o (in f	in ntl		
Ro	ad Elevation:	0.0 teet		-	ane Ly	Autor	AC A		eelj		
	Road Grade.	0.0%			Madiu	Autos.	40.4	100			
	Len View:	-90.0 degre	es		Hear	n Trucks.	40.2	09			
	Right view.	90.0 degre	es		nea	ry mucks.	40.2	.20			
FHWA Noise Mod	el Calculation	is									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	6 -1.55	5	0.38	3	-1.20		4.66	0.0	00	0.000
Medium Trucks:	79.45	5 -19.72	2	0.41		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.52	2	0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	l barrie	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Ev	rening	Leq N	ight		Ldn	CI	NEL
Autos:	6	6.1	64.9		63.8		59.7		67.3		67.8
Medium Trucks:	5	8.9	58.3		52.1		52.3		60.0		60.2
Heavy Trucks:	6	1.9	67.1		57.4		55.5		63.1		63.4
venicie Noise.	0	0.1	07.1		04.9		01.0		09.2		09.0
Centerline Distan	ce to Noise C	ontour (in fee	<i>t</i>)	70 d	BA	65 di	BA	6	0 dBA	55	dBA
			Ldn:		. 46		. 100		214		462
		C	NEL:		49		106		229		492

	FHWA-RD	-77-108 HIGH	WAY	NOISE	E PREDIC	TION M	ODEL (S	9/12/2	021)		
Scenario Road Name	: OY NP : Live Oak Cy			Project Job N	Name: I umber:	-CSP 15411	& POCC				
Road Segmen	: n/o I-10 WB	Ramps									
SITE S	PECIFIC IN	PUT DATA				N	IOISE N	IODE	LINPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	15,635 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Tri	ucks (2 A	(xles):	15		
Peak Ho	ur Volume:	1,204 vehicle	S		He	avy Truc	cks (3+ A	(xles):	15		
Veh	icle Speed:	45 mph		ľ	Vehicle I	Nix					
Near/Far Lan	e Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53
Barı	ier Heiaht:	0.0 feet			M	edium Ti	rucks:	80.3%	4.7%	14.9%	1.49
Barrier Type (0-Wa	II, 1-Berm):	0.0			I	leavy Ti	rucks:	75.9%	8.2%	15.9%	0.98
Centerline Dist	to Barrier:	52.0 feet		ŀ	Noise So	urce El	evations	s (in fe	eet)		
Centerline Dist. to	Observer:	52.0 feet		ŀ		Auto	s: 0.0	000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	n Truck	s: 2.2	297			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	iustment.	0.0
Pa	d Elevation:	0.0 feet		-	1 F		Distance		F 41		
Roa	d Elevation:	0.0 feet		-	Lane Eq	livalent	Distanc	e (in i	reet)		
R	oad Grade:	0.0%			Martin	Auto:	S: 46.4	400			
	Left View:	-90.0 degree	es		Mediu	т Truck	S.' 46.2	209			
	Right view:	90.0 degree	es		neav	y muck	5. 40.	220			
FHWA Noise Model	Calculations	3									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	68.46	-1.14		0.3	38	-1.20		-4.66	0.0	000	0.00
Medium Trucks:	79.45	-19.31		0.4	11	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.11		0.4	11	-1.20		-5.41	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	ier atter	nuation)						
VehicleType I	.eq Peak Hou	r Leq Day	<i>(</i>	Leq E	vening	Leq	Night		Ldn	CI	VEL
Autos:	66	.5	65.3		64.2		60.1		67.3	7	68
Medium Trucks:	59	.3	58.7		52.5		52.7		60.4	1	60
Heavy Trucks:	62	.3	61.5		57.9		56.0		63.5	5	63.
Vehicle Noise:	68	.5	67.5		65.3		62.0		69.6	j.	70.
Centerline Distance	e to Noise Co	ntour (in feet,)	70	dBA	65	ADA		OdRA	55	dRA
			I dr	70	40	05	100		0 UDA 200	- 55	UDA AO
		C			49		100		228		49.
									24.3		

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHV	VAY NOI	SE I	PREDIC	TION M	ODEL (9/12/2	021)			
Scenario Road Name Road Segmen	o: OY WP e: Live Oak C <u>j</u> t: n/o I-10 WE	/n. Rd. Ramps				Project Job N	Name: umber:	FCSP 15411	& POCO	;		
SITE S	PECIFIC IN	PUT DATA				N	OISE I	IODE	EL INPU	ITS		
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)			
Average Daily T	raffic (Adt):	17,131 vehicles	6					Autos	15			
Peak Hour F	Percentage:	7.70%			Me	dium Tru	icks (2 /	Axles)	: 15			
Peak Ho	our Volume:	1,319 vehicles			He	avy Truc	:ks (3+ /	Axles)	: 15			
Veh	icle Speed:	45 mph		v	ehicle l	Mix						
Near/Far Lan	e Distance:	48 feet		F	Veh	icleType		Day	Evenin	g N	ight	Daily
Site Data						A	utos:	70.6%	6 13.6	% 1	5.8%	95.45%
Barr	rier Heiaht:	0.0 feet			M	edium Tr	ucks:	80.3%	6 4.7	% 1	4.9%	1.75%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	6 8.2	% 1	5.9%	2.80%
Centerline Dis	t. to Barrier:	52.0 feet		N	oise Sc	ource Ele	evation	s (in f	eet)			-
Centerline Dist. to	o Observer:	52.0 feet		1		Autos	: 0.	000				
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Trucks	: 2	297				
Observer Height (Above Pad): 5.0 feet					Heav	v Trucks	. 8.	004	Grade	Adjust	ment:	0.0
Pa		L										
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (in	feet)			
R	load Grade:	0.0%				Autos	s: 46.	400				
	Left View:	-90.0 degrees	5		Mediui	m Trucks	5: 46. 	209				
	rtight view.	90.0 degrees	,		near	y mache	. 40.	220				
FHWA Noise Mode	Calculations	Traffia Flaur	Distance		E in the	Deed	F	-	Demier	A 44	0	
venicie i ype	REMEL	Traffic Flow	Distanc	e 1 20	Finite	1 20	Fresh	1 66	Barrier .	4 <i>tten</i>	Berr	TI Atten
Medium Trucks:	70.40	19.21).30 1 / 1		1.20		4.00		0.000		0.000
Heavy Trucks:	84.25	-16.16).41		-1.20		-5.41		0.000		0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier att	enu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	Leo	Ev	ening	Leq I	Night		Ldn		CN	VEL
Autos:	66	.8 6	5.6		64.5		60.4	i i	6	8.0		68.
Medium Trucks:	60	.4 5	9.8		53.6		53.8	3	6	1.5		61.
Heavy Trucks:	67	.3 6	6.4		62.8		60.9)	6	8.5		68.8
Vehicle Noise:	70	.5 6	9.6		67.0		64.1		7	1.7		72.1
Centerline Distance	e to Noise Co	ntour (in feet)						1		-		
			7	'0 di	BA	65 0	dΒA		60 dBA		55	dBA
		L	dn:		67		145		3	13		674
		CN	EL:		71		154		3	31		714

	FHWA-RI	D-77-108 HIGH	IWAY N	IOISE P	REDIC	TION MO	DEL (9	/12/20	21)		
Scenar Road Nan Road Segme	io: OY Int NP ne: Live Oak C nt: n/o I-10 WI	yn. Rd. 3 Ramps				Project N Job Nur	ame: F nber: 1	CSP 8 5411	& POCC		
SITE	SPECIFIC IN	IPUT DATA				NO	ISE M	ODE		5	
Highway Data				Sit	te Con	ditions (H	lard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	14,867 vehicl	es				A	lutos:	15		
Peak Hour	Percentage:	7.70%			Mee	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	1,145 vehicle	s		Hea	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Ve	hicle N	lix					
Near/Far La	ne Distance:	48 feet			Vehi	cleType	l	Day	Evening	Night	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet			Me	edium Truc	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Truc	cks: 1	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		No	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	00	- /		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.0	04	Grade Adj	ustment	: 0.0
P	Pad Elevation: 0.0 feet					vivalant D	Viotono	o (in f	a a fi		
Ro	ad Elevation:	0.0 feet		Ld	ne Equ	Autos:	AG A		eel)		
	Loft View:	0.0%	00		Mediur	n Trucks:	40.4	00			
	Right View:	90.0 degre	es		Heav	y Trucks:	46.2	28			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/ I	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.36		0.38		-1.20		4.66	0.0	00	0.000
Medium Trucks:	79.45	-19.53		0.41		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.33		0.41		-1.20	-	5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenua	ation)						
VehicleType	Leq Peak Hou	Ir Leq Day	/	Leq Eve	ning	Leq Ni	ght		Ldn	C	NEL
Autos:	66	5.3	65.1		64.0		59.9		67.5		68.0
Medium Trucks:	55	9.1	58.5		52.3		52.5		60.2	-	60.3
Heavy Trucks:	62	.1	67.0		57.0 6F.1		55.7		63.3	•	60.0
Venicie Noise.			07.2		03.1		01.0		09.4		09.0
Centerline Distant	ce to Noise Co	ontour (in feet	,	70 dB	A	65 dE	3A	6	0 dBA	55	dBA
			Ldn:		48		103		221		476
	Ldn: CNEL:				51		109		235		507

	FHWA-R	D-77-108 HIGH	IWAY N	OISE F	PREDIC	TION MC	DEL (S	/12/20)21)		
Scenar Bood Marce	io: OY Int WP	ten Del				Project N	lame: F	CSP 8	& POCC		
Road Nam Road Segme	nt: n/o I-10 W	yn. ка. B Ramps				JOB NUI	nder: 1	5411			
SITE	SPECIFIC II	IPUT DATA				NC	DISE N	IODE		3	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	15,171 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	1,168 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	96.56%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.63%
Barrier Type (0-W	/all, 1-Berm):	0.0			I	Heavy Tru	cks:	75.9%	8.2%	15.9%	1.81%
Centerline Di	st. to Barrier:	52.0 feet		N	oise So	ource Elev	vations	in fe	et)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet				·	Viotono	a lin f	in at l		
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L	Istanc		eet)		
	Road Grade:	0.0%			Madiu	Autos:	40.4	100			
	Left View:	-90.0 degre	es		Meaiu	m Trucks:	40.4	209			
	Right view.	90.0 degre	es		near	ly mucks.	40.2	20			
FHWA Noise Mod	el Calculation	s								-	
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el i	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.31		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks:	79.45	-19.04		0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.20	-18.56)	0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	.eq Eve	ening	Leq N	ight		Ldn	CI	VEL
Autos:	50	0.3	60.2 50.0		64.0 50.7		59.9		67.5		68.0
Medium Trucks:	55	9.0	59.0		52.7 60.4		52.9		60.7		60.8
Vehicle Noise:	69	i.9).2	68.2		65.8		62.7		70.3	1	70.7
Centerline Distan	ce to Noise C	ontour (in fee	6								
Centennie Distant		unioui (in iee	y	70 dE	BA	65 dł	BA	6	0 dBA	55	dBA
			Ldn:	55 118 255			549				
	Ldn: CNEL:					58 126 271					583

	FRWA-RD-		WAT	NUISE	PREDIC		ODEL (9/12/2	021)		
Scenario	2050 NP					Project	Name: I	CSP	& POCC		
Road Name	: Live Oak Cyr	n. Rd.				Job N	umber:	15411			
Road Segment	: n/o I-10 WB I	Ramps									
SITE S	PECIFIC INP	UT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data					Site Cond	ditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt): 2	8,257 vehicle	es					Autos:	15		
Peak Hour F	ercentage:	7.70%			Med	dium Tri	icks (2 A	(xles)	15		
Peak Ho	ur Volume: 2	176 vehicles	5		Hea	avy Truo	cks (3+ A	(xles):	15		
Veh	icle Speed:	45 mph			Vehicle N	lix					
Near/Far Lan	e Distance:	48 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						/	Autos:	70.6%	13.6%	15.8%	97.53
Barr	ier Heiaht:	0.0 feet			Me	dium Ti	ucks:	80.3%	4.7%	14.9%	1.499
Barrier Type (0-Wa	ll, 1-Berm):	0.0			h	leavy Ti	ucks:	75.9%	8.2%	15.9%	0.98
Centerline Dist	to Barrier:	52.0 feet			Noise So	urce El	evation	s (in fe	eet)		
Centerline Dist. to	Observer:	52.0 feet		F		Auto	s: 0.0	000	,		
Barrier Distance to	Observer:	0.0 feet			Mediun	n Truck	s: 2.1	297			
Observer Height (A	bove Pad):	5.0 feet			Heav	y Truck	s: 8.0	004	Grade Ad	justment	: 0.0
Pad	d Elevation:	0.0 feet		-			Distant	- 6	f = = 41		
Road	d Elevation:	0.0 feet		-	Lane Equ	ivalent	Distanc	e (in i	reet)		
R	oad Grade:	0.0%			1.4 m all	Auto	S. 46.	400			
	Left View:	-90.0 degree	es		Wealun	Truck	5. 40.	209			
	Right view:	90.0 degree	es		neav.	y TTUCK	5. 40.	220			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	68.46	1.43		0.3	8	-1.20		-4.66	0.0	000	0.00
Medium Trucks:	79.45	-16.74		0.4	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-18.54		0.4	1	-1.20		-5.41	0.0	000	0.00
Unmitigated Noise	Levels (withou	It Topo and	barrie	er atten	uation)						
VehicleType L	.eq Peak Hour	Leq Day	r	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	69.1		67.9		66.8		62.7		70.3	2	70.
Medium Trucks:	61.9)	61.3		55.0		55.2		62.	9	63
Heavy Trucks:	64.9)	64.1		60.4		58.5	i	66.	1	66.
Vehicle Noise:	71.1		70.0		67.9		64.6	1	72.	2	72
Centerline Distance	e to Noise Con	tour (in feet))							1	
			L	70	dBA	65	dBA	6	60 dBA	55	dBA
		-	Ldn:		73		157		339	•	730
		0	VEL		70		169		261		779

Thursday, August 17, 2023

	FHWA-RI	0-77-108 HIGHV	VAY NOIS	SE PREDIO	CTION MC	DEL (9/12	/2021)			
Scenar	io: 2050 WP				Project N	lame: FCS	P & POC	c		
Road Nam	e: Live Oak C	yn. Rd.			Job Nu	mber: 154	11			
Road Segme	<i>nt:</i> n/o I-10 WE	3 Ramps								
SITE	SPECIFIC IN	IPUT DATA			NC	DISE MOI	DEL INP	JTS		
Highway Data				Site Cor	ditions (H	lard = 10,	Soft = 15	1		
Average Daily	Traffic (Adt):	29,752 vehicles	6			Auto	os: 15			
Peak Hour	Percentage:	7.70%		Me	dium Truc	cks (2 Axle	s): 15			
Peak H	lour Volume:	2,291 vehicles		He	avy Truck	is (3+ Axle	s): 15			
Ve	hicle Speed:	45 mph		Vohiclo	Miv					
Near/Far La	ne Distance:	48 feet		Venicle	icleType	Dav	Evenir	na Ni	iaht	Daily
Site Data					AL	itos: 70.	5% 13.6	% 1	5.8%	96.33%
Ra	rrier Height	0.0 feet		м	edium Tru	cks: 80.3	3% 4.7	% 1	4.9%	1.64%
Barrier Type (0-W	all 1-Rerm)	0.0			Heavy Tru	cks: 75.	9% 8.2	% 1	5.9%	2.03%
Centerline Di	st. to Barrier:	52.0 feet		Noine C	uree Ele	untin no (in	faati			
Centerline Dist.	to Observer:	52.0 feet		NOISE S	Juice Ele		Teetj			
Barrier Distance	to Observer:	0.0 feet		Madiu	Autos.	0.000				
Observer Height (Above Pad):	5.0 feet		Weulu	III TTUCKS.	2.297	Grade	Adjust	mont	0.0
Pa	ad Elevation:	0.0 feet		пеа	y mucks.	0.004	Grade	Aujusi	ment.	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent I	Distance (i	n feet)			
	Road Grade:	0.0%			Autos:	46.400				
	Left View:	-90.0 degrees	5	Mediu	m Trucks:	46.209				
	Right View:	90.0 degrees	3	Hea	vy Trucks:	46.228				
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier	Atten	Berr	m Atten
Autos:	68.46	1.60	C	.38	-1.20	-4.6	6	0.000	-	0.000
Medium Trucks:	79.45	-16.10	C	.41	-1.20	-4.8	37	0.000		0.000
Heavy Trucks:	84.25	-15.16	C	0.41	-1.20	-5.4	1	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	enuation)					-	
VehicleType	Leq Peak Hou	Ir Leq Day	Leq	Evening	Leq N	light	Ldn		CN	VEL
Autos:	69	.2 6	8.1	66.9		62.8	1	70.4		70.9
Medium Trucks:	62	6 6	2.0	55.7		55.9	6	33.6		63.8
Heavy Trucks:	68	.3 6	7.4	63.8		61.9	(39.5		69.8
Vehicle Noise:	72	.3 7	1.3	68.9		65.9	ī	73.5		73.9
Centerline Distant	ce to Noise Co	ontour (in feet)								
			7	0 dBA	65 dl	BA	60 dBA		55 (dBA
		L	dn:	88		191	4	111		884
		CN	EL:	94		202	4	136		939

	FHWA-RI	D-77-108 HIGH	IWAY N	IOISE P	REDIC	TION MO	DEL (9	/12/20:	21)		
Scenari Road Nam Road Segmer	o: 2050 Int NF e: Live Oak C nt: n/o I-10 WI	yn. Rd. 3 Ramps				Project N Job Nur	ame: F nber: 1	CSP & 5411	POCC		
SITE	SPECIFIC IN	IPUT DATA				NO	ISE M	ODEL	INPUTS	3	
Highway Data				Si	te Con	ditions (H	lard = 1	10, Sof	t = 15)		
Average Daily	Traffic (Adt):	29,621 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	2,281 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		Ve	hicle I	<i>lix</i>					
Near/Far La	ne Distance:	48 feet			Vehi	cleType	Ĺ	Day I	Evening	Night	Daily
Site Data						Au	tos: ī	70.6%	13.6%	15.8%	97.53%
Bai	rier Height:	0.0 feet			Me	edium Tru	cks: 8	30.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	52.0 feet		No	oise So	urce Flev	ations	(in fee	of)		
Centerline Dist.	to Observer:	52.0 feet				Autos	0.0	00	.9		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04 (Grade Adj	ustment:	0.0
Pa	ad Elevation:	0.0 feet		_	_						
Roa	ad Elevation:	0.0 feet		La	ne Equ	livalent L	istanc	e (in te	et)		
	Road Grade:	0.0%				Autos:	46.4	00			
	Left View:	-90.0 degre	es		Mealur	n Trucks:	40.2	09			
	Right view:	90.0 degre	es		neav	y mucks.	40.2	20			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.63		0.38		-1.20	-	4.66	0.0	00	0.000
Medium Trucks:	79.45	-16.54		0.41		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-18.34		0.41		-1.20	-	5.41	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenua	ation)					T	
VehicleType	Leq Peak Hou	ir Leq Day	/ 1	Leq Eve	ning	Leq Ni	ght		Ldn	CI	VEL
Autos:	69	9.3	68.1		67.0		62.9		70.5	5	71.0
Meaium Trucks:	62	2.1 	61.5		55.3		55.5		63.2	-	63.3
Heavy Trucks:	65	0.1	04.3		60.6		0.80		56.3) 	55.5
venicle Noise:	71	.3	10.2		08.1		04.8		72.4		72.8
Centerline Distance	e to Noise Co	ontour (in feet)	70 45		05 -15			-04		
				70 dE	75	65 dE	5A 400	60	aBA	55	aBA 754
		0	Lan:		/5		162		350		754
		C	NEL:		80		173		3/3		803

	FHWA-R	D-77-108 HIGI	IWAY N	IOISE P	PREDIC	TION MC	DEL (9	/12/20)21)		
Scenar	Scenario: 2050 Int WP Road Name: Live Oak Cyn. Rd.						lame: F	CSP	& POCC		
Road Nan Road Segme	ne: Live Oak C nt: n/o I-10 W	Syn. Rd. B Ramps				Job Nu	mber: 1	5411			
SITE	SPECIFIC II	NPUT DATA				NC	DISE M	IODE	L INPUTS	3	
Highway Data				Si	ite Con	ditions (H	lard = :	10, So	ft = 15)		
Average Daily	Traffic (Adt):	29,925 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	2,304 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Ve	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		Ē	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.04%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 1	80.3%	4.7%	14.9%	1.56%
Barrier Type (0-W	/all, 1-Berm):	0.0			I	Heavy Tru	cks:	75.9%	8.2%	15.9%	1.40%
Centerline Di	st. to Barrier:	52.0 feet		N	oise So	ource Elev	vations	in fe	et)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet				·		- 6- 4	41		
Ro	ad Elevation:	0.0 feet		Lä	ane Eq	uivaient L	nstanc	e (in i	eet)		
	Road Grade:	0.0%				Autos:	46.4	100			
	Left View:	-90.0 degre	es		Meaiu	m Trucks:	46.2	209			
	Right View:	90.0 degre	es		Heav	y Trucks:	46.2	228			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.66		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks:	79.45	-16.28	5	0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-16.74		0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y i	Leq Eve	ening	Leq N	ight		Ldn	CI	NEL
Autos:	69	9.3	68.1		67.0		62.9		70.5		71.0
Medium Trucks:	62	2.4	61.8		55.5		55.7		63.4		63.6
Heavy Trucks:	66	6.7	65.9		62.2		60.3		67.9)	68.2
Vehicle Noise:	7.	1.7	70.7		68.5		65.3		72.9)	73.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	ЗA	65 dl	BA	6	i0 dBA	55	dBA
		_	Ldn:	81 175 377				812			
		C	NEL:		86 186 401					864	

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9	/12/2	021)		
Scenario	хE					Project	Name: F	CSP	& POCC		
Road Name	: Oak Glen R	d.				Job N	umber: 1	5411			
Road Segmen	t: s/o Calimes	a Blvd.									
SITE S	PECIFIC IN	PUT DATA				N	OISE N	ODE		S	
Highway Data				S	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	25,215 vehicle	es				A	Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Tri	icks (2 A	xles):	15		
Peak Ho	our Volume:	1,942 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	45 mph		v	/ehicle I	Mix					
Near/Far Lan	e Distance:	48 feet			Veh	icleType	1	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53
Barı	ier Heiaht:	0.0 feet			Me	edium Ti	ucks:	80.3%	4.7%	14.9%	1.49
Barrier Type (0-Wa	II, 1-Berm):	0.0			ŀ	leavy Ti	ucks:	75.9%	8.2%	15.9%	0.98
Centerline Dist	t. to Barrier:	52.0 feet			loise Sc	urce Fl	evations	(in fe	pet)		
Centerline Dist. to	o Observer:	52.0 feet		-		Auto	e 0.0	00			
Barrier Distance to	o Observer:	0.0 feet			Mediu	n Truck	s: 22	97			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Truck	s: 8.0	04	Grade Ad	iustment.	0.0
Pa	d Elevation:	0.0 feet		-		,					
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in i	feet)		
R	oad Grade:	0.0%				Auto	s: 46.4	100			
	Left View:	-90.0 degree	es		Mediui	n Truck	s: 46.2	209			
	Right view:	90.0 degree	es		Heav	у ттиск	5. 40.2	228			
FHWA Noise Model	Calculations	:									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	68.46	0.94		0.38	3	-1.20		4.66	0.0	000	0.00
Medium Trucks:	79.45	-17.24		0.41		-1.20		4.87	0.0	000	0.0
Heavy Trucks:	84.25	-19.03		0.41		-1.20		-5.41	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	er atteni	uation)						
VehicleType I	eq Peak Hou	r Leq Day	· .	Leq Ev	rening	Leq	Night		Ldn	CI	VEL
Autos:	68.	6	67.4		66.3		62.2		69.8	3	70
Medium Trucks:	61.	4	60.8		54.6		54.8		62.5	5	62
Heavy Trucks:	64.	4	63.6		59.9		58.0		65.6	3	65
Vehicle Noise:	70.	6	69.5		67.4		64.1		71.3	(72
Centerline Distance	e to Noise Co	ntour (in feet,)							Т	
				70 d	IBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		68		146		314		67
			<u></u>								

Thursday, August 17, 2023

	FHWA-RI	D-77-108 HIGHV	VAY NOI	SE PREDI	CTION MO	ODEL (S	/12/20)21)		
Scenar	io: OY NP				Project I	Name: F	CSP 8	& POCC		
Road Nan	ne: Oak Glen F	Rd.			Job Nu	imber: 1	5411			
Road Segme	nt: s/o Calime	sa Blvd.								
SITE	SPECIFIC IN	IPUT DATA			N	OISE N	IODEI	LINPUT	5	
Highway Data				Site Col	nditions (Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	27,540 vehicles	5			A	Autos:	15		
Peak Hour	Percentage:	7.70%		M	edium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	2,121 vehicles		H	eavy Truc	ks (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		Vohiclo	Mix					
Near/Far La	ne Distance:	48 feet		Venicle	nicleType		Day	Evening	Night	Daily
Site Data					A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet		N	ledium Tri	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tri	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	52.0 feet		Noise S	ource Ele	vations	in fe	ef)		
Centerline Dist.	to Observer:	52.0 feet			Autos	. 0.0	000	- 1		
Barrier Distance	to Observer:	0.0 feet		Medii	m Trucks	22	97			
Observer Height	(Above Pad):	5.0 feet		Hea	vv Trucks	. 80	104	Grade Adi	iustment	: 0.0
P	ad Elevation:	0.0 feet			.,					
Ro	ad Elevation:	0.0 feet		Lane Ec	uivalent	Distanc	e (in f	eet)		
	Road Grade:	0.0%			Autos	: 46.4	100			
	Left View:	-90.0 degree:	S	Mediu	ım Trucks	46.2	209			
	Right View:	90.0 degrees	S	Hea	vy Trucks	: 46.2	228			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresn	el I	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.32	(0.38	-1.20		-4.66	0.0	000	0.00
Medium Trucks:	79.45	-16.85	(0.41	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-18.65	().41	-1.20		-5.41	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier att	enuation)						-
VehicleType	Leq Peak Hou	ur Leq Day	Leg	Evening	Leq I	light		Ldn	CI	NEL
Autos:	69	9.0 6	7.8	66.7	,	62.5		70.1	1	70.
Medium Trucks:	61	1.8 6	1.2	54.9)	55.1		62.8	3	63.
Heavy Trucks:	64	1.8 6	i4.0	60.3	3	58.4		66.0)	66.
Vehicle Noise:	70	0.9 6	9.9	67.8	3	64.5		72.1	I	72.
Centerline Distan	ce to Noise Co	ontour (in feet)	1		L					
			7	'0 dBA	65 0	IBA	6	0 dBA	55	dBA _
		L	.dn:	72		155		333		718
		CN	EL:	77 165 355					765	

	FHWA-RD	-77-108 HIGHW	AY NOI	SE PREDI	CTION MO	DEL (9/12	2021)		
Scenar	io: OY WP				Project N	lame: FCS	P & POCC		
Road Nam	e: Oak Glen R	d.			Job Nui	nber: 1541	1		
Road Segme	nt: s/o Calimes	a Blvd.							
SITE	SPECIFIC IN	PUT DATA			NC	ISE MOD	EL INPUT	s	
Highway Data				Site Col	nditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	28,270 vehicles				Auto	s: 15		
Peak Hour	Percentage:	7.70%		M	edium Truc	ks (2 Axles	s): 15		
Peak H	lour Volume:	2,177 vehicles		H	eavy Truck	s (3+ Axles	s): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	48 feet		Venicle	hicleType	Dav	Evenina	Night	Dailv
Site Data					Au	tos: 70.6	% 13.6%	15.8%	96.21%
Ra	rrior Hoight:	0.0 foot		٨	ledium Tru	cks: 80.3	% 4.7%	14.9%	1.68%
Barrier Tupe (0 M	(all 1 Berm):	0.0 1001			Heavy Tru	cks: 75.9	% 8.2%	15.9%	2.11%
Centerline Di	st to Barrier:	52.0 feet							
Centerline Dist.	to Observer:	52.0 feet		Noise S	ource Elev	ations (in	teet)		
Barrier Distance	to Observer:	0.0 feet		A 4	Autos:	0.000			
Observer Height	(Above Pad):	5.0 feet		Weald	ITT Trucks:	2.297	Crada Ad	ivetment	
P	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.004	Grade Auj	usimeni	. 0.0
Roi	ad Elevation:	0.0 feet		Lane Eq	uivalent D	Distance (i	n feet)		
	Road Grade:	0.0%			Autos:	46.400			
	Left View:	-90.0 degrees		Mediu	ım Trucks:	46.209			
	Right View:	90.0 degrees		Hea	vy Trucks:	46.228			
FHWA Noise Mod	el Calculations	;		1					
VehicleType	REMEL	Traffic Flow	Distance	e Finite	e Road	Fresnel	Barrier Atte	en Bei	rm Atten
Autos:	68.46	1.37	(0.38	-1.20	-4.6	6 0.0	000	0.000
Medium Trucks:	79.45	-16.20	().41	-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	84.25	-15.21	().41	-1.20	-5.4	1 0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and ba	arrier att	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	Ldn	С	NEL
Autos:	69	.0 67	7.8	66.7	7	62.6	70.2	2	70.7
Medium Trucks:	62	.5 61	.9	55.6	3	55.8	63.5	5	63.7
Heavy Trucks:	68	.2 67	7.4	63.8	3	61.9	69.4	ļ.	69.7
Vehicle Noise:	72	.2 71	.2	68.7	7	65.7	73.3	3	73.7
Centerline Distant	ce to Noise Co	ntour (in feet)							
			7	0 dBA	65 dE	BA	60 dBA	55	dBA
		Lo	dn:	87		186	402		865
		CNE	L:	92		198	426		918

	FHWA-RI	D-77-108 HIGH	IWAY NO	DISE F	PREDIC	TION MO	DDEL (9/12/2	021)		
Scenar	rio: OY Int NP				Project I	Vame:	FCSP	& POCC			
Road Nan	ne: Oak Glen F	Rd.				Job Nu	mber:	15411			
Road Segme	nt: s/o Calime	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE I	NODE		s	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	25,876 vehicl	es					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	1,992 vehicle	s		He	avy Truc	ks (3+)	Axles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Height	0.0 feet			M	edium Tru	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall. 1-Berm):	0.0			ŀ	leavy Tru	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	52.0 feet		N	oico Sc		vation	e (in fi	nofi		
Centerline Dist.	to Observer:	52.0 feet		14	0136 30	Autoo	valion	000	eey		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks	. 0. 	207			
Observer Height	(Above Pad):	5.0 feet			Heat	n Trucks	. 2. . 0	201	Grade Ad	iustment	· 0.0
P	ad Elevation:	0.0 feet			neav	y mucks	. 0.	004	0,000,10	actinoin	. 0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	46.	400			
	Left View:	-90.0 degre	es		Mediu	m Trucks	46.	209			
	Right View:	90.0 degre	es		Heav	y Trucks	46.	228			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresr	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	1.05		0.38		-1.20		-4.66	0.0	000	0.000
Medium Trucks:	79.45	-17.12		0.41		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.92		0.41		-1.20		-5.41	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ L	eq Eve	ening	Leq N	light		Ldn	С	NEL
Autos:	68	3.7	67.5		66.4		62.3	3	69.9	9	70.4
Medium Trucks:	61	1.5	60.9		54.7		54.9	9	62.0	5	62.8
Heavy Trucks:	64	1.5	63.7		60.0		58.1	1	65.	7	66.0
Vehicle Noise:	70).7	69.7		67.5		64.2	2	71.	В	72.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 dl	BA	65 d	BA	(60 dBA	55	dBA
			Ldn:	69 148		320		689			
	CNEL:					73 158 341				734	

	FRWA-RD	-77-108 HIGH	WAI	NOISE	PREDIC		IODEL (5/12/2	021)		
Scenario:	OY Int WP		Project Name: FCSP & POCC								
Road Name:	Oak Glen R	d.				Job N	lumber:	15411			
Road Segment:	s/o Calimes	a Blvd.									
SITE SF	ECIFIC IN	PUT DATA				1	IOISE	NODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	26,061 vehicle	es					Autos:	15		
Peak Hour Pe	ercentage:	7.70%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Hou	r Volume:	2,007 vehicles	5		He	avy Tru	cks (3+)	Axles):	15		
Vehic	le Speed:	45 mph		1	/ehicle I	Nix					
Near/Far Lane	Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.55%
Barrie	er Heiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.48%
Barrier Type (0-Wall	, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist.	to Barrier:	52.0 feet			loise Sc	urco E	ovation	e (in fa	oot)		
Centerline Dist. to	Observer:	52.0 feet		-	10/30 00	Auto	c 0	000			
Barrier Distance to	Observer:	0.0 feet			Mediu	n Truck	s. 0. e [,] 2	207			
Observer Height (At	ove Pad):	5.0 feet			Heav	n Truck	з. 2. e [.] Я	004	Grade Ad	liustment	0.0
Pad	Elevation:	0.0 feet			near	y mach	3. 0.	004		,	. 0.0
Road	Elevation:	0.0 feet		L	ane Equ	uivalen	Distan	ce (in i	feet)		
Ro	ad Grade:	0.0%				Auto	s: 46.	400			
	Left View:	-90.0 degree	es		Mediui	m Truck	s: 46.	209			
F	light View:	90.0 degree	es		Heav	y Truck	s: 46.	228			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	ten Bei	rm Atten
Autos:	68.46	1.08		0.38	3	-1.20		-4.66	0.	000	0.00
Medium Trucks:	79.45	-17.12		0.41	1	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-18.92		0.41	I	-1.20		-5.41	0.	000	0.00
Unmitigated Noise L	evels (witho	out Topo and	barrie	er atteni	uation)						
VehicleType Le	eq Peak Hou	r Leq Day	r	Leg Ev	rening	Leq	Night		Ldn	С	NEL
Autos:	68.	.7	67.6		66.4		62.3	3	69.	9	70.4
Medium Trucks:	61.	.5	60.9		54.7		54.9	Э	62.	6	62.0
Heavy Trucks:	64.	.5	63.7		60.0		58.	1	65.	7	66.0
Vehicle Noise:	70.	.7	69.7		67.6		64.3	2	71.	8	72.3
Centerline Distance	to Noise Co	ntour (in feet)									
			L	70 a	IBA 🛛	65	dBA	6	60 dBA	55	dBA
			Ldn:		69		149		321		691
		~					450		0.40		700

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHW	AY NOIS	E PREDI	CTION MC	DEL (9/12	/2021)			
Scenario Road Name Road Segment	: 2050 NP : Oak Glen R : s/o Calimes	d. a Blvd.			Project N Job Nui	lame: FCS mber: 1541	P & POCC 11			
SITE S	PECIFIC IN	PUT DATA			NC	DISE MOD	DEL INPU	TS		-
Highway Data				Site Col	nditions (H	lard = 10,	Soft = 15)			
Average Daily T	raffic (Adt):	43,389 vehicles				Auto	is: 15			
Peak Hour F	Percentage:	7.70%		M	edium Truc	ks (2 Axles	s): 15			
Peak Ho	ur Volume:	3,341 vehicles		H	eavy Truck	s (3+ Axles	s): 15			
Veh	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	48 feet		Venicle	nicleTvpe	Dav	Evening	Ni	aht	Dailv
Site Data					AL	itos: 70.6	5% 13.6%	5 1	5.8%	97.53%
Barr	ier Heiaht:	0.0 feet		N	ledium Tru	cks: 80.3	3% 4.7%	5 1-	4.9%	1.49%
Barrier Type (0-Wa	II, 1-Berm):	0.0			Heavy Tru	cks: 75.9	9% 8.2%	5 1	5.9%	0.98%
Centerline Dist	to Barrier:	52.0 feet		Noise S	ource Elev	vations (in	feet)			
Centerline Dist. to	o Observer:	52.0 feet			Autos:	0.000	1000			-
Barrier Distance to	o Observer:	0.0 feet		Medii	im Trucks:	2 297				
Observer Height (A	bove Pad):	5.0 feet		Hea	vv Trucks:	8 004	Grade A	diust	ment	0.0
Pad	d Elevation:	0.0 feet			<i>i) indono.</i>	0.001		-,		
Road	d Elevation:	0.0 feet		Lane Eq	uivalent L	Distance (i	n feet)			
R	oad Grade:	0.0%			Autos:	46.400				
	Left View:	-90.0 degrees		Mediu	ım Trucks:	46.209				
	Right View:	90.0 degrees		Hea	vy Trucks:	46.228				
FHWA Noise Model	Calculations	;								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier A	tten	Berr	m Atten
Autos:	68.46	3.29	0	38	-1.20	-4.6	6 C	0.000		0.000
Medium Trucks:	79.45	-14.88	0	41	-1.20	-4.8	7 C	0.000		0.000
Heavy Trucks:	84.25	-16.68	0	41	-1.20	-5.4	1 0	0.000		0.000
Unmitigated Noise	Levels (witho	out Topo and b	arrier atte	nuation)						
VehicleType L	.eq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	Ldn		CN	VEL
Autos:	70.	9 6	9.8	68.6	6	64.5	72	2.1		72.6
Medium Trucks:	63.	.8 6	3.2	56.9)	57.1	64	.8		65.0
Heavy Trucks:	66.	8 6	5.9	62.3	3	60.4	68	3.0		68.3
Vehicle Noise:	72.	9 7	1.9	69.8	3	66.5	74	.1		74.
Centerline Distance	e to Noise Co	ntour (in feet)			T			-		
			70) dBA	65 dE	BA	60 dBA		55	dBA
		L	dn:	97		209	45	51		972
		CNI	EL:	104		223	48	31		1,036

	FHWA-RD	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION MC	DDEL (9/12/2	021)		
Scenar	io: 2050 WP					Project N	lame:	FCSP	& POCC		
Road Nan	ne: Oak Glen R	Rd.				Job Nu	mber:	15411			
Road Segme	nt: s/o Calimes	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				N	DISEN	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	44,119 vehicl	es					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 A	Axles):	15		
Peak H	lour Volume:	3,397 vehicle	в		He	avy Truck	(S (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo I	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	6 96.68%
Ba	rrier Height:	0.0 feet			Me	edium Tru	icks:	80.3%	4.7%	14.9%	6 1.61%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	75.9%	8.2%	15.9%	6 1.71%
Centerline Di	st. to Barrier:	52.0 feet		N	oise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	52.0 feet				Autos	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediui	n Trucks.	2.5	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks	8.0	004	Grade Ad	ljustmen	nt: 0.0
P	ad Elevation:	0.0 feet			_						
Ro	ad Elevation:	0.0 feet		L	ane Equ	uvalent l	Distanc	e (in i	reet)		
	Road Grade:	0.0%				Autos:	46.	400			
	Left View:	-90.0 degre	es		wealui	TTTUCKS.	40.	209			
	Right view:	90.0 degre	es		neav	y mucks.	40.	220			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	el	Barrier At	ten Be	erm Atten
Autos:	68.46	3.33		0.38		-1.20		-4.66	0.	000	0.000
Medium Trucks:	79.45	-14.45		0.41		-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-14.21		0.41		-1.20		-5.41	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	' L	eq Eve	ening	Leq N	light		Ldn	0	CNEL
Autos:	71	.0	69.8		68.7		64.5	5	72.	1	72.6
Medium Trucks:	64	.2	63.6		57.3		57.5	5	65.	2	65.4
Heavy Trucks:	69	.3	68.4		64.8		62.9)	70.	4	70.7
Vehicle Noise:	73	.7	72.7		70.4		67.3	3	74.	9	75.3
Centerline Distant	ce to Noise Co	ontour (in feet)	-			-				
				70 dl	BA	65 d	BA	6	60 dBA	5	5 dBA
			Ldn:		110		237		511	1	1,101
	CNEL:					117 252 543			3	1,170	

	FHWA-R	D-77-108 HIG	IWAY N	OISE F	PREDIC	TION MC	DEL (S	9/12/2	021)		
Scenar Road Nan Road Segme	rio: 2050 Int Ni ne: Oak Glen F ent: s/o Calime	P Rd. sa Blvd.				Project N Job Nui	lame: F mber: 1	CSP	& POCC		
SITE	SPECIFIC I	NPUT DATA				NC	DISE N	IODE		3	
Highway Data				Si	ite Con	ditions (H	lard =	10, Sc	oft = 15)	c	
Average Daily Peak Hour	Traffic (Adt): Percentage:	39,772 vehicl 7.70%	es		Ме	dium Truc) ks (2 A	Autos: (xles):	15 15		
Peak H	our Volume:	3,062 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		14	hiele	Mise					
Near/Far La	ne Distance:	48 feet		Ve	Veh	icle Type		Dav	Evening	Night	Daily
Site Data					ven	AL	itos:	70.6%	5 13.6%	15.8%	97.53%
Ba	rrier Height	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	52.0 feet		N	oise So	ource Elev	vations	s (in fe	eet)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad): ad Elevation:	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent L	Distanc	e (in i	feet)		
1.0	Road Grade:	0.0%				Autos:	46.4	400			
	Left View	-90.0 deare	es		Mediu	m Trucks:	46.3	209			
	Right View:	90.0 degre	es		Heav	y Trucks:	46.2	228			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	2.91		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks:	79.45	-15.26	5	0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-17.06	5	0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	70	0.6	69.4		68.3		64.1		71.7		72.2
Medium Trucks:	63	3.4	62.8		56.5		56.7		64.4		64.6
Heavy Trucks:	66	5.4	65.6		61.9		60.0		67.6	i	67.9
Vehicle Noise:	72	2.5	71.5		69.4		66.1		73.7		74.1
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dl	BA	6	50 dBA	55	dBA
		_	Ldn:		92		198		426		917
		C	NEL:		98		211		454		978

	FHWA-RD	-77-108 HIGH	WAY	NOISE F	PREDIC		ODEL (9/12/2	021)		
Scenario Road Name Road Segmen	o: 2050 Int WF e: Oak Glen R t: s/o Calimes	d. a Blvd.				Project Job N	Name: umber:	FCSP 15411	& POCC		
SITE S	PECIFIC IN	PUT DATA					OISE	IODE		s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)	-	
Average Daily 1 Peak Hour F Peak Ho Veh	Traffic (Adt): Percentage: our Volume: nicle Speed:	39,957 vehicle 7.70% 3,077 vehicle 45 mph	es s	V	Me He iehicle I	dium Tr avy Tru Mix	ucks (2) cks (3+)	Autos: Axles): Axles):	15 15 15		
Near/Far Lan	e Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.54
Bari	rier Height:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.48
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.98
Centerline Dis	t. to Barrier:	52.0 feet		N	oise So	urce El	evation	s (in fe	eet)		
Centerline Dist. to Barrier Distance to Observer Height (A Pa	o Observer: o Observer: \bove Pad): d Elevation:	52.0 feet 0.0 feet 5.0 feet			Mediui Heav	Auto n Truck ry Truck	s: 0. s: 2. s: 8.	000 297 004	Grade Ad	justment.	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	e (in	feet)		
R	oad Grade:	0.0%				Auto	s: 46.	400	,		
	Left View: Right View:	-90.0 degree 90.0 degree	es es		Mediui Heav	m Truck ry Truck	s: 46. s: 46.	209 228			
FHWA Noise Mode	I Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	el	Barrier Att	en Ber	m Atter
Autos:	68.46	2.94		0.38		-1.20		-4.66	0.0	000	0.0
Medium Trucks:	79.45	-15.26		0.41		-1.20		-4.87	0.0	000	0.0
Heavy Trucks:	84.25	-17.06		0.41		-1.20		-5.41	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and	barrie	er attenu	ation)						
VehicleType	Leq Peak Houi	r Leq Day	1	Leq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	70.	6	69.4		68.3		64.2	2	71.	В	72
Medium Trucks:	63.	4	62.8		56.5		56.7	,	64.4	4	64
Heavy Trucks:	66.	4	65.6		61.9		60.0)	67.	6	67
Vehicle Noise:	72.	5	71.5		69.4		66.1		73.	7	74
Centerline Distance	e to Noise Co	ntour (in feet,)								
			L	70 dl	ВA	65	аВА	6	ou dBA	55	aBA
		0	Ldn:		92		198		427		91
		Ci	VEL.		98		211		455		980

Thursday, August 17, 2023

	FHWA-RI	0-77-108 HIGHW	AY NOIS	e predio	CTION MO	DEL (9/12	2/2021)		
Scenar Road Nam Road Segmei	<i>io:</i> E ne: Oak Glen F nt: n/o Calimes	₹d. sa Blvd.			Project N Job Nur	ame: FCS nber: 154	8P & POCC 11		
SITE	SPECIFIC IN	IPUT DATA			NO	ISE MO	DEL INPUT	S	
Highway Data				Site Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	16,380 vehicles 7.70%		Ме	dium Truc	Auto ks (2 Axle	os: 15 s): 15		
Peak H	lour Volume:	1.261 vehicles		He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	45 mph		Vehiele	Mise	-			
Near/Far La	ne Distance:	48 feet		Venicle	icleType	Dai	/ Evenina	Night	Daily
Site Data					Au	tos: 70.	6% 13.6%	15.8%	97.53%
Pa	rrior Hoight:	0.0 foot		М	edium Tru	cks: 80.	3% 4.7%	14.9%	6 1.49%
Barrier Type (0-W	/all 1-Berm)	0.0			Heavy Tru	cks: 75.	9% 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		Noine O			- f 4)		
Centerline Dist.	to Observer:	52.0 feet		NOISe 30	Autoo:		i ieel)		
Barrier Distance	to Observer:	0.0 feet		Madiu	Autos.	0.000			
Observer Height ((Above Pad):	5.0 feet		Weulu	III Trucks.	2.297	Grade Ac	liustmon	+ 0.0
Pa	ad Elevation:	0.0 feet		пеа	y mucks.	0.004	Grade Ad	jusunem	2. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in feet)		
1	Road Grade:	0.0%			Autos:	46.400			
	Left View:	-90.0 degrees		Mediu	m Trucks:	46.209			
	Right View:	90.0 degrees		Hear	vy Trucks:	46.228			
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Be	rm Atten
Autos:	68.46	-0.94	0.	38	-1.20	-4.6	66 0.	000	0.00
Medium Trucks:	79.45	-19.11	0	41	-1.20	-4.8	37 0.	000	0.00
Heavy Trucks:	84.25	-20.91	0.	41	-1.20	-5.4	41 0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and ba	arrier atte	nuation)					
VehicleType	Leq Peak Hou	ır Leq Day	Leq I	Evening	Leq Ni	ght	Ldn	С	NEL
Autos:	66	.7 65	5.5	64.4		60.3	67.	9	68.
Medium Trucks:	59	.6 58	3.9	52.7		52.9	60.	6	60.
Heavy Trucks:	62	.6 61	1.7	58.1		56.2	63.	7	64.
Vehicle Noise:	68	.7 67	7.7	65.5		62.2	69.	8	70.3
Centerline Distant	ce to Noise Co	ontour (in feet)							
			70	dBA	65 dE	BA	60 dBA	55	5 dBA
		Lo	dn:	51		109	236	3	508
		CNE	EL:	54		117	251	1	541

	FHWA-RD	-77-108 HIGHW	AY NOIS	E PREDIO	CTION MC	DEL (9/	12/202	21)		
Scenar	io: OY NP				Project N	lame: F0	CSP &	POCC		
Road Nam	e: Oak Glen R	d.			Job Nu	mber: 15	5411			
Road Segme	nt: n/o Calimes	a Blvd.								
SITE	SPECIFIC IN	PUT DATA			NC	DISE M	ODEL	INPUTS	5	
Highway Data				Site Cor	nditions (H	lard = 1	0, Sof	ťt = 15)		
Average Daily	Traffic (Adt):	18,510 vehicles				A	utos:	15		
Peak Hour	Percentage:	7.70%		Me	edium Truc	ks (2 Ax	(les):	15		
Peak H	lour Volume:	1,425 vehicles		He	eavy Truck	s (3+ Ax	(les):	15		
Ve	hicle Speed:	45 mph		Vohiclo	Mix					
Near/Far La	ne Distance:	48 feet		Venicle	nicleType	D	av	Evenina	Niaht	Daily
Site Data					AL	itos: 7	0.6%	13.6%	15.8%	97.53%
Ba	rrier Height	0.0 feet		M	ledium Tru	cks: 8	0.3%	4.7%	14.9%	1.49%
Barrier Tune (0 M	(all 1 Berm):	0.0 1001			Heavy Tru	cks: 7	5.9%	8.2%	15.9%	0.98%
Centerline Di	st to Barrier	52.0 feet								
Centerline Dist	to Observer:	52.0 feet		Noise S	ource Ele	vations	(in fee	et)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.00	00			
Observer Height	(Above Pad):	5.0 feet		Mediu	im Trucks:	2.25	97	Our de Adi		
P	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.00)4 (Grade Adju	Istment	. 0.0
Roi	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance	e (in fe	eet)		-
	Road Grade:	0.0%			Autos:	46.40	00			
	Left View:	-90.0 degrees		Mediu	im Trucks:	46.20	09			
	Right View:	90.0 degrees		Hea	vy Trucks:	46.22	28			
FHWA Noise Mode	el Calculations	;		1						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	1 E	Barrier Atte	n Ber	m Atten
Autos:	68.46	-0.41	0	.38	-1.20	-4	4.66	0.0	00	0.000
Medium Trucks:	79.45	-18.58	0	.41	-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-20.38	0	.41	-1.20	-{	5.41	0.0	00	0.000
Unmitigated Noise	e Levels (witho	out Topo and ba	nrier atte	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	1	Ldn	C	NEL
Autos:	67	.2 66	i.1	64.9)	60.8		68.4		68.9
Medium Trucks:	60	.1 59	1.5	53.2	2	53.4		61.1		61.3
Heavy Trucks:	63	.1 62	.2	58.6	3	56.7		64.3		64.6
Vehicle Noise:	69	.2 68	.2	66.1		62.8		70.4		70.8
Centerline Distant	ce to Noise Co	ntour (in feet)								-
			7	0 dBA	65 dl	BA	60) dBA	55	dBA
		La	in:	55		119		256		551
		CNE	L:	59		126		272		587

	FHWA-RI	D-77-108 HIGH	IWAY N	IOISE F	PREDIC	TION MO	ODEL (S	9/12/2	021)		
Scena	rio: OY WP					Project I	Name: I	CSP	& POCC		
Road Nar	ne: Oak Glen F	Rd.				Job Nu	imber: `	15411			
Road Segme	ent: n/o Calime	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISEN	IODE	L INPUTS	3	
Highway Data				Si	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	18,811 vehicl	es					Autos:	15		
Peak Hou	Percentage:	7.70%			Me	dium Tru	cks (2 A	(xles)	15		
Peak I	Hour Volume:	1,448 vehicle	s		He	avy Truc	ks (3+ A	(xles	15		
Ve	ehicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ane Distance:	48 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	5 13.6%	15.8%	97.57%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	ucks:	80.3%	4.7%	14.9%	1.46%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	ucks:	75.9%	8.2%	15.9%	0.97%
Centerline D	ist. to Barrier:	52.0 feet		N	oise So	ource Ele	vations	s (in fe	eet)		
Centerline Dist.	to Observer:	52.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.3	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Adj	ustment	: 0.0
F	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		Li	ane Equ	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 46.	400			
	Left View:	-90.0 degre	es		Mediur	m Trucks	: 46.	209			
	Right View:	90.0 degre	es		Heav	ry Trucks	: 46.	228			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos	68.46	-0.34		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks	79.45	-18.58		0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks	84.25	-20.38		0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	/ 1	Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	67	7.3	66.1		65.0		60.9)	68.5	i	69.0
Medium Trucks:	60	0.1	59.5		53.2		53.4	Ļ	61.1		61.3
Heavy Trucks	63	3.1	62.2		58.6		56.7	·	64.3	ļ	64.6
Vehicle Noise:	69	9.3	68.2		66.1		62.8	5	70.4	ļ	70.8
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dE	BA	65 d	IBA		60 dBA	55	dBA
			Ldn:		55		120		257		555
		С	NEL:		59		127		274		591

	FHWA-RL	9-77-108 HIGH	WAI	NOISE	PREDIC		IODEL (9/12/2	021)		
Scenario:	OY Int NP					Project	Name:	FCSP	& POCC		
Road Name:	Oak Glen R	d.				Job N	lumber:	15411			
Road Segment:	n/o Calimes	a Blvd.									
SITE SI	PECIFIC IN	PUT DATA				N	IOISE I	NODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Tr	affic (Adt):	17,613 vehicle	es					Autos:	15		
Peak Hour P	ercentage:	7.70%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Hou	ır Volume:	1,356 vehicles	5		He	avy Tru	cks (3+)	Axles):	15		
Vehi	cle Speed:	45 mph		1	/ehicle I	Nix					
Near/Far Lane	Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53%
Barri	er Heiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wal	l, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist.	to Barrier:	52.0 feet			loise Sc	urce Fl	evation	s (in f	ef)		
Centerline Dist. to	Observer:	52.0 feet				Auto	s' 0	000			
Barrier Distance to	Observer:	0.0 feet			Mediu	n Truck	s. 0. s [.] 2	297			
Observer Height (Al	bove Pad):	5.0 feet			Heav	v Truck	s: 8.	004	Grade Ad	ljustment	: 0.0
Pad	Elevation:	0.0 feet		_							
Road	Elevation:	0.0 feet		1	ane Equ	uivalent	Distan	ce (in i	feet)		
Ro	ad Grade:	0.0%				Auto	s: 46.	400			
_	Left View:	-90.0 degree	es		Mediui	m Truck	s: 46.	209			
F	Right View:	90.0 degree	es		Heav	у т гиск	S.' 46.	228			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	ten Bei	rm Atten
Autos:	68.46	-0.62		0.38	3	-1.20		-4.66	0.	000	0.00
Medium Trucks:	79.45	-18.79		0.41	1	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-20.59		0.41	I	-1.20		-5.41	0.	000	0.00
Unmitigated Noise L	evels (with	out Topo and	barrie	er atten	uation)						
VehicleType L	eq Peak Hou	r Leq Day	r -	Leq Ev	rening	Leq	Night		Ldn	С	NEL
Autos:	67	.0	65.9		64.7		60.6	3	68.	2	68.
Medium Trucks:	59	.9	59.3		53.0		53.2	2	60.	9	61.
Heavy Trucks:	62	.9	62.0		58.4		56.	5	64.	1	64.4
Vehicle Noise:	69	.0	68.0		65.9		62.6	3	70.	2	70.0
Centerline Distance	to Noise Co	ntour (in feet))								
			Ι	70 a	IBA	65	dBA	e	60 dBA	55	dBA
			Ldn:		53		115		247	,	533
		~					400		26/		500

Thursday, August 17, 2023

	FHWA-RD	0-77-108 HIGHW	AY NOISE	E PREDIO	CTION MC	DEL (9/1	2/2021)			
Scenar Road Nam Road Segmei	io: OY Int WP ne: Oak Glen R nt: n/o Calimes	td. sa Blvd.			Project N Job Nui	lame: FC mber: 15	SP & POC 411	C		
SITE	SPECIFIC IN	PUT DATA			NC	DISE MO	DEL INP	UTS		
Highway Data				Site Con	ditions (H	lard = 10	, Soft = 1	5)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	17,631 vehicles 7.70%		Ме	dium Truc	Au ks (2 Axl:	tos: 15 es): 15			
Peak H	lour Volume:	1,358 vehicles		He	avy Truck	s (3+ Axl	es): 15			
Ve	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		Veh	icleType	Da	ay Even	ing N	ight	Daily
Site Data					AL	itos: 70	.6% 13.	6% 1	5.8%	97.53%
Ba	rrier Height:	0.0 feet		М	edium Tru	<i>cks:</i> 80	0.3% 4.	7% 1	4.9%	1.48%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Tru	cks: 75	i.9% 8.	2% 1	5.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		Noise Se	ource Elev	vations (in feet)			
Centerline Dist.	to Observer:	52.0 feet			Autos'	0.00	0			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2 29	7			
Observer Height ((Above Pad):	5.0 feet		Hear	vy Trucks:	8.00	, 4 Grade	e Adjust	ment:	0.0
Pa	ad Elevation:	0.0 feet								
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance	(in feet)			
1	Road Grade:	0.0%			Autos:	46.40	0			
	Left View:	-90.0 degrees		Mediu	m Trucks:	46.20	9			
	Right View:	90.0 degrees		Hear	vy Trucks:	46.22	8			
FHWA Noise Mode	el Calculation:	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrie	r Atten	Berr	n Atten
Autos:	68.46	-0.62	0.3	38	-1.20	-4	.66	0.000		0.000
Medium Trucks:	79.45	-18.79	0.4	41	-1.20	-4	.87	0.000		0.000
Heavy Trucks:	84.25	-20.59	0.4	11	-1.20	-5	.41	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and ba	arrier attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leg E	evning	Leq N	ight	Ldn		C٨	IEL
Autos:	67	.0 65	5.9	64.7		60.6		68.2		68.
Medium Trucks:	59	.9 59	9.3	53.0		53.2		60.9		61.
Heavy Trucks:	62	.9 62	2.0	58.4		56.5		64.1		64.4
Vehicle Noise:	69	.0 68	3.0	65.9		62.6		70.2		70.6
Centerline Distant	ce to Noise Co	ntour (in feet)								
			70	dBA	65 dl	BA	60 dBA		55 (dBA
		Lo	dn:	53		115		247		533
		CNE	=L.:	57		122		264		568

	FHWA-RD	-77-108 HIGHWA	AY NOIS	E PREDIC	TION MO	DEL (9/1:	2/2021)		
Scenar Road Nam Road Segme	io: 2050 NP ne: Oak Glen R nt: n/o Calimes	d. a Blvd.			Project N Job Nui	lame: FC: mber: 154	SP & POCC		
SITE	SPECIFIC IN	PUT DATA			NC	DISE MO	DEL INPUT	S	
Highway Data				Site Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	22,695 vehicles				Aut	os: 15		
Peak Hour	Percentage:	7.70%		Me	dium Truc	ks (2 Axle	es): 15		
Peak H	lour Volume:	1,747 vehicles		He	avy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	45 mph		Vehicle	Niv				
Near/Far La	ne Distance:	48 feet		Venicle I	icleTvpe	Da	v Evenina	Niaht	Daily
Site Data					Au	itos: 70.	.6% 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet		Me	edium Tru	cks: 80	.3% 4.7%	14.9%	1.49%
Barrier Type (0-W	(all, 1-Berm):	0.0		ŀ	leavy Tru	cks: 75	.9% 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		Noise So	ource Elev	vations (i	n feet)		
Centerline Dist.	to Observer:	52.0 feet			Autos:	0 000	1		
Barrier Distance	to Observer:	0.0 feet		Mediu	n Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.004	Grade Ad	iustment	: 0.0
Pi	ad Elevation:	0.0 feet						·	
Roi	ad Elevation:	0.0 feet		Lane Equ	uivalent E	Distance ('in feet)		
	Road Grade:	0.0%			Autos:	46.400)		
	Left View:	-90.0 degrees		Mediui	m Trucks:	46.209)		
	Right View:	90.0 degrees		Heav	y Trucks:	46.228	5		
FHWA Noise Mode	el Calculations	5							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.48	0.	38	-1.20	-4.	66 0.0	000	0.000
Medium Trucks:	79.45	-17.69	0.	41	-1.20	-4.	87 0.0	000	0.000
Heavy Trucks:	84.25	-19.49	0.	41	-1.20	-5.	41 0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and bai	rrier atte	nuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	Ldn	C	VEL
Autos:	68	.1 67.	0	65.8		61.7	69.3	3	69.8
Medium Trucks:	61	.0 60.	4	54.1		54.3	62.	D	62.2
Heavy Trucks:	64	.0 63.	1	59.5		57.6	65.	2	65.5
Vehicle Noise:	70	.1 69.	1	67.0		63.7	71.3	3	71.7
Centerline Distant	ce to Noise Co	ntour (in feet)					-		-
			70) dBA	65 dE	BA	60 dBA	55	dBA
		Ldi	1:	63		136	293		631
		CNEL		67		145	312	2	673

	FHWA-R	D-77-108 HIG	IWAY	NOISE	PREDIC	TION MC	DEL (9	/12/20)21)		
Scenar	<i>io:</i> 2050 WP					Project N	<i>lame:</i> F	CSP	& POCC		
Road Nan	ne: Oak Glen I	Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: n/o Calime	sa Bivo.									
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	IODE	L INPUTS	6	
Highway Data				S	ite Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	22,995 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	lour Volume:	1,771 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	1	Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.56%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.47%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.97%
Centerline Di	ist. to Barrier:	52.0 feet		N	loise So	ource Ele	vations	in fe	et)		
Centerline Dist.	to Observer:	52.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	vy Trucks:	8.0	004	Grade Adj	ustment.	0.0
P	ad Elevation:	0.0 feet						- 6- 4	41		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivaient L	Jistanc	e (in i	eet)		
	Road Grade:	0.0%				Autos:	46.4	100			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	46.2	209			
	Right View:	90.0 degre	es		Heav	y Trucks:	46.2	228			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	0.54		0.38		-1.20		-4.66	0.0	00	0.000
Medium Trucks:	79.45	-17.69)	0.41		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-19.49)	0.41		-1.20		-5.41	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	ening	Leq N	light		Ldn	CI	NEL
Autos:	68	3.2	67.0		65.9		61.8		69.4		69.9
Medium Trucks:	61	1.0	60.4		54.1		54.3		62.0		62.2
Heavy Trucks:	64	4.0	63.1		59.5		57.6		65.2		65.5
Vehicle Noise:	70	0.1	69.1		67.0		63.7		71.3		71.7
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 di	BA	6	0 dBA	55	dBA
		_	Ldn:		63		137		295		635
		C	NEL:		68		146		314		676

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC		IODEL (S	/12/2	021)		
Scenario: Road Name:	2050 Int NF Oak Glen F	td.				Project Job N	Name: F lumber: 1	CSP 5411	& POCC		
Road Segment:	n/o Calimes	sa Blvd.									
SITE SP	ECIFIC IN	IPUT DATA				1	IOISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tra	ffic (Adt):	24,112 vehicle	es					Autos:	15		
Peak Hour Pe	rcentage:	7.70%			Mee	dium Tr	ucks (2 A	xles):	15		
Peak Hour	Volume:	1,857 vehicle	s		Hea	avy Tru	cks (3+ A	xles):	15		
Vehicl	e Speed:	45 mph		V	ehicle N	lix					
Near/Far Lane	Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53%
Barrie	r Heiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wall,	1-Berm):	0.0			H	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist. t	o Barrier:	52.0 feet		A	loise So		ovations	(in f	of		
Centerline Dist. to (Observer:	52.0 feet		~	0136 30	Auto		00	ey		
Barrier Distance to 0	Observer:	0.0 feet			Modiur	Aulo n Truck	s. 0.0	00			
Observer Height (Ab	ove Pad):	5.0 feet			Heav	v Truck	o. 2.2 e 80	04	Grade Ad	iustment	0.0
Pad E	Elevation:	0.0 feet			neav	y much	3. 0.0	-0-		,	0.0
Road E	Elevation:	0.0 feet		L	ane Equ	iivalen	Distanc	e (in i	feet)		
Roa	d Grade:	0.0%				Auto	s: 46.4	100			
L	.eft View:	-90.0 degree	es		Mediur	n Truck	s: 46.2	209			
Ri	ght View:	90.0 degree	es		Heav	y Truck	s: 46.2	228			
FHWA Noise Model C	alculation	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	0.74		0.38		-1.20		4.66	0.0	000	0.00
Medium Trucks:	79.45	-17.43		0.41		-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-19.23		0.41		-1.20		-5.41	0.0	000	0.00
Unmitigated Noise Le	evels (with	out Topo and	barri	er attenu	uation)						
VehicleType Le	q Peak Hou	r Leq Day	<i>'</i>	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	68	.4	67.2		66.1		62.0		69.	6	70.
Medium Trucks:	61	.2	60.6		54.4		54.6		62.3	3	62.
Heavy Trucks:	64	.2	63.4		59.7		57.8		65.4	4	65.
Vehicle Noise:	70	.4	69.3		67.2		63.9		71.	5	71.
Centerline Distance t	o Noise Co	ontour (in feet,)	70 /			-10.4		0 -10 4		-/0.4
			1 day	70 a.	BA	65	aBA 440		DU BBA	55	abA 053
		0	LUN:		55		142		305		657
		0	VLL.		70		151		320		700

Thursday, August 17, 2023

	FHWA-R	0-77-108 HIGHV	VAY NOIS	SE PREDIO	TION MOD	EL (9/12/	2021)		
Scenar	io: 2050 Int W	Р			Project Na	ne: FCSF	P & POCC		
Road Nan	ne: Oak Glen F	Rd.			Job Numl	ber: 1541	1		
Road Segme	nt: n/o Calimes	sa Blvd.							
SITE	SPECIFIC IN	IPUT DATA			NOI	SE MOD	EL INPUT	s	
Highway Data				Site Cor	ditions (Ha	rd = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	24,130 vehicles	5			Autos	s: 15		
Peak Hour	Percentage:	7.70%		Me	dium Trucks	(2 Axles): 15		
Peak H	lour Volume:	1,858 vehicles		He	avy Trucks	(3+ Axles): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	48 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data					Auto	s: 70.6	% 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet		M	edium Truck	s: 80.3	% 4.7%	14.9%	1.48%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Truck	s: 75.9	% 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	52.0 feet		Noise S	ource Fleva	tions (in	foot)		
Centerline Dist.	to Observer:	52.0 feet		110/30 0	Autos:	0.000	1000		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2 297			
Observer Height	(Above Pad):	5.0 feet		Hea	v Trucks	8 004	Grade Ad	iustment	t: 0.0
P	ad Elevation:	0.0 feet			,				
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Dis	tance (in	n feet)		
	Road Grade:	0.0%			Autos:	46.400			
	Left View:	-90.0 degrees	5	Mediu	m Trucks:	46.209			
	Right View:	90.0 degrees	5	Hea	vy Trucks:	46.228			
FHWA Noise Mod	el Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road F	resnel	Barrier Att	en Bei	rm Atten
Autos:	68.46	0.74	0	0.38	-1.20	-4.66	5 0.0	000	0.000
Medium Trucks:	79.45	-17.43	0).41	-1.20	-4.87	7 0.0	000	0.000
Heavy Trucks:	84.25	-19.23	C).41	-1.20	-5.41	1 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	enuation)					
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq Nigi	nt	Ldn	С	NEL
Autos:	68	.4 6	7.2	66.1		62.0	69.6	3	70.
Medium Trucks:	61	.2 6	0.6	54.4		54.6	62.3	3	62.4
Heavy Trucks:	64	.2 6	3.4	59.7		57.8	65.4	1	65.
Vehicle Noise:	70	.4 6	9.3	67.2		63.9	71.8	5	71.9
Centerline Distant	ce to Noise Co	ontour (in feet)							
			7	0 dBA	65 dBA		60 dBA	55	dBA
		L	dn:	66		142	305		657
		CN	EL:	70		151	325		700

	FHWA-RD	77-108 HIGHWA	Y NOIS			DEL (9/1	12/2021)			
Scenar Road Nan	io: E ne: Colorado St.				Project N Job Nur	lame: FC nber: 15	CSP & POCC 411	;		
Road Segme	nt: e/o ath St.									
SITE	SPECIFIC INI	PUT DATA		0.44	NC	DISE MO	DDEL INPU	TS		
Highway Data				Site Con	aitions (F	iara = 10), Soft = 15)			
Average Daily	Traffic (Adt):	1,790 vehicles				Au	itos: 15			
Peak Hour	Percentage:	7.70%		Me	dium Truc	ks (2 Ax	les): 15			
Peak F	lour Volume:	138 vehicles		не	avy Truck	s (3+ AX	les): 15			
Ve	hicle Speed:	40 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	12 feet		Veh	icleType	Di	ay Evenin	g Nig	ght L	Daily
Site Data					Au	tos: 70	0.6% 13.69	% 15	5.8% 9	7.53%
Ba	rrier Height:	0.0 feet		M	edium Tru	cks: 80	0.3% 4.79	% 14	1.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Tru	cks: 75	5.9% 8.29	% 15	5.9%	0.98%
Centerline Di	st. to Barrier:	33.0 feet		Noise So	ource Elev	ations (in feet)			-
Centerline Dist.	to Observer:	33.0 feet			Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet		Heav	y Trucks:	8.00	4 Grade	Adjustr	nent: 0	.0
P.	ad Elevation:	0.0 feet		Long Fr	uivelent F	Viotonoo	(in feet)			
Ro	ad Elevation:	0.0 feet		Lane Eq	Autoo:	nstance 22.02	(III leel)			
	Road Grade:	0.0%		Modiu	Autos. m Trucks:	32.03	13 19			
	Right View:	90.0 degrees		Heav	v Trucks:	32.58	12			
	right fion.	30.0 dogrooo			,		-			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow L	Distance	Finite	Road	Fresnel	Barrier /	Atten	Berm	Atten
Autos: Madium Truaka	77.70	-10.04	2.	64 60	-1.20	-4	.52	0.000		0.000
Medium Trucks:	11.12	-28.21	2.	69 60	-1.20	-4	.00	0.000		0.000
neavy mucks.	62.99	-30.01	Ζ.	09	-1.20	-0		0.000		0.000
Unmitigated Nois	e Levels (witho	ut Topo and bar	rier atte	nuation)	1 1	and and	l da		01/5	7
venicie i ype	Leq Peak Hour	Leq Day	Leq	Evening	Leq N	Ignt E1 E	Lan	0.1	CIVE	L E0.6
Autos. Madium Truaka	57.3	5 50.	4	33.0		31.5	5	9.1		59.0
Heavy Trucks	51.	5 524	*	44.1 50.0		44.3	5	2.0 5.7		56.0
Vehicle Noise:	54. 60.1	5 55.0 1 59.1	1	56.9		53.7	6	1.3		61.7
Contorlino Distan	no to Noiso Co	tour (in foot)		20.0			0			
Centenine Distant	Le lo Noise Col	nour (in reel)	70	dBA	65 dF	BA	60 dBA		55 dE	A
		Ldn			00 02	19		40	25 00	86
		CNEL	:	9		20		43		92
				-				-		

	FHWA-R	D-77-108 HIG	HWAY	NOISE	PREDIC	TION M	ODEL (S	9/12/2	021)		
Scena	rio: OY NP			Project	Name: I	CSP	& POCC				
Road Nar	ne: Colorado S	St.				Job Ni	umber:	15411			
Road Segme	ent: e/o 8th St.										
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				5	Site Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	1,875 vehic	les				,	Autos:	15		
Peak Hou	r Percentage:	7.70%			Me	dium Tru	icks (2 A	(xles	15		
Peak I	Hour Volume:	144 vehicle	es		He	avy Truc	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	40 mph		1	Vehicle I	Mix				-	
Near/Far La	ane Distance:	12 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data				-		A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			M	edium Tri	ucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			F	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	33.0 feet		7	Noise Sc	ource Ele	evations	s (in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet		_		Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.1	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Adj	ustment	0.0
F	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distanc	e (in	teet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediui	m Trucks	: 32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	: 32.	589			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	-9.84	1	2.64	4	-1.20		-4.52	0.0	00	0.000
Medium Trucks:	77.72	-28.0	1	2.69	9	-1.20		-4.86	0.0	00	0.000
Heavy Trucks	82.99	-29.8	1	2.69	9	-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leg Ev	vening	Leq I	Vight		Ldn	CI	NEL
Autos:	58	3.1	56.9		55.8		51.7	,	59.3	ł	59.8
Medium Trucks:	5	1.2	50.6		44.3		44.5	5	52.2	2	52.4
Heavy Trucks	54	4.7	53.8		50.2		48.3	1	55.9)	56.2
Vehicle Noise:	60	0.3	59.3		57.1		53.9)	61.5	,	61.9
Centerline Distan	ce to Noise C	ontour (in fee	t)					r			
				70 c	dBA	65 a	1BA	(60 dBA	55	dBA
			Ldn:		9		19		41		89
		C	NEL:		9		20		44		95

	FRWA-KL	-//-106 HIGH	IVVAT	NUISE	PREDIC		IODEL	9/12/2	021)		
Scenario	: OY WP					Projec	t Name:	FCSP	& POCC		
Road Name	e: Colorado Si	t.				Job I	lumber:	15411			
Road Segmen	t: e/o 8th St.										
SITE S	PECIFIC IN	PUT DATA				I	OISE	MODE	L INPUT	S	
Highway Data				4	Site Con	ditions	(Hard =	: 10, So	oft = 15)		
Average Daily 7	raffic (Adt):	1,909 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Ti	ucks (2	Axles):	15		
Peak Ho	our Volume:	147 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Veh	icle Speed:	40 mph		1	Vehicle I	Nix					
Near/Far Lan	e Distance:	12 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.58%
Bar	rier Heiaht [.]	0.0 feet			Me	edium 1	rucks:	80.3%	4.7%	14.9%	1.46%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy 1	rucks:	75.9%	8.2%	15.9%	0.96%
Centerline Dis	t. to Barrier:	33.0 feet		7	Noise Sc	ource E	levatior	s (in fe	eet)		
Centerline Dist. t	o Observer:	33.0 feet		-		Auto	us' 0	000			
Barrier Distance to	o Observer:	0.0 feet			Mediu	n Truck	(s: 2	297			
Observer Height (A	Above Pad):	5.0 feet			Heav	v Truck	s: 8	004	Grade Ad	ljustment	: 0.0
Pa	d Elevation:	0.0 feet		L.							
Roa	d Elevation:	0.0 feet		4	Lane Equ	uvalen	t Distan	ce (in i	reet)		
R	load Grade:	0.0%				Auto	s: 32	.833			
	Left View:	-90.0 degre	es		Mediui	n Truck	s: 32	.562			
	Right View:	90.0 degre	es		Heav	y Truck	s: 32	.589			
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	ten Ber	m Atten
Autos:	66.51	-9.76		2.6	4	-1.20		-4.52	0.	000	0.00
Medium Trucks:	77.72	-28.01		2.6	9	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	82.99	-29.81		2.6	9	-1.20		-5.69	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leg E	vening	Leq	Night		Ldn	C	NEL
Autos:	58	.2	57.0		55.9		51.	8	59.	4	59.9
Medium Trucks:	51	.2	50.6		44.3		44.	5	52.	2	52.4
Heavy Trucks:	54	.7	53.8		50.2		48.	3	55.	9	56.2
Vehicle Noise:	60	.3	59.3		57.2		53.	9	61.	5	61.9
Centerline Distance	e to Noise Co	ntour (in feet)								
				70 0	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		9		19)	42	2	90
		С	NEL		10		2.		44	1	95

Thursday, August 17, 2023

	FHWA-RI	D-77-108 HIGHW	AY NOIS	E PREDIO	CTION M	IODEL (9	9/12/2	021)		
Scena	rio: OY Int NP				Project	Name: I	-CSP	& POCC		
Road Nar	ne: Colorado S	t.			Job N	umber:	15411			
Road Segme	ent: e/o 8th St.									
SITE	SPECIFIC IN	IPUT DATA			N	IOISE N	IODE		5	
Highway Data				Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1,875 vehicles				,	Autos:	15		
Peak Hou	r Percentage:	7.70%		Me	edium Tr	ucks (2 A	(xles)	15		
Peak I	Hour Volume:	144 vehicles		He	eavy Tru	cks (3+ A	(xles	15		
V	ehicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ane Distance:	12 feet		Veh	nicleType		Day	Evening	Night	Daily
Site Data						Autos:	70.6%	13.6%	15.8%	97.53%
Bé	arrier Height:	0.0 feet		М	ledium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	33.0 feet		Noico S	ourco El	ovation	in f	ootl		
Centerline Dist	to Observer:	33.0 feet		140136 3	Auto	evalion:		eey		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck	e 2'	207			
Observer Height	(Above Pad):	5.0 feet		Hea	vv Truck	s 2.1 s 81	104	Grade Adi	iustment	t: 0.0
F	Pad Elevation:	0.0 feet			,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0. 0.1		,		
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%			Auto	s: 32.	833			
	Left View:	-90.0 degrees		Mediu	m Truck	s: 32.	562			
	Right View:	90.0 degrees		Hea	vy Truck	s: 32.	589			
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el 🛛	Barrier Atte	en Ber	rm Atten
Autos	66.51	-9.84	2.	64	-1.20		-4.52	0.0	000	0.00
Medium Trucks	77.72	-28.01	2.	69	-1.20		-4.86	0.0	000	0.00
Heavy Trucks	82.99	-29.81	2.	69	-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	nuation)						
VehicleType	Leq Peak Hou	Ir Leq Day	Leg	Evening	Leq	Night		Ldn	С	NEL
Autos	58	3.1 5	6.9	55.8		51.7	,	59.3	3	59.8
Medium Trucks	51	.2 5	0.6	44.3		44.5	5	52.2	2	52.4
Heavy Trucks	54	.7 5	3.8	50.2		48.3	5	55.9	ł	56.2
Vehicle Noise	60	0.3 5	9.3	57.1		53.9)	61.5	;	61.9
Centerline Distan	ce to Noise Co	ontour (in feet)								-
-			70) dBA	65	dBA	6	60 dBA	55	i dBA
		L	dn:	9		19		41		89
		CNI	EL:	9		20		44		95

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC		IODEL (9	/12/2	021)		
Scenar	io: OY Int WP					Project	Name: F	CSP	& POCC		
Road Nan Road Segme	ne: Colorado St nt: e/o 8th St.					JOD N	umper: 1	9411			
SITE	SPECIFIC IN	PUT DATA				N	IOISE M	ODE		S	
Highway Data					Site Con	ditions	(Hard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1,885 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	lour Volume:	145 vehicles	5		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		-	Vehicle I	Mix					
Near/Far La	nne Distance:	12 feet		-	Veh	icleType	e [Day	Evening	Night	Daily
Site Data						,	Autos: 7	70.6%	13.6%	15.8%	97.54%
Ba	rrier Height:	0.0 feet			M	edium T	rucks: 8	30.3%	4.7%	14.9%	1.48%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy T	rucks: 7	75.9%	8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	33.0 feet		t,	Noise Sc	ource El	evations	(in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet		F		Auto	s: 0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	y Truck	s: 8.0	04	Grade Adj	iustment	t: 0.0
Pi	ad Elevation:	0.0 feet		F			Died	- /	(4)		
Ro	ad Elevation:	0.0 feet		ļ.	∟ane Eq	uivalent	Distance	e (in 1	reet)		
	Road Grade:	0.0%			M!!	Auto	s: 32.8	33 60			
	Lett View:	-90.0 degree	es		Mediu	m Iruck	s: 32.5	02 90			
	Right View:	90.0 degree	es		Heav	y iruck	s. 32.5	99			
FHWA Noise Mode	el Calculations	1									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	2	Barrier Atte	en Bei	rm Atten
Autos:	66.51	-9.82		2.6	i4	-1.20	-	4.52	0.0	000	0.000
Medium Trucks:	77.72	-28.01		2.6	9	-1.20	-	4.86	0.0	000	0.000
Heavy Trucks:	82.99	-29.81		2.6	9	-1.20	-	5.69	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hour	r Leq Day	-	Leq E	vening	Leq	Night		Ldn	C C	NEL
Autos:	58.	1	57.0		55.8		51.7		59.3	3	59.8
Medium Trucks:	51.	2	50.6		44.3		44.5		52.2	<u> </u>	52.4
Heavy Trucks:	54.	/	53.8		50.2		48.3		55.9	9 -	56.2
Vehicle Noise:	60.	3	59.3		57.1		53.9		61.5)	61.9
Centerline Distant	ce to Noise Co	ntour (in feet)								_	
			L	70	dBA	65	dBA	6	60 dBA	55	i dBA
		_	Ldn:		9		19		41		89
		CI	NEL:		9		20		44		95

	FHWA-R	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION MO	ODEL (9/12/2	021)		
Scena	rio: 2050 NP					Project I	Name:	FCSP	& POCC		
Road Nar	ne: Colorado S	it.				Job Nu	imber:	15411			
Road Segme	ent: e/o 8th St.										
SITE	SPECIFIC II	IPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions (Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	3,814 vehicl	es					Autos:	15		
Peak Hou	r Percentage:	7.70%			Me	dium Tru	cks (2 /	Axles).	15		
Peak I	Hour Volume:	294 vehicle	S		He	avy Truc	ks (3+ /	Axles)	15		
Ve	ehicle Speed:	40 mph		v	ehicle l	Mix					
Near/Far La	ane Distance:	12 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	6 13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	ucks:	75.9%	6 8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	33.0 feet		N	loise So	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.	004	Grade Adj	ustment	0.0
F	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (In	feet)		
	Road Grade:	0.0%				Autos	: 32.	833			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 32.	562			
	Right View:	90.0 degre	es		Heav	y Trucks	: 32.	589			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresr	iel	Barrier Atte	en Ber	rm Atten
Autos	66.51	-6.76		2.64		-1.20		-4.52	0.0	000	0.000
Medium Trucks:	77.72	-24.93		2.69		-1.20		-4.86	0.0	000	0.000
Heavy Trucks	82.99	-26.73		2.69		-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	' L	eq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	6	1.2	60.0		58.9		54.8	3	62.4	Ļ	62.9
Medium Trucks:	54	1.3	53.7		47.4		47.6	6	55.3	3	55.5
Heavy Trucks:	5	7.8	56.9		53.3		51.4	1	58.9)	59.2
Vehicle Noise:	63	3.4	62.4		60.2		56.9	9	64.5	5	65.0
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 di	BA	65 d	IBA	1	60 dBA	55	dBA
			Ldn:		14		31		66		143
		С	NEL:		15		33		71		152

	FHWA-RL	9-77-108 HIGH	WAY	NUISE	PREDIC		ODEL	(9/12/2	021)		
Scenario Road Name	2050 WP Colorado Si			Project Job N	Name: umber:	FCSP 15411	& POCC				
Road Segment	: e/o 8th St.										
SITE S	PECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily T	raffic (Adt):	3,848 vehicle	es					Autos.	15		
Peak Hour P	ercentage:	7.70%			Me	dium Tri	ucks (2	Axles).	15		
Peak Ho	ur Volume:	296 vehicle	s		He	avy Truc	cks (3+	Axles).	: 15		
Vehi	cle Speed:	40 mph		v	ehicle I	<i>lix</i>					
Near/Far Lane	e Distance:	12 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	6 13.6%	15.8%	97.55%
Barn	ier Heiaht:	0.0 feet			Me	edium Ti	rucks:	80.3%	6 4.7%	14.9%	1.47%
Barrier Type (0-Wa	ll, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	75.9%	6 8.2%	15.9%	0.97%
Centerline Dist.	to Barrier:	33.0 feet		Δ	loise So	urce El	evatior	ns (in f	eet)		
Centerline Dist. to	Observer:	33.0 feet				Auto	s: 0	000	,		
Barrier Distance to	Observer:	0.0 feet			Mediur	n Truck	s: 2	.297			
Observer Height (A	bove Pad):	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	ljustment	: 0.0
Pad	Elevation:	0.0 feet					Distan		6		
Road	Elevation:	0.0 feet		L	ane Equ	livalent	Distar	ice (in	reet)		
R	bad Grade:	0.0%			Ma dian	Auto	S: 32	2.833			
	Left View:	-90.0 degree	es		Mediur	n Truck	S: 32	2.002			
,	Right view:	90.0 degree	es		neav	y muck	5. 32	.009			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-6.72		2.64		-1.20		-4.52	0.	000	0.00
Medium Trucks:	77.72	-24.93		2.69		-1.20		-4.86	0.	000	0.00
Heavy Trucks:	82.99	-26.73		2.69		-1.20		-5.69	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	uation)						
VehicleType L	eq Peak Hou	r Leq Day	<i>(</i>	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	61	.2	60.1		58.9		54	.8	62.	4	62.9
Medium Trucks:	54	.3	53.7		47.4		47	.6	55.	3	55.
Heavy Trucks:	57	.8	56.9		53.3		51	.4	58.	9	59.2
Vehicle Noise:	63	.4	62.4		60.2		57	.0	64.	6	65.0
Centerline Distance	to Noise Co	ntour (in feet,)	70 -	DA I	67	dD A		60 dBA		dB A
			I da:	70 a	BA	65	abA ^		DU UBA	55	abA 4 to
		~	Lan: NEL		14		3	1	67		143
		6	VEL.		10				/1		153

Thursday, August 17, 2023

	FHWA-RI	D-77-108 HIGHV	VAY NOI	SEI	PREDIC	TION N	IODEL (9/12/2	021)			
Scenar Road Nan Road Segme	<i>io:</i> 2050 Int NF ne: Colorado S nt: e/o 8th St.	s t.				Project Job N	! Name: lumber:	FCSP 15411	& POCC			
SITE	SPECIFIC IN	IPUT DATA				1	NOISE	NODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	3,495 vehicles	;					Autos	15			
Peak Hour	Percentage:	7.70%			Me	dium Tr	ucks (2)	Axles)	: 15			
Peak F	our Volume:	269 vehicles			He	avy Tru	cks (3+)	Axles)	: 15			
Ve	hicle Speed:	40 mph		-	(ahiala)	Mise						
Near/Far La	ne Distance:	12 feet		-	Veh	icleType		Dav	Evening	Nic	ht	Daily
Sito Data					VCII	ioic i ypc	, Autos:	70.6%	6 13.6%	15	8%	97.53%
Dite Data		0.0.6			м	edium T	rucks:	80.39	6 4.7%	14	.9%	1.49%
Barrier Turne (0.14	rrier Height:	0.0 feet				Heavv T	rucks:	75.9%	6 8.2%	15	.9%	0.98%
Centerline Di	ist to Barrier	0.0 33.0 foot										
Centerline Dist	to Observer:	33.0 feet		Ν	loise So	ource E	levation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000				
Observer Height	(Above Pad):	5.0 feet			Mediu	m Truck	:s: 2.	297				
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	ljustn	nent:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Ea	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 32.	833	,			
	Left View:	-90.0 degrees			Mediu	m Truck	s: 32.	562				
	Right View:	90.0 degrees	5		Heav	/y Truck	s: 32.	589				
FHWA Noise Mod	el Calculation	S										
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fresr	nel	Barrier At	ten	Berr	m Atten
Autos:	66.51	-7.14		2.64		-1.20		-4.52	0.	000		0.000
Medium Trucks:	77.72	-25.31		2.69)	-1.20		-4.86	0.	000		0.000
Heavy Trucks:	82.99	-27.11		2.69)	-1.20		-5.69	0.	000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier at	tenı	uation)							
VehicleType	Leq Peak Hou	ir Leq Day	Leo	η Ev	ening	Leq	Night		Ldn		CN	VEL
Autos:	60	.8 5	9.6		58.5		54.4	1	62.	0		62.
Medium Trucks:	53	.9 5	3.3		47.0		47.2	2	54.	9		55.
Heavy Trucks:	57	.4 5	6.5		52.9		51.0)	58.	6		58.9
Vehicle Noise:	63	.0 6	2.0		59.8		56.6	3	64.	2		64.
Centerline Distan	ce to Noise Co	ontour (in feet)	-							-		
				70 d	BA	65	dBA		60 dBA	_	55	dBA
		L	an: El		13		29		63	5		135
		CN	EL:		14		31		67			144

	FHWA-RD-	77-108 HIGHW	AY NOIS	E PREDIC	TION MOD	EL (9/12/2	2021)		
Scenal Road Nan Road Segme	rio: 2050 Int WP ne: Colorado St. ent: e/o 8th St.				Project Nar Job Numb	ne: FCSP ber: 15411	& POCC		
SITE	SPECIFIC INF	PUT DATA			NOIS	SE MODI	EL INPUTS	5	
Highway Data				Site Con	ditions (Ha	rd = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,505 vehicles				Autos	: 15		
Peak Hour	Percentage:	7.70%		Me	dium Trucks	(2 Axles)	: 15		
Peak I	lour Volume:	270 vehicles		He	avy Trucks ((3+ Axles)	: 15		
Ve	ehicle Speed:	40 mph		Vohiclo	Aiv				
Near/Far La	ane Distance:	12 feet		Vehicle k	cleType	Dav	Evenina	Niaht	Daily
Site Data					Auto	s' 70.69	6 13.6%	15.8%	97 54%
one butu		0.0.64		Me	dium Truck	s: 80.39	6 4.7%	14.9%	1.48%
Barrier Tune (0.1	rrier Height:	0.0 reet		F	leavv Truck	s: 75.9%	6 8.2%	15.9%	0.98%
Centerline D	ist to Barrier	0.0 33.0 foot							
Centerline Dist	to Observer:	33.0 feet		Noise So	urce Eleva	tions (in f	feet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000			
Observer Height	(Above Pad):	5.0 feet		Mediur	n Trucks:	2.297			
P	ad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Adj	ustment	: 0.0
Ro	ad Elevation:	0.0 feet		Lane Equ	ivalent Dis	tance (in	feet)		
	Road Grade:	0.0%		-	Autos:	32.833			
	Left View:	-90.0 degrees		Mediur	n Trucks:	32.562			
	Right View:	90.0 degrees		Heav	y Trucks:	32.589			
FHWA Noise Mod	el Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road F	resnel	Barrier Atte	en Ber	m Atten
Autos:	66.51	-7.12	2.	64	-1.20	-4.52	0.0	000	0.000
Medium Trucks:	77.72	-25.31	2.	69	-1.20	-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-27.11	2.	69	-1.20	-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and ba	rrier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq I	Evening	Leq Nigł	nt	Ldn	C	NEL
Autos:	60.8	3 59	.7	58.5		54.4	62.0)	62.5
Medium Trucks:	53.9	53	.3	47.0		47.2	54.9	9	55.1
Heavy Trucks:	57.4	1 56	.5	52.9		51.0	58.6	j N	58.9
Vehicle Noise:	63.0) 62	.0	59.8		56.6	64.2	2	64.6
Centerline Distan	ce to Noise Con	ntour (in feet)							
			70	aBA 10	65 dBA	20	OU OBA	55	aBA 125
		La	11. 7 ·	13		29	63		135
		CNE	L.	14 31 67					144

	FHWA-RI	D-77-108 HIGH	IWAY N	IOISE P	REDIC	TION MC	DDEL (9/12/2	021)		
Scenai Road Nan Road Segme	rio: E ne: Wildwood (nt: n/o Calime				Project N Job Nu	Vame: I mber:	FCSP 15411	& POCC			
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUT	3	
Highway Data				Si	te Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	6,520 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	(xles)	15		
Peak H	lour Volume:	502 vehicle	s		He	avy Truck	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	45 mph		V	hicle l	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Height	0.0 feet			M	edium Tru	icks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	44.0 feet		N	oise Sc	ource Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos	0.0	100	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2:	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distanc	e (in i	teet)		
	Road Grade:	0.0%				Autos:	40.	460			
	Left View:	-90.0 degre	es		Mediui	m Trucks:	40.	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-4.94		1.28		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-23.11		1.31		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-24.91		1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	63	3.6	62.4		61.3		57.2	2	64.8	1	65.3
Medium Trucks:	56	3.5	55.8		49.6		49.8	3	57.5	;	57.7
Heavy Trucks:	59	9.5	58.6		55.0		53.1		60.6	5	60.9
Vehicle Noise:	65	5.6	64.6		62.4		59.1		66.7	,	67.2
Centerline Distan	ce to Noise Co	ontour (in feel	1)					r			
			L	70 dE	3A	65 d	BA	6	60 dBA	55	dBA
		-	Ldn:		27		57		124		267
		С	NEL:		28		61		132		284

FI		-//-100 ПІВП	WAT	NUISI			IODEL (9/12/2	021)		
Scenario: OY	NP					Projec	t Name:	FCSP	& POCC		
Road Name: Wil	dwood C	yn. Rd.				Job N	lumber:	15411			
Road Segment: n/o	Calimes	a Blvd.									
SITE SPEC	IFIC IN	PUT DATA				ľ	NOISE	NODE		s	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic	(Adt):	7,000 vehicle	es					Autos:	15		
Peak Hour Perce	ntage:	7.70%			Mee	dium Tr	ucks (2)	Axles):	15		
Peak Hour Vo	olume:	539 vehicle	s		Hea	avy Tru	cks (3+)	Axles):	15		
Vehicle S	peed:	45 mph			Vehicle N	lix					
Near/Far Lane Dis	tance:	36 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53%
Barrier H	eiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-L	Berm):	0.0			H	leavy T	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist. to B	arrier:	44.0 feet			Noise So	urce E	levation	s (in f	eet)		
Centerline Dist. to Obs	erver:	44.0 feet				Auto	s: 0.	000			
Barrier Distance to Obs	erver:	0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height (Above	Pad):	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justment	0.0
Pad Elev	/ation:	0.0 feet			Long Eau	ui valan	t Distan	na (in	fact)		
Road Elev	ation:	0.0 feet			Lane Equ	Ivalen	UIStan	2e (III)	leel)		
Road C	srade:	0.0%			Modium	AUIO	S: 40.	400			
Len	View:	-90.0 degree	es		Heav	v Truck	S. 40.	241			
Right	view.	90.0 degree	25		neav	y much	3. 40.	202			
FHWA Noise Model Cald	ulations										
VehicleType RE	MEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-4.63		1.	28	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-22.80		1.	31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-24.60		1.3	31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Leve	ls (witho	ut Topo and	barri	er atte	nuation)						
VehicleType Leq P	eak Hour	r Leq Day	<i>(</i>	Leq E	Evening	Leq	Night		Ldn	C	NEL
Autos:	63.	9	62.7		61.6		57.	5	65.1	1	65.0
Medium Trucks:	56.	8	56.2		49.9		50.		57.8	3	58.0
Heavy Trucks:	59.	8	58.9		55.3		53.4	1	61.0)	61.3
Venicle Noise:	65.	9	64.9		62.7		59.4	ł	67.0)	67.5
Centerline Distance to N	loise Col	ntour (in feet,)								
			L	70	dBA	65	dBA		60 dBA	55	dBA
		-	Ldn:		28		60		130		280
		C	VEL:		30		64		138		298

Thursday, August 17, 2023

	FHWA-R	D-77-108 HIGHV	VAY NOIS	SE PREDIO	CTION MOD	EL (9/12/:	2021)		
Scenar	io: OY WP				Project Na	me: FCSF	& POCC		
Road Nam	e: Wildwood (Cyn. Rd.			Job Numl	ber: 1541	1		
Road Segme	nt: n/o Calimes	sa Blvd.							
SITE	SPECIFIC IN	IPUT DATA			NOI	SE MOD	EL INPUT	s	
Highway Data				Site Cor	nditions (Ha	rd = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	7,764 vehicles	5			Autos	s: 15		
Peak Hour	Percentage:	7.70%		Me	edium Trucks	s (2 Axles,): 15		
Peak H	lour Volume:	598 vehicles		He	eavy Trucks	(3+ Axles,): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet		Veh	nicleTvpe	Dav	Evenina	Night	Dailv
Site Data					Auto	s: 70.6	% 13.6%	15.8%	88.66%
Ba	rrier Height	0.0 feet		M	ledium Truck	s: 80.3	% 4.7%	14.9%	2.89%
Barrier Type (0-W	all. 1-Berm):	0.0			Heavy Truck	s: 75.9	% 8.2%	15.9%	8.45%
Centerline Di	st. to Barrier:	44.0 feet		Noise S	ource Eleva	tions (in	foot)		
Centerline Dist.	to Observer:	44.0 feet		110/30 0	Autos:	0.000	1001		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks	2 297			
Observer Height (Above Pad):	5.0 feet		Hea	w Trucks	8 004	Grade Ad	liustment	. 0 0
Pa	ad Elevation:	0.0 feet		nea	vy mucho.	0.004	0/000//10	Jaounoni	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent Dis	stance (in	feet)		
1	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees	6	Mediu	m Trucks:	40.241			
	Right View:	90.0 degrees	5	Hea	vy Trucks:	40.262			
FHWA Noise Mode	el Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road F	resnel	Barrier Att	en Ber	m Atten
Autos:	68.46	-4.59	1	.28	-1.20	-4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.46	1	.31	-1.20	-4.87	° 0.0	000	0.00
Heavy Trucks:	84.25	-14.80	1	.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	enuation)				-	
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq Nigi	ht	Ldn	CI	NEL
Autos:	63	6.9 6	2.8	61.6		57.5	65.	1	65.
Medium Trucks:	60).1 5	9.5	53.2		53.4	61.1	1	61.
Heavy Trucks:	69	0.6 6	8.7	65.1		63.2	70.	7	71.
Vehicle Noise:	71	.0 7	0.1	66.9		64.6	72.3	2	72.
Centerline Distant	ce to Noise Co	ontour (in feet)							-
			7	0 dBA	65 dBA		60 dBA	55	dBA
		L	dn:	61		132	284	•	612
		CN	EL:	64		139	299	1	645

	FHWA-RD	0-77-108 HIGH	WAY NOI	SE PREDI	CTION MC	DEL (9/12	/2021)		
Scenar	io: OY Int NP				Project N	<i>lame:</i> FCS	P & POCC		
Road Nam	ne: Wildwood C	Cyn. Rd.			Job Nu	mber: 1541	1		
Road Segme	nt: n/o Calimes	sa Blvd.							
SITE	SPECIFIC IN	IPUT DATA			NO	DISE MOD	EL INPUTS	5	
Highway Data				Site Cor	nditions (F	Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	10,037 vehicle	s			Auto	s: 15		
Peak Hour	Percentage:	7.70%		Me	edium Truc	cks (2 Axles	s): 15		
Peak H	lour Volume:	773 vehicles	;	He	eavy Truck	ks (3+ Axles	s): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet		Venicle	hicleType	Dav	Evenina	Night	Daily
Site Data					AI	utos: 70.6	5% 13.6%	15.8%	97.53%
Ba	rrior Hoimht	0.0 feet		N	1edium Tru	icks: 80.3	3% 4.7%	14.9%	1.49%
Dd Rorrier Type (0 M	(all 1 Rorm):	0.0 1001			Heavy Tru	icks: 75.9	% 8.2%	15.9%	0.98%
Centerline Di	st to Barrier	44.0 feet							
Centerline Dist	to Observer:	44.0 feet		Noise S	ource Ele	vations (in	feet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000			
Observer Height	(Above Pad):	5.0 feet		Mediu	Im Trucks:	2.297			
P	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.004	Grade Adj	ustment	2 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance (i	n feet)	-	
	Road Grade:	0.0%			Autos:	40.460		-	
	Left View:	-90.0 degree	s	Mediu	im Trucks:	40.241			
	Right View:	90.0 degree	s	Hea	vy Trucks:	40.262			
FHWA Noise Mod	el Calculation:	5							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresnel	Barrier Atte	en Ber	rm Atten
Autos:	68.46	-3.07		1.28	-1.20	-4.6	1 0.0	000	0.000
Medium Trucks:	79.45	-21.24		1.31	-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	84.25	-23.04		1.31	-1.20	-5.5	0 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	barrier at	tenuation)				-	
VehicleType	Leq Peak Hou	r Leq Day	Leo	q Evening	Leq N	light	Ldn	C	NEL
Autos:	65	.5	64.3	63.2	2	59.0	66.6	j	67.1
Medium Trucks:	58	.3	57.7	51.5	5	51.7	59.4	4	59.5
Heavy Trucks:	61	.3	60.5	56.8	3	54.9	62.5	i	62.8
Vehicle Noise:	67	.5	66.4	64.3	3	61.0	68.6	i	69.0
Centerline Distant	ce to Noise Co	ontour (in feet)			1	1			-
				70 dBA	65 di	BA	60 dBA	55	dBA
			Ldn:	36		77	165		356
		CI	IEL:	38		82	176		379

	FHWA-R	D-77-108 HIG	IWAY I	NOISE	PREDIC	TION MC	DEL (S	/12/20)21)		
Scenar Road Nan	rio: OY Int WP ne: Wildwood	Cyn. Rd.				Project N Job Nui	lame: F mber: 1	CSP 8	& POCC		
Road Segme	nt: n/o Calime	sa Blvd.									
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	IODE	L INPUTS	6	
Highway Data				S	ite Cor	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	11,320 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	872 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.81%
Ba	rrier Height	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.32%
Barrier Type (0-W	Vall, 1-Berm):	0.0				Heavy Tru	cks:	75.9%	8.2%	15.9%	0.87%
Centerline Di	ist. to Barrier:	44.0 feet		N	nisa Si	urce Elev	vations	(in fo	of		
Centerline Dist.	to Observer:	44.0 feet			0/30 00	Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	900			
Observer Height	(Above Pad):	5.0 feet			Heat	/v Trucks:	8.0	04	Grade Adi	ustment	0.0
P	ad Elevation:	0.0 feet				<i>y maono.</i>	0.0				
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Hear	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el i	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.53		1.28		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-21.24	Ļ	1.31		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-23.04	ł	1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Eve	ening	Leq N	ight		Ldn	CI	NEL
Autos:	66	5.0	64.8		63.7		59.6		67.2		67.7
Medium Trucks:	58	3.3	57.7		51.5		51.7		59.4		59.5
Heavy Trucks:	61	1.3	60.5		56.8		54.9		62.5		62.8
Vehicle Noise:	67	7.8	66.8		64.7		61.4		69.0		69.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dl	BA	65 dl	BA	6	0 dBA	55	dBA
			Ldn:		38		81		174		375
		C	NEL:		40		86		186		400

Scenario: 2050 NP				Project N	Vame: FO	CSP & POC	С		
Road Name: Wildwood Cyn. Rd.				Job Nu	mber: 15	411			
Road Segment: h/o Calimesa Bivd.									
SITE SPECIFIC INPUT DATA	A		ite Con	N		DDEL INP	UTS		
		-	sile Com	uitions (i		, SOIL - 15)		
Average Daily Traffic (Adt): 18,198 veh	icles		140	diuma Truu	AL aka (2 Au	1005: 15			
Peak Hour Percentage: 1.10%			IVIE Llo		2KS (2 AX	(es). 15			
Vehicle Speed: 45 mph	cies		пе	avy muci	(S (ST AX	<i>les).</i> 15			
Near/Far Lane Distance: 36 feet		1	/ehicle I	Aix					
Nearri ar Larie Distance. 30 leet			Vehi	cleType	D	ay Eveni	ng N	light	Daily
Site Data				A	utos: 7	0.6% 13.6	5% ·	15.8%	97.53
Barrier Height: 0.0 feet	t		Me	edium Tru	icks: 8	0.3% 4.7	7% ·	14.9%	1.49
Barrier Type (0-Wall, 1-Berm): 0.0			ŀ	leavy Tru	icks: 7	5.9% 8.2	2% ·	15.9%	0.98
Centerline Dist. to Barrier: 44.0 feet		٨	loise So	urce Ele	vations	(in feet)			
Centerline Dist. to Observer: 44.0 feet				Autos:	0.00	10			
Barrier Distance to Observer: 0.0 feet			Mediur	n Trucks.	2.29	7			
Observer Height (Above Pad): 5.0 feet			Heav	y Trucks:	8.00	4 Grade	Adjus	tment:	0.0
Pad Elevation: 0.0 feet		,	ano Equ	inclont	Dictorco	(in foot)			
Road Elevation: 0.0 feet		-	ane Ly	Autoo					
Left View: 00.0 dog	roos		Mediur	n Trucks	40.40	11			
Right View: 90.0 deg	rees		Heav	v Trucks	40.26	32			
right from: 00.0 dog				,		-			
FHWA Noise Model Calculations									
VehicleType REMEL Traffic Flow	v Di	istance	Finite	Road	Fresnei	Barrier	Atten	Berr	n Atter
Autos: 68.46 -0.4	48	1.28	3	-1.20	-4	1.61	0.000)	0.00
Medium Trucks: 79.45 -18.	65	1.31		-1.20	-4	1.87	0.000)	0.0
Heavy Trucks: 84.25 -20.	45	1.31	1	-1.20	-5	50	0.000	J	0.00
Unmitigated Noise Levels (without Topo ar	nd barr	ier atten	uation)						
VehicleType Leq Peak Hour Leq D)ay	Leg Ev	ening	Leq N	light	Ldn		C٨	IEL
Autos: 68.1	66.9		65.8		61.6		69.2		69
Medium Trucks: 60.9	60.3		54.0		54.2		61.9		62
Heavy Trucks: 63.9	63.1		59.4		57.5		65.1		65
Venicle Noise: 70.0	69.0		66.9		63.6		/1.2		/1
Centerline Distance to Noise Contour (in fe	et)								
		70 a	IBA	65 d	BA	60 dBA		55 (dBA
	Ldn:		53		114		245		52
	CNEL:		56		121		262		56

Thursday, August 17, 2023

FHWA-RI	D-77-108 HIGHV	VAY NOIS	E PREDIO	CTION M	ODEL (9	/12/20	21)		
Scenario: 2050 WP Road Name: Wildwood (Road Segment: n/o Calime:	Cyn. Rd. sa Blvd.			Project Job No	Name: F umber: 1	CSP 8 5411	& POCC		
SITE SPECIFIC IN	IPUT DATA			N	OISE M	ODE	L INPUTS	6	
Highway Data			Site Con	ditions (Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt):	18,962 vehicles	5	Me	dium Tru	A Icks (2 A	lutos:	15 15		
Peak Hour Volume	1.1070		He	avy Truc	ks (3+ A	vles).	15		
Vehicle Speed:	45 mph				10 10 - 71	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10		
Near/Far Lane Distance:	36 feet		Vehicle	Mix					
Neam al Lane Distance.	00 1001		Veh	icleType	1	Day	Evening	Night	Daily
Site Data				A	utos: 1	70.6%	13.6%	15.8%	93.90%
Barrier Height:	0.0 feet		M	eaium Ir	UCKS: E	30.3%	4.7%	14.9%	2.06%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy In	UCKS:	/5.9%	8.2%	15.9%	4.04%
Centerline Dist. to Barrier:	44.0 feet		Noise Se	ource Ele	evations	(in fe	et)		
Centerline Dist. to Observer:	44.0 feet			Autos	: 0.0	00			
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks	: 2.2	97			
Observer Height (Above Pad):	5.0 feet		Hear	vy Trucks	: 8.0	04	Grade Adj	ustment:	0.0
Pad Elevation:	0.0 feet		Lana Fr		Distance	- 11- 6	41		
Road Elevation:	0.0 teet		Lane Eq	uivaient	Distanc		eel)		
Road Grade:	0.0%		Madiu	Autos	. 40.4	100			
Right View:	90.0 degrees	5	Hear	vy Trucks	: 40.2 : 40.2	262			
FHWA Noise Model Calculation	s								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el l	Barrier Atte	en Ben	m Atten
Autos: 68.46	-0.47	1	.28	-1.20	-	4.61	0.0	00	0.000
Medium Trucks: 79.45	-17.05	1	.31	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks: 84.25	-14.13	1	.31	-1.20	-	-5.50	0.0	00	0.000
Unmitigated Noise Levels (with	out Topo and b	arrier atte	enuation)						
VehicleType Leq Peak Hou	ir Leq Day	Leq	Evening	Leq I	Vight		Ldn	CI	VEL
Autos: 68	.1 6	6.9	65.8		61.6		69.2		69.7
Medium Trucks: 62	.5 6	1.9	55.6		55.8		63.5		63.7
Heavy Trucks: 70	.2 6	9.4	65.7		63.8		71.4		71.7
vehicle Noise: 72		1.8	69.0		66.3		73.9		74.3
Centerline Distance to Noise Co	ontour (in feet)	7	0 dBA	65 /	IR∆	6	0 dBA	55	dBA
	1	dn'	80	001	172	0	371	55	800
	CN	EL:	85		182		393		846

	FHWA-RD	D-77-108 HIGH	WAY NO	DISE F	PREDIC	TION M	ODEL (9/12/2	021)			
Scenan Road Nam Road Segmei	io: 2050 Int NF e: Wildwood 0 nt: n/o Calimes	o Cyn. Rd. sa Blvd.				Project Job N	Name: umber:	FCSP 15411	& POCC			
SITE	SPECIFIC IN	IPUT DATA				N	OISE	IODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	10,208 vehicle 7.70% 786 vehicles	s		Me He	dium Tru avy Truc	ucks (2) cks (3+)	Autos Axles) Axles)	15 15 15			
Ve	hicle Speed:	45 mph		V	ohiclo I	<i>liv</i>						
Near/Far La	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Nigi	ht	Daily
Site Data						A	Autos:	70.69	6 13.6%	15.	8% 9	97.53%
Bai	rier Height	0.0 feet			Me	edium Ti	ucks:	80.3%	6 4.7%	14.	9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	6 8.2%	15.	9%	0.98%
Centerline Dis	st. to Barrier:	44.0 feet		N	oise So	urce El	evation	s (in f	eet)			
Centerline Dist.	to Observer:	44.0 feet				Auto	s' 0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	s 2	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s 8	104	Grade Ad	liustm	ent: (0.0
Pa	ad Elevation:	0.0 feet			mour	<i>y maon</i>	. 0.			,		
Roa	ad Elevation:	0.0 feet		La	ane Equ	iivalent	Distan	e (in	feet)			
1	Road Grade:	0.0%				Autos	s: 40.	460				
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 40.	241				
	Right View:	90.0 degree	s		Heav	y Trucks	s: 40.	262				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	el	Barrier Att	len	Berm	Atten
Autos:	68.46	-2.99		1.28		-1.20		-4.61	0.	000		0.000
Medium Trucks:	79.45	-21.16		1.31		-1.20		-4.87	0.	000		0.000
Heavy Trucks:	84.25	-22.96		1.31		-1.20		-5.50	0.	000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType	Leq Peak Hou	Ir Leq Day	Le	eq Eve	ening	Leq	Night		Ldn		CNE	:L
Autos:	65	.5	64.4		63.2		59.1		66.	7		67.2
Medium Trucks:	58	.4	57.8		51.5		51.7	,	59.	4		59.6
Heavy Trucks:	61	.4	60.5		56.9		55.0)	62.	6		62.9
Vehicle Noise:	67	.5	6.5		64.4		61.1		68.	7		69.1
Centerline Distance	e to Noise Co	ontour (in feet)										-
				70 dE	BA	65 (dBA		60 dBA		55 dl	3A
			Ldn:		36		77		167	· -		360
		CI	IEL:		38		83		178	3		383

	FHWA-R	D-77-108 HIGI	IWAY N	IOISE P	PREDIC	TION MC	DEL (S	9/12/2	021)		
Scenar Road Nan Road Segme	nio: 2050 Int W ne: Wildwood ent: n/o Calime	P Cyn. Rd. sa Blvd.				Project N Job Nui	lame: F mber: 1	CSP 15411	& POCC		
SITE	SPECIFIC II	NPUT DATA				NC	DISEN	IODE	LINPUTS	3	
Highway Data				Si	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	11,491 vehic	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	(xles):	15		
Peak H	lour Volume:	885 vehicle	s		He	avy Truck	is (3+ A	(xles):	15		
Ve	ehicle Speed:	45 mph		Ve	ehicle	Mix					
Near/Far La	ne Distance:	36 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.81%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.32%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.87%
Centerline Di	ist. to Barrier:	44.0 feet		N	oise So	ource Elev	vations	s (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	004	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L	Jistanc	e (in i	eet)		
	Road Grade:	0.0%				Autos:	40.4	460			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.47		1.28		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-21.16	5	1.31		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-22.96	5	1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	66	5.1	64.9		63.8		59.6		67.2		67.7
Medium Trucks:	58	3.4	57.8		51.5		51.7		59.4		59.6
Heavy Trucks:	61	1.4	60.5		56.9		55.0		62.6		62.9
Vehicle Noise:	67	7.9	66.8		64.8		61.4		69.0		69.4
Centerline Distan	ce to Noise C	ontour (in fee	t)					r			
				70 dE	BA	65 dE	BA	6	60 dBA	55	dBA
			Ldn:		38		82		176		379
		C	NEL:		40		87		188		404

FHW	A-RD	-77-108 HIGH	WAY	NOISE	PREDIC		IODEL (9/12/2	021)		
Scenario: E						Projec	Name:	FCSP	& POCC		
Road Name: County	Line	Rd.				Job N	lumber:	15411			
Road Segment: w/o I-10) EB	Ramps									
SITE SPECIFIC) INI	PUT DATA				1	IOISE I	NODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Ad	t):	2,755 vehicle	es					Autos:	15		
Peak Hour Percentag	e:	7.70%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Hour Volum	e:	212 vehicle	s		He	avy Tru	cks (3+)	Axles):	15		
Vehicle Spee	d:	45 mph		١	/ehicle I	<i>lix</i>					
Near/Far Lane Distanc	e:	36 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53
Barrier Heigh	nt:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.499
Barrier Type (0-Wall, 1-Bern	n):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.989
Centerline Dist. to Barrie	er:	44.0 feet			loise So	urce E	levation	s (in f	eet)		
Centerline Dist. to Observe	er:	44.0 feet		-		Auto	s' 0	000			
Barrier Distance to Observe	er:	0.0 feet			Mediur	n Truck	s: 2	297			
Observer Height (Above Pag	d):	5.0 feet			Heav	v Truck	s: 8.	004	Grade Ad	justment.	0.0
Pad Elevatio	n:	0.0 feet		_							
Road Elevatio	n:	0.0 feet		L	ane Equ	iivalen	t Distand	ce (in	feet)		
Road Grad	e:	0.0%				Auto	s: 40.	460			
Left Vie	W:	-90.0 degree	es		Mediur	n Truck	s: 40.	241			
Right Vie	W:	90.0 degree	es		Heav	y Truck	s: 40.	262			
FHWA Noise Model Calcula	ions										
VehicleType REMEL		Traffic Flow	Di	istance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos: 68	.46	-8.68		1.28	3	-1.20		-4.61	0.0	000	0.00
Medium Trucks: 79	.45	-26.85		1.31	I	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84	.25	-28.65		1.31	I	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (v	vitho	ut Topo and	barri	ier atten	uation)						
VehicleType Leq Peak	Hour	· Leq Day	<i>(</i>	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	59.	9	58.7		57.6		53.4	1	61.	D	61
Medium Trucks:	52.	7	52.1		45.8		46.0)	53.	7	53
Heavy Trucks:	55.	7	54.9		51.2		49.3	3	56.	9	57
Vehicle Noise:	61.	8	60.8		58.7		55.4	1	63.	U	63
Centerline Distance to Nois	e Col	ntour (in feet,)					1			
			I alu	70 a	IBA 1-	65	aBA 		U dBA	55	aBA
		0	Lan:		15		32		70		150
		Ci	VEL.		16		34		74		160

Thursday, August 17, 2023

FHWA-RI	0-77-108 HIGHV	VAY NOIS	SE PREDIO	CTION MO	DEL (9/'	12/2021)		
Scenario: OY NP Road Name: County Line Road Segment: w/o I-10 EE	e Rd. Ramps			Project N Job Nur	ame: FC nber: 15	SP & POCC 411		
SITE SPECIFIC IN	IPUT DATA			NO	ISE MO	DEL INPU	TS	
Highway Data			Site Cor	nditions (H	ard = 10), Soft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	2,860 vehicles 7.70% 220 vehicles	5	Me He	edium Truc eavy Truck:	AL ks (2 Ax s (3+ Ax	itos: 15 les): 15 les): 15		
Vehicle Speed:	45 mph		Vehicle	Mix				
Near/Far Lane Distance:	36 feet		Veh	icleType	D	ay Evening	Nigh	t Daily
Site Data				Au	tos: 70	0.6% 13.6%	5 15.8	97.53%
Barrier Height:	0.0 feet		M	ledium Truc	cks: 80	0.3% 4.7%	5 14.9	1.49%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy True	cks: 78	5.9% 8.2%	5 15.9	0.98%
Centerline Dist. to Barrier:	44.0 feet		Noise S	ource Elev	ations (in feet)		
Centerline Dist. to Observer:	44.0 feet			Autos:	0.00	0		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks:	2.29	7		
Observer Height (Above Pad):	5.0 feet		Hea	vy Trucks:	8.00	4 Grade A	djustme	ent: 0.0
Pad Elevation:	0.0 feet							
Road Elevation:	0.0 feet		Lane Eq	uivalent D	istance	(in feet)		
Road Grade:	0.0%		14-14	Autos:	40.46	0		
Right View:	-90.0 degrees 90.0 degrees	5	Hea	wy Trucks:	40.24	12		
FHWA Noise Model Calculation	s							
VehicleType REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier A	tten E	Berm Atten
Autos: 68.46	-8.52	1	.28	-1.20	-4	.61 0	0.000	0.000
Medium Trucks: 79.45	-26.69	1	.31	-1.20	-4	.87 0	0.000	0.000
Heavy Trucks: 84.25	-28.49	1	.31	-1.20	-5	. <i>50</i> C	0.000	0.000
Unmitigated Noise Levels (with	out Topo and b	arrier att	enuation)					
VehicleType Leq Peak Hou	ir Leq Day	Leq	Evening	Leq Ni	ght	Ldn		CNEL
Autos: 60	.0 5	8.9	57.7		53.6	61	.2	61.7
Medium Trucks: 52	.9 5	2.3	46.0		46.2	53	3.9	54.1
Heavy Trucks: 55	.9 5	5.0	51.4		49.5	57	.1	57.4
venicie ivoise. 62		1.0	58.9		55.6	63	9.Z	03.0
Centerline Distance to Noise Co	ontour (in feet)	7	0 dBA	65 45		60 dBA		55 dBA
	,	dn'	15	05 UE	33	UU UDA	1	154
	CN	EL:	16		35	7	6	164

	FHWA-RL	D-77-108 HIGH	WAY N	IOISE	PREDIC	TION MO	JDEL (9/12/2	021)		
Scenar	io: OY WP					Project I	Name:	FCSP	& POCC		
Road Nam	e: County Line	e Rd.				Job Nu	imber:	15411			
Road Segme	nt: w/o I-10 EB	Ramps									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE		5	
Highway Data				S	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	4,862 vehicle	s					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	374 vehicles	;		He	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	45 mph		v	/ehicle I	Aix					
Near/Far La	ne Distance:	36 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	82.38%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	ucks:	80.3%	4.7%	14.9%	3.62%
Barrier Type (0-W	(all, 1-Berm):	0.0			F	leavy Tru	ucks:	75.9%	8.2%	15.9%	5 14.00%
Centerline Di	st. to Barrier:	44.0 feet			loise So	urce Fle	vation	s (in fi	pet)		
Centerline Dist.	to Observer:	44.0 feet		Ê		Autos	. 0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 2	297			
Observer Height	Above Pad):	5.0 feet			Heav	v Trucks	. 8	004	Grade Ad	iustmen	t: 0.0
Pi	ad Elevation:	0.0 feet				,	. 0.		,		
Roi	ad Elevation:	0.0 feet		L	ane Equ	ivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 40.	460			
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 40.	241			
	Right View:	90.0 degree	s		Heav	y Trucks	: 40.	262			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	68.46	-6.95		1.28	3	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-20.51		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-14.64		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	1	Leq Ev	ening	Leq N	light		Ldn	0	NEL
Autos:	61	.6	60.4		59.3		55.2	2	62.8	3	63.3
Medium Trucks:	59	.0	58.4		52.2		52.4	1	60.1		60.3
Heavy Trucks:	69	.7	68.9		65.2		63.3	3	70.9)	71.2
Vehicle Noise:	70	.7	69.8		66.4		64.2	2	71.8	3	72.1
Centerline Distant	ce to Noise Co	ontour (in feet)					_				-
				70 d	IBA	65 a	BA	6	60 dBA	55	5 dBA
			Ldn:		58		125		270		582
		CI	IEL:		61		132		284		612

FHWA-R	D-77-108 HIGH	WAY NO	DISE F	PREDIC	TION MC	DDEL (9/12/2	021)		
Scenario: OY Int NP Road Name: County Lin	ie Rd.				Project N Job Nu	lame: mber:	FCSP 15411	& POCC		
Road Segment: w/o I-10 El	B Ramps									
SITE SPECIFIC II	NPUT DATA				NC	DISEN	IODE	L INPUT	5	
Highway Data			Si	ite Con	ditions (H	Hard =	10, Se	oft = 15)		
Average Daily Traffic (Adt):	2,860 vehicle	es					Autos:	15		
Peak Hour Percentage:	7.70%			Me	dium Truc	cks (2 /	Axles).	15		
Peak Hour Volume:	220 vehicles	s		He	avy Truck	(3+ A	Axles).	15		
Vehicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far Lane Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data					AL	utos:	70.6%	6 13.6%	15.8%	97.53%
Barrier Height:	0.0 feet			М	edium Tru	icks:	80.3%	6 4.7%	14.9%	1.49%
Barrier Type (0-Wall, 1-Berm):	0.0			I	Heavy Tru	icks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Dist. to Barrier:	44.0 feet		N	oise So	ource Ele	vation	s (in f	eet)		
Centerline Dist. to Observer:	44.0 feet				Autos:	0.	000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks:	2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.	004	Grade Adj	ustmen	t: 0.0
Pad Elevation:	0.0 feet			nno Ea	uivelent l	Dioton	na (in	faati		
Road Elevation:	0.0 feet		Le	ane Eq		JISTAIL	20 (111	ieel)		
Road Grade:	0.0%			Madiu	Autos:	40.	400			
Left View: Dight View:	-90.0 degree	es		Meaiu	m Trucks:	40.	241 262			
Right view.	90.0 degree	:5		near	ly mucks.	40.	202			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	iel	Barrier Atte	en Be	rm Atten
Autos: 68.46	6 -8.52		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks: 79.45	5 -26.69		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 84.25	-28.49		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise Levels (with	nout Topo and	barrier a	attenu	ation)						
VehicleType Leq Peak Ho	ur Leq Day	' Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos: 6	0.0	58.9		57.7		53.6	ò	61.2	2	61.7
Medium Trucks: 5	2.9	52.3		46.0		46.2	-	53.9	•	54.1
Vehicle Noise 6	5.9 2.0	55.0 61.0		51.4		49.t) }	57.1	>	57.4 63.6
Orantardina Distance to Naise O	2.0	01.0		00.0		00.0	, 	00.2	-	00.0
Centerline Distance to Noise C	ontour (in feet,	,	70 dE	BA	65 dl	BA		60 dBA	55	dBA
		Ldn:		15		33	· · · · ·	71		154
	Ci	NEL:		16		35		76		164

	FRWA-RD	-//-106 HIGH	IWAT	NUISE	PREDIC		IODEL (9/12/20	JZ1)		
Scenario	o: OY Int WP					Project	Name: F	CSP	& POCC		
Road Name	e: County Line	e Rd.				Job N	lumber: *	5411			
Road Segmen	t: w/o I-10 EB	Ramps									
SITE S	PECIFIC IN	PUT DATA				1	IOISE N	IODE	L INPUT	5	
Highway Data				S	Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily 7	raffic (Adt):	3,262 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.70%			Me	dium Tr	ucks (2 A	xles):	15		
Peak Ho	our Volume:	251 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	45 mph		V	/ehicle I	Nix					
Near/Far Lan	e Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.84%
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	80.3%	4.7%	14.9%	1.30%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	75.9%	8.2%	15.9%	0.86%
Centerline Dis	t. to Barrier:	44.0 feet			loise Sc	urce F	levation	: (in fe	ef)		
Centerline Dist. t	o Observer:	44.0 feet		-		Auto	e' 0 (000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	n Truck	s 21	997			
Observer Height (A	Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	ustment:	0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalen	t Distanc	e (in f	'eet)		
R	oad Grade:	0.0%				Auto	s: 40.4	160			
	Left View:	-90.0 degre	es		Mediui	n Truck	s: 40.	241			
	Right View:	90.0 degre	es		Heav	y Truck	s: 40.1	262			
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-7.93		1.28	3	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-26.69		1.31	1	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-28.49		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (witho	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	CI	VEL
Autos:	60	.6	59.4		58.3		54.2		61.8	3	62.3
Medium Trucks:	52	.9	52.3		46.0		46.2		53.9)	54.
Heavy Trucks:	55	.9	55.0		51.4		49.5		57.1		57.4
Vehicle Noise:	62	.4	61.3		59.3		55.9		63.5	5	64.0
Centerline Distance	e to Noise Co	ntour (in feet)						-		
				70 d	IBA	65	dBA	6	i0 dBA	55	dBA
		-	Ldn:		16		35		76		163
		C	NEL		47		20		01		174

Thursday, August 17, 2023

FHV	VA-RD	-77-108 HIGHV	VAY I	NOISE	PREDIC		IODEL (9/12/2	:021)			
Scenario: 2050 Road Name: Coun Road Segment: w/o I-	NP ty Line 10 EB	Rd. Ramps				Project Job N	Name: lumber:	FCSP 15411	& POC	С		
SITE SPECIF	IC IN	PUT DATA				M	IOISE N	NODE	EL INP	UTS		
Highway Data				s	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (A	Adt):	7,566 vehicles						Autos.	15			
Peak Hour Percent	age:	7.70%			Me	dium Tr	ucks (2 /	Axles)	: 15			
Peak Hour Volu	me:	583 vehicles			He	avy Tru	cks (3+ /	Axles)	: 15			
Vehicle Spe	eed:	45 mph		V	ohiclo	Mix						
Near/Far Lane Dista	nce:	36 feet			Veh	icleType		Day	Eveni	ng N	light	Daily
Site Data							Autos:	70.6%	6 13.6	5% 1	5.8%	97.53%
Barrier Hei	aht:	0.0 feet			М	edium T	rucks:	80.3%	6 4.3	7% 1	4.9%	1.49%
Barrier Type (0-Wall, 1-Be	rm):	0.0			1	leavy T	rucks:	75.9%	6 8.3	2% 1	5.9%	0.98%
Centerline Dist. to Bar	rier:	44.0 feet		Δ	loise Sr	ource E	evation	s (in f	eet)			
Centerline Dist. to Obser	ver:	44.0 feet		-	0.00 00	Auto	s' 01	000				
Barrier Distance to Obser	ver:	0.0 feet			Mediu	m Truck	s: 2	297				
Observer Height (Above P	ad):	5.0 feet			Heat	v Truck	s' 81	004	Grade	Adius	tment	0.0
Pad Eleva	tion:	0.0 feet				<i>y maon</i>	0. 0.					
Road Eleva	tion:	0.0 feet		L	ane Eq	uivalen	Distant	ce (in	feet)			
Road Gr	ade:	0.0%				Auto	s: 40.	460				
Left V	ïew:	-90.0 degrees	5		Mediu	m Truck	s: 40.	241				
Right V	iew:	90.0 degrees	5		Heav	y Truck	s: 40.	262				
FHWA Noise Model Calcu	lations	5										
VehicleType REMI	EL	Traffic Flow	Dist	ance	Finite	Road	Fresr	nel	Barrier	Atten	Ber	m Atten
Autos:	68.46	-4.29		1.28		-1.20		-4.61		0.000)	0.000
Medium Trucks:	79.45	-22.46		1.31		-1.20		-4.87		0.000)	0.000
Heavy Trucks:	84.25	-24.26		1.31		-1.20		-5.50		0.000)	0.000
Unmitigated Noise Levels	(with	out Topo and b	arrie	r attenı	ation)							
VehicleType Leq Pea	ak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	64.	.2 6	3.1		61.9		57.8	3		65.4		65.9
Medium Trucks:	57.	.1 5	6.5		50.2		50.4	1		58.1		58.3
Heavy Trucks:	60.	.1 5	9.2		55.6		53.7	7		61.3		61.6
Vehicle Noise:	66.	.2 6	5.2		63.1		59.8	3		67.4		67.8
Centerline Distance to No.	ise Co	ntour (in feet)										
				70 d	BA	65	dBA		60 dBA		55	dBA
		L	dn:		29		63			137		295
		CN	EL:		31		68			146		314

	FHWA-RD	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION	IODEL (9/12/2	021)		
Scenar Road Nan	io: 2050 WP	- Bd				Project	Name:	FCSP	& POCC		
Road Segme	nt: w/o I-10 EB	Ramps				000 1					
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE		S	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	9,568 vehicle	s					Autos.	15		
Peak Hour	Percentage:	7.70%			Me	dium Tr	ucks (2)	Axles).	15		
Peak H	lour Volume:	737 vehicles	5		He	avy Tru	cks (3+)	Axles).	15		
Ve	hicle Speed:	45 mph		v	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleTvpe	•	Dav	Evenina	Niah	Dailv
Site Data							Autos:	70.6%	6 13.6%	15.8	% 89.83%
Ba	rrier Height:	0.0 feet			Me	edium T	rucks:	80.3%	6 4.7%	14.9	% 2.57%
Barrier Type (0-W	/all_1-Rerm):	0.0			ŀ	Heavy T	rucks:	75.9%	6 8.2%	15.9	% 7.60%
Centerline Di	st. to Barrier:	44.0 feet						- (41		
Centerline Dist.	to Observer:	44.0 feet		N	ioise so	ource E	evation	s (IN 1	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000			
Observer Height	(Above Pad):	5.0 feet			Wealur	IT Truck	S. Z.	297	Grade Ad	liustma	nt: 0.0
P	ad Elevation:	0.0 feet			neav	y muck	s. o.	004	Graue Au	jusune	111. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degree	s		Mediur	m Truck	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	ten E	lerm Atten
Autos:	68.46	-3.63		1.28	3	-1.20		-4.61	0.	000	0.000
Medium Trucks:	79.45	-19.06		1.31		-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-14.36		1.31		-1.20		-5.50	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenı	uation)					-	
VehicleType	Leq Peak Hou	Ir Leq Day	L	eq Ev	ening	Leq	Night		Ldn		CNEL
Autos:	64	.9	63.7		62.6		58.	5	66.	1	66.6
Medium Trucks:	60	.5	59.9		53.6		53.8	3	61.	5	61.7
Heavy Trucks:	70	.0	69.1		65.5		63.0	j	71.	2	71.5
Vehicle Noise:	71	.5	70.6		67.5		65.		72.	(73.0
Centerline Distant	ce to Noise Co	ontour (in feet)									
				70 d	BA	65	dBA		60 dBA	1	55 dBA
			Ldn:		67		144		309)	666
		CI	VEL:		70		151		326	6	702

	FHWA-R	D-77-108 HIGI	HWAY	NOISE	PREDIC	TION MC	DEL (9	/12/20	21)		
Scenar	rio: 2050 Int N	P				Project N	lame: F	CSP 8	R POCC		
Road Nan	ne: County Lin	e Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: w/o I-10 EE	3 Ramps									
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	ODEL	INPUTS	5	
Highway Data				S	Site Con	ditions (H	lard =	10, Sol	ft = 15)		
Average Daily	Traffic (Adt):	12,494 vehic	les				A	lutos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	962 vehicle	es		He	avy Truck	's (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 1	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	ist. to Barrier:	44.0 feet		^	loise So	ource Elev	vations	(in fee	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		1	.ane Eq	uivalent L	Distanc	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.11		1.28	3	-1.20		4.61	0.0	00	0.000
Medium Trucks:	79.45	-20.29	9	1.31	1	-1.20		4.87	0.0	00	0.000
Heavy Trucks:	84.25	-22.08	3	1.31	1	-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	rening	Leq N	ight		Ldn	CI	VEL
Autos:	66	5.4	65.3		64.1		60.0		67.6		68.1
Medium Trucks:	59	9.3	58.7		52.4		52.6		60.3		60.5
Heavy Trucks:	62	2.3	61.4		57.8		55.9		63.5		63.8
Vehicle Noise:	68	3.4	67.4		65.3		62.0		69.6		70.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70 a	IBA	65 dl	ЗA	60) dBA	55	dBA
		_	Ldn:		41		89		191		411
		C	NEL:		44		94		204		439

						0822 (52 .)		
Scenario: 2050 Int	t WP				Project	Name: I	CSP	& POCC		
Road Name: County	Line Rd	L			Job Ni	imber: *	15411			
Road Segment: w/o I-10	EB Ra	mps								
SITE SPECIFIC	; INPU	T DATA			N	OISE N	IODE	L INPUT	S	
Highway Data				Site Cond	ditions (Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adl): 12,	896 vehicles				,	Autos:	15		
Peak Hour Percentage	e: 7.	70%		Med	dium Tru	cks (2 A	(xles)	15		
Peak Hour Volume	e: 9	93 vehicles		Hea	avy Truc	ks (3+ A	(xles)	15		
Vehicle Speed	d:	45 mph	ŀ	Vehicle N	lix					
Near/Far Lane Distance	e:	36 feet	F	Vehi	cleTvpe		Dav	Evenina	Niaht	Daily
Site Data					, A	utos:	70.6%	13.6%	15.8%	97.619
Barrier Heigh	<i>*</i> •	0.0 foot		Ме	dium Tr	ucks:	80.3%	4.7%	14.9%	1.449
Barrier Type (0-Wall, 1-Rem);	0.0		h	leavy Tr	ucks:	75.9%	8.2%	15.9%	0.95%
Centerline Dist. to Barrie	y. er: 4	4.0 feet	-	Noine Co	uree Ek	votion	in fi	a a fi		
Centerline Dist. to Observe	er: 4	4.0 feet	-	Noise 30	urce Ele	valions		eu		
Barrier Distance to Observe	r:	0.0 feet		Madium	Autos	. 0.0	007			
Observer Height (Above Pac	Ŋ:	5.0 feet		Mediun	n Trucks	. 2.4	297	Grade Ad	iustment	
Pad Elevation	n:	0.0 feet		neav.	y mucks	. 0.0	JU4	Orade Au	Justinent	. 0.0
Road Elevation	n:	0.0 feet		Lane Equ	ivalent	Distanc	e (in i	feet)		
Road Grad	e: 0.	.0%			Autos	: 40.4	460			
Left View	v: -9	0.0 degrees		Mediun	n Trucks	: 40.	241			
Right View	v: 9	0.0 degrees		Heav	y Trucks	: 40.	262			
FHWA Noise Model Calculat	ions									
VehicleType REMEL	Tra	affic Flow Di	istance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos: 68	.46	-1.97	1.2	28	-1.20		-4.61	0.0	000	0.00
Medium Trucks: 79	.45	-20.29	1.3	31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84	.25	-22.08	1.3	31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (w	vithout	Topo and barr	ier atter	nuation)						
VehicleType Leq Peak	Hour	Leq Day	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	66.6	65.4		64.3		60.1		67.	7	68.
Medium Trucks:	59.3	58.7		52.4		52.6		60.3	3	60.
Heavy Trucks:	62.3	61.4		57.8		55.9		63.	5	63.
Vehicle Noise:	68.5	67.5		65.4		62.0		69.	7	70.
Centerline Distance to Noise	e Conto	ur (in feet)	70	dBA	65 -	ID A		C dBA		dB A
		l da:	70	UDA 40	000	IDA 00		JU OBA	55	UBA
		Lan:		42		90		194		417
		(NEI '		44		46		206		44.5

Thursday, August 17, 2023

	FHWA-RD	-77-108 HIGHW	AY NOIS	E PREDIO	TION MOD	EL (9/12/	2021)		
Scenar	io: E				Project Na	me: FCSF	P & POCC		
Road Nam	e: County Line	Rd.			Job Num	ber: 1541	1		
Road Segme	nt: e/o I-10 WB	Ramps							
SITE	SPECIFIC IN	PUT DATA			NOI	SE MOD	EL INPUT	5	
Highway Data				Site Con	ditions (Ha	rd = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	12,705 vehicles				Autos	s: 15		
Peak Hour	Percentage:	7.70%		Me	dium Truck	s (2 Axles): 15		
Peak H	lour Volume:	978 vehicles		He	avy Trucks	(3+ Axles): 15		
Ve	hicle Speed:	45 mph		Vahicla	Mix				
Near/Far La	ne Distance:	36 feet		Venicle	icleType	Dav	Evenina	Niaht	Daily
Site Data					Auto	os: 70.6	% 13.6%	15.8%	97.53%
Pa	rrior Hoight:	0.0 foot		м	edium Truck	(s: 80.3	% 4.7%	14.9%	1.49%
Barrier Type (0 M	(all 1 Berm):	0.0 1001			Heavy Truck	(s: 75.9	% 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet							
Centerline Dist.	to Observer:	44.0 feet		Noise Se	ource Eleva	tions (in	feet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000			
Observer Height (Above Pad):	5.0 feet		Mediu	m Trucks:	2.297	~ · · ·		
Pi	ad Elevation:	0.0 feet		Hear	vy Trucks:	8.004	Grade Adj	ustment.	: 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (in	n feet)		
	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees		Mediu	m Trucks:	40.241			
	Right View:	90.0 degrees		Hear	vy Trucks:	40.262			
ELIMA Naiaa Mad	. Coloulations								
VehicleType	REMEI	Traffic Flow	Distance	Finite	Road I	resnel	Rarrier Atte	en Ber	m Atten
Autos:	68.46	-2.04	1	28	-1.20	-4.61	1 0.0	000	0.000
Medium Trucks:	79.45	-20.21	1	31	-1.20	-4.87	7 0.0	000	0.000
Heavy Trucks:	84.25	-22.01	1	.31	-1.20	-5.50	0.0	000	0.000
Inmitigated Noise	l ovols (with	out Topo and b	arrior atte	nuation)					
VehicleType	Lea Peak Hou	r Lea Dav	Lea	Evenina	Lea Nia	ht	Ldn	CI	NEL
Autos:	66.	.5 65	5.3	64.2	1 5	60.1	67.7	7	68.2
Medium Trucks:	59.	3 58	3.7	52.5		52.7	60.4	1	60.6
Heavy Trucks:	62.	3 6	1.5	57.9		56.0	63.5	5	63.8
Vehicle Noise:	68.	5 6	7.5	65.3		62.0	69.6	3	70.
Centerline Distand	ce to Noise Co	ntour (in feet)							
			70) dBA	65 dB/	1	60 dBA	55	dBA
		L	dn:	42		90	193		416
		CNE	EL:	44		96	206		443

	FHWA-RD	0-77-108 HIGH	NAY NOI	SE PREDI	CTION MC	DEL (9/1:	2/2021)		
Scenar	io: OY NP				Project N	lame: FC	SP & POCC		
Road Nam	e: County Line	e Rd.			Job Nu	mber: 154	11		
Road Segme	nt: e/o I-10 WE	3 Ramps							
SITE	SPECIFIC IN	IPUT DATA			NC	DISE MO	DEL INPUT	s	
Highway Data				Site Cor	nditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	14,950 vehicle	s			Aut	os: 15		
Peak Hour	Percentage:	7.70%		Me	edium Truc	ks (2 Axle	es): 15		
Peak H	lour Volume:	1,151 vehicles		He	eavy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	45 mph		Vohiclo	Mix				
Near/Far La	ne Distance:	36 feet		Venicle	iicleTvne	Da	v Evenina	Niaht	Daily
Site Data					AL	itos: 70	.6% 13.6%	15.89	6 97.53%
Ba	rrior Hoight:	0.0 foot		N	ledium Tru	cks: 80	.3% 4.7%	14.99	6 1.49%
Barrier Type (0 M	(all 1 Rorm):	0.0 leet			Heavy Tru	cks: 75	.9% 8.2%	15.9%	6 0.98%
Centerline Di	st. to Barrier:	44.0 feet							
Centerline Dist.	to Observer:	44.0 feet		Noise S	ource Ele	vations (i	n feet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000) -		
Observer Height	Above Pad):	5.0 feet		Medil	m Trucks:	2.297	Crada Ad	livetmer	* 0.0
P	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.004	Grade Adj	justmen	12: 0.0
Roi	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance ((in feet)	-	
	Road Grade:	0.0%			Autos:	40.460)	-	
	Left View:	-90.0 degree	s	Mediu	m Trucks:	40.241	1		
	Right View:	90.0 degree	s	Hea	vy Trucks:	40.262	2		
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Att	en Be	erm Atten
Autos:	68.46	-1.33		1.28	-1.20	-4.	61 0.0	000	0.000
Medium Trucks:	79.45	-19.51		1.31	-1.20	-4.	87 0.0	00C	0.000
Heavy Trucks:	84.25	-21.31		1.31	-1.20	-5.	50 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	barrier att	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	Ldn	0	ONEL
Autos:	67	.2 6	6.0	64.9)	60.8	68.4	4	68.9
Medium Trucks:	60	.1 (59.4	53.2	2	53.4	61.1	1	61.3
Heavy Trucks:	63	.1 6	52.2	58.6	i	56.7	64.2	2	64.6
Vehicle Noise:	69	.2 6	58.2	66.0)	62.7	70.3	3	70.8
Centerline Distant	ce to Noise Co	ontour (in feet)						-	
			7	'0 dBA	65 dl	BA	60 dBA	5	5 dBA
		1	dn:	46		100	215	i	464
		CA	IEL:	49		106	229	I.	494

	FHWA-R	D-77-108 HIGI	IWAY	NOISE	PREDIC	TION MC	DEL (9	/12/20	21)		
Scenar	rio: OY WP					Project N	<i>lame:</i> F	CSP 8	R POCC		
Road Nan	ne: County Lin	e Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: e/o I-10 W	B Ramps									
SITE	SPECIFIC II	NPUT DATA				NC	DISE M	IODEL	INPUTS	;	
Highway Data				S	Site Con	ditions (H	lard = 1	10, Soi	ft = 15)		
Average Daily	Traffic (Adt):	15,282 vehic	es				A	lutos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	1,177 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	36 feet		F	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						AL	itos: T	70.6%	13.6%	15.8%	97.59%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 8	80.3%	4.7%	14.9%	1.45%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 1	75.9%	8.2%	15.9%	0.96%
Centerline Di	ist. to Barrier:	44.0 feet		^	loise So	ource Elev	vations	(in fe	et)		
Centerline Dist.	to Observer:	44.0 feet		_		Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heat	v Trucks	8.0	04	Grade Adii	ustment	0.0
P	ad Elevation:	0.0 feet			mour	<i>y maono.</i>	0.0				
Ro	ad Elevation:	0.0 feet		L	ane Eq.	uivalent L	Distanc	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	el E	Barrier Atte	n Ber	m Atten
Autos:	68.46	-1.24		1.28	3	-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	79.45	-19.51		1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.31		1.31		-1.20	-	-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	rening	Leq N	ight		Ldn	CI	VEL
Autos:	67	7.3	66.1		65.0		60.9		68.5		69.0
Medium Trucks:	60	D.1	59.4		53.2		53.4		61.1		61.3
Heavy Trucks:	63	3.1	62.2		58.6		56.7		64.2		64.6
Vehicle Noise:	69	9.2	68.2		66.1		62.8		70.4		70.8
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70 d	IBA	65 dl	BA	60	0 dBA	55	dBA
			Ldn:		47		101		217		468
		C	NEL:		50		108		232		499

	FHWA-RD	-//-108 HIGH	IVVAT	NUISE	REDIC		ODEL (S	9/12/2	021)		
Scenario	OY Int NP					Project	Name: I	CSP	& POCC		
Road Name	County Line	Rd.				Job N	umber: 1	15411			
Road Segment	: e/o I-10 WB	Ramps									
SITE S	PECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	14,950 vehicle	es				,	Autos:	15		
Peak Hour P	ercentage:	7.70%			Mee	dium Tru	ucks (2 A	(xles)	15		
Peak Ho	ur Volume:	1,151 vehicle	s		Hea	avy Truo	cks (3+ A	(xles)	15		
Vehi	cle Speed:	45 mph		V	ehicle N	lix					
Near/Far Lane	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						/	Autos:	70.6%	13.6%	15.8%	97.53
Barr	ier Heiaht:	0.0 feet			Me	dium Ti	rucks:	80.3%	4.7%	14.9%	1.49
Barrier Type (0-Wa	II, 1-Berm):	0.0			F	leavy Ti	rucks:	75.9%	8.2%	15.9%	0.98
Centerline Dist.	to Barrier:	44.0 feet		N	nise So	urco Fl	ovations	in fa	oot)		
Centerline Dist. to	Observer:	44.0 feet			0136 00	Auto	evalion.	000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Truck	s. 0.0	207			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Truck	s. 2.2 s. 8(104	Grade Ad	iustment.	: 0.0
Pad	Elevation:	0.0 feet			mour	,					
Road	Elevation:	0.0 feet		L	ane Equ	iivalent	Distanc	e (in :	feet)		
R	oad Grade:	0.0%				Auto	s: 40.4	460			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 40.	241			
1	Right View:	90.0 degree	es		Heav	y Truck	s: 40.2	262			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.33		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.51		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.31		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	er attenu	ation)						
VehicleType L	eq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	CI	NEL
Autos:	67.	2	66.0		64.9		60.8		68.4	1	68
Medium Trucks:	60.	1	59.4		53.2		53.4		61.	1	61
Heavy Trucks:	63.	1	62.2		58.6		56.7		64.	2	64
Vehicle Noise:	69.	2	68.2		66.0		62.7		70.3	3	70
Centerline Distance	to Noise Co	ntour (in feet,)								
			L	70 di	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:		46		100		215		46
		0	NEL		40		106		220		40/

Thursday, August 17, 2023

	FHWA-RD)-77-108 HIGH\	VAY NO	ISE F	PREDIC	TION MO	DEL (9	/12/2	021)		
Scenari Road Nam Road Segmer	o: OY Int WP e: County Line nt: e/o I-10 WE	Rd. Ramps				Project N Job Nur	lame: F nber: 1	CSP 5411	& POCC		
SITE	SPECIFIC IN	PUT DATA				NC	ISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	14,950 vehicle 7.70% 1,151 vehicles	5		Me He	dium Truc avy Truck	A ks (2 A s (3+ A	Autos: xles): xles):	15 15 15		
Vei	hicle Speed:	45 mph		V	ohiclo I	Nix					
Near/Far La	ne Distance:	36 feet		-	Vehi	icleType		Dav	Evenina	Niaht	Daily
Site Data						Au	tos:	70.6%	13.6%	15.8%	97.53%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Dis	st. to Barrier:	44.0 feet		N	oise So	urce Elev	ations	in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	000	.,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	iustment	: 0.0
Pa	ad Elevation:	0.0 feet									
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent L	listanc	e (in i	teet)		
F	Road Grade:	0.0%				Autos:	40.4	160			
	Left View: Right View:	-90.0 degree 90.0 degree	5 5		Mediui Heav	n Trucks: y Trucks:	40.2 40.2	241 262			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.33		1.28		-1.20		4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.51		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.31		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier at	tenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	q Eve	ening	Leq N	ight		Ldn	C	NEL
Autos:	67	.2 6	6.0		64.9		60.8		68.4	1	68.9
Medium Trucks:	60	.1 5	9.4		53.2		53.4		61.1	1	61.3
Heavy Trucks:	63	.1 6	2.2		58.6		56.7		64.2	2	64.6
Vehicle Noise:	69	.2 6	i8.2		66.0		62.7		70.3	3	70.8
Centerline Distance	e to Noise Co	ntour (in feet)									
			. ட	70 dl	BA	65 dE	BA 10-	6	60 dBA	55	dBA
			.an:		46		100		215		464
		CN	EL:		49		106		229		494

	FHWA-RD	D-77-108 HIGH	WAY NC	ISE P	REDIC	TION MC	DEL (9	/12/2	021)		
Scenar	io: 2050 NP					Project N	<i>lame:</i> F	CSP	& POCC		
Road Nan	ne: County Line	e Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: e/o I-10 WE	3 Ramps									
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODE	L INPUTS	5	
Highway Data				Si	te Con	ditions (H	lard = 1	10, S	oft = 15)		
Average Daily	Traffic (Adt):	18,738 vehicle	s				A	lutos.	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	:ks (2 A	xles).	15		
Peak H	lour Volume:	1,443 vehicles	6		He	avy Truck	s (3+ A	xles).	15		
Ve	hicle Speed:	45 mph		V	hiclo I	Mix					
Near/Far La	ne Distance:	36 feet		Ve	Veh	icleType		Dav	Evening	Night	Daily
Site Data				-	ven	AL	itos:	70.6%	6 13.6%	15.8%	97.53%
Be	rrior Hoimht	0.0 feet			M	edium Tru	cks: 8	30.3%	6 4.7%	14.9%	5 1.49%
Ba Barriar Tuna (0.14	rrier Height:	0.0 teet			1	Heavy Tru	cks:	75.9%	6 8.2%	15.9%	0.98%
Centerline Di	st to Barrier	0.0 44.0 feet									
Centerline Dist	to Observer:	44.0 feet		No	oise Sc	ource Ele	vations	(in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	00			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Trucks:	2.2	97			
P	ad Elevation:	0.0 feet			Heav	y Trucks:	8.0	04	Grade Adji	ıstment	t: 0.0
Ro	ad Elevation:	0.0 feet		La	ne Ea	uivalent L	Distanc	e (in	feet)		
1.0	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degree	s		Mediu	m Trucks:	40.2	41			
	Right View:	90.0 degree	s		Heav	y Trucks:	40.2	62			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	e/	Barrier Atte	n Be	rm Atten
Autos:	68.46	-0.35		1.28		-1.20		4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.53		1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-20.32		1.31		-1.20	-	5.50	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Eve	ening	Leq N	ight		Ldn	С	NEL
Autos:	68	.2	67.0		65.9		61.8		69.4		69.9
Medium Trucks:	61	.0	60.4		54.2		54.4		62.1		62.3
Heavy Trucks:	64	.0	63.2		59.5		57.6		65.2		65.5
Vehicle Noise:	70	.2	69.1		67.0		63.7		71.3		71.7
Centerline Distant	ce to Noise Co	ontour (in feet)									
				70 dE	BA	65 dl	BA		60 dBA	55	i dBA
			Ldn:		54		116		250		539
		CI	VEL:		57		124		267		575

	FHWA-R	D-77-108 HIGI	WAY N	NOISE F	REDIC	TION MC	DEL (9/12/2	021)		
Scenar Road Nam Road Segme	io: 2050 WP ie: County Lin nt: e/o I-10 W	e Rd. B Ramps				Project N Job Nu	lame: I mber: '	-CSP 15411	& POCC		
SITE	SPECIFIC II	NPUT DATA				N	DISEN	IODE	L INPUTS	3	
Highway Data				Si	te Con	ditions (I	Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	19,070 vehic	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium True	cks (2 A	Axles).	15		
Peak H	lour Volume:	1,468 vehicle	s		He	avy Truck	(S (3+ A	Axles).	15		
Ve	hicle Speed:	45 mph		V	hicle	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	6 13.6%	15.8%	97.57%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	icks:	80.3%	6 4.7%	14.9%	1.46%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	icks:	75.9%	6 8.2%	15.9%	0.96%
Centerline Di	st. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	8.0	004	Grade Adj	ustment	0.0
Pa	ad Elevation:	0.0 feet		1.		uiualant l	Diotono	o (in	fact		
Roa	ad Elevation:	0.0 feet		Lā	ine Eq	uivalent I	Jistand	e (In	reet)		
	Road Grade:	0.0%				Autos:	40.4	460			
	Left View:	-90.0 degre	es		Meaiu	m Trucks:	40.	241			
	Right view.	90.0 degre	es		near	ly muchs.	40.	202			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-0.28	1	1.28		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.53	5	1.31		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-20.32		1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	68	3.3	67.1		66.0		61.8	3	69.4		69.9
Medium Trucks:	6	1.0	60.4		54.2		54.4	ł	62.1		62.3
Heavy Trucks:	64	4.0	63.2		59.5		57.6	;	65.2	2	65.5
Vehicle Noise:	70).2	69.2		67.1		63.8	5	71.4		71.8
Centerline Distant	ce to Noise C	ontour (in fee	t)	70		05.1	0.4		0.104		-10.4
				70 dE	SA E I	65 d	BA		ы ава	55	ава
		~	Lan:		54		117		252		543
		C	NEL:		58		125		269		579

	FHWA-RL		WAT	NUISI	EPREDIC		IUDEL (9/12/2	021)		
Scenario	2050 Int NF)				Projec	t Name:	FCSP	& POCC		
Road Name	: County Line	e Rd.				Job I	lumber:	15411			
Road Segment	: e/o I-10 WE	3 Ramps									
SITE S	PECIFIC IN	IPUT DATA				I	NOISE	MODE	L INPUT	S	
Highway Data					Site Cond	ditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	22,644 vehicle	es					Autos:	15		
Peak Hour F	ercentage:	7.70%			Med	dium Ti	ucks (2	Axles):	15		
Peak Ho	ur Volume:	1,744 vehicle	s		Hea	avy Tru	cks (3+ .	Axles):	15		
Veh	icle Speed:	45 mph			Vehicle N	lix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.6%	13.6%	15.8%	97.53%
Barr	ier Heiaht:	0.0 feet			Me	dium 1	rucks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-Wa	ll, 1-Berm):	0.0			H	leavy 1	rucks:	75.9%	8.2%	15.9%	0.98%
Centerline Dist	to Barrier:	44.0 feet			Noise So	urce E	levation	s (in f	eet)		
Centerline Dist. to	Observer:	44.0 feet				Auto	s: 0.	000	,		
Barrier Distance to	Observer:	0.0 feet			Mediun	n Truck	s: 2.	297			
Observer Height (A	bove Pad):	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justment	: 0.0
Pad	Elevation:	0.0 feet			Lano Equ	ivalor	t Dicton	co (in	foot)		
Road	Elevation:	0.0 feet			Lane Lyu	Auto		460	leel)		
л	Loft View	0.0%			Modium	AUIC Truck	S. 40	2/1			
	Leit View. Right View:	-90.0 degre	25 26		Heav	v Truck	(S) 40	262			
	light view.	50.0 degree			nour.	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0. 10	202			
FHWA Noise Model	Calculations	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	0.47		1.	28	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-17.70		1.	31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-19.50		1.3	31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType L	eq Peak Hou.	r Leq Day	<i>(</i>	Leq E	Evening	Leq	Night		Ldn	С	NEL
Autos:	69	.0	67.8		66.7		62.	6	70.3	2	70.
Medium Trucks:	61	.9	61.3		55.0		55.	2	62.	9	63.
Heavy Trucks:	64	.9	54.0		60.4		58.	5	66.	1	55.4
venicie Noise:	/1	.0	70.0		67.8		64.	5	12.	I	12.
Centerline Distance	to Noise Co	ontour (in feet)								10.4
			1 - 1	70	ава	65	aBA	1 (ы ава	55	aBA
		0	Lan:		61		132	-	284		612
		C	VEL.		65		140)	303		652

Thursday, August 17, 2023

	FHWA-RI	D-77-108 HIGHW	AY NOIS	E PREDIO	CTION MOD	EL (9/12/	2021)		
Scenar	io: 2050 Int W	Р			Project Na	me: FCSI	P & POCC		
Road Nam	e: County Line	e Rd.			Job Num	ber: 1541	1		
Road Segme	nt: e/o I-10 WE	3 Ramps							
SITE	SPECIFIC IN	IPUT DATA			NOI	SE MOD	EL INPUT	s	
Highway Data				Site Cor	ditions (Ha	rd = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	22,644 vehicles				Auto	s: 15		
Peak Hour	Percentage:	7.70%		Me	dium Truck	s (2 Axles): 15		
Peak H	lour Volume:	1,744 vehicles		He	avy Trucks	(3+ Axles): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet		Veh	icleTvpe	Dav	Evenina	Niaht	Dailv
Site Data					Auto	os: 70.6	% 13.6%	15.8	% 97.53%
Ba	rrier Height:	0.0 feet		М	edium Truc	ks: 80.3	% 4.7%	14.9	% 1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Truc	ks: 75.9	% 8.2%	15.9	% 0.98%
Centerline Di	st. to Barrier:	44.0 feet		Noise S	ource Eleva	tions (in	feet)		
Centerline Dist.	to Observer:	44.0 feet			Autos:	0.000	1000		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2 297			
Observer Height	(Above Pad):	5.0 feet		Hea	v Trucks	8 004	Grade Ad	diustme	nt: 0.0
P	ad Elevation:	0.0 feet			<i>, , , , , , , , , ,</i>	0.001		,	
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (ir	n feet)		
	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees		Mediu	m Trucks:	40.241			
	Right View:	90.0 degrees		Hea	vy Trucks:	40.262			
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road I	Fresnel	Barrier At	ten B	erm Atten
Autos:	68.46	0.47	1	.28	-1.20	-4.6	1 0.	.000	0.00
Medium Trucks:	79.45	-17.70	1	.31	-1.20	-4.8	7 0.	.000	0.000
Heavy Trucks:	84.25	-19.50	1	.31	-1.20	-5.50	0 0.	.000	0.00
Unmitigated Noise	e Levels (with	out Topo and b	arrier atte	enuation)					
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq Nig	ht	Ldn		CNEL
Autos:	69	.0 6	7.8	66.7		62.6	70	.2	70.1
Medium Trucks:	61	.9 6	1.3	55.0		55.2	62.	.9	63.
Heavy Trucks:	64	.9 6	4.0	60.4		58.5	66.	.0	66.
Vehicle Noise:	71	.0 7	0.0	67.8		64.5	72	.1	72.0
Centerline Distant	ce to Noise Co	ontour (in feet)						-	
			7	0 dBA	65 dB/	4	60 dBA	1	55 dBA
		L	dn:	61		132	28	4	612
		CNI	EL:	65		140	30	3	652

	FHWA-RD	0-77-108 HIGH	WAY NOI	SE PREDIO	CTION MO	DEL (9/12)	2021)		
Scenar	io: E				Project N	lame: FCS	P & POCC		
Road Nan	ne: County Line	e Rd.			Job Nu	mber: 1541	1		
Road Segme	nt: e/o Calimes	sa Blvd.							
SITE	SPECIFIC IN	IPUT DATA			NC	ISE MOD	EL INPUTS	s	
Highway Data				Site Cor	nditions (H	lard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt):	9,685 vehicle	s			Auto	s: 15		
Peak Hour	Percentage:	7.70%		Me	edium Truc	ks (2 Axles	s): 15		
Peak H	lour Volume:	746 vehicles	5	He	eavy Truck	s (3+ Axles	s): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet		Veh	nicleType	Dav	Evenina	Night	Daily
Site Data					Au	tos: 70.6	% 13.6%	15.8%	97.53%
Ba	rrier Height:	0.0 feet		м	ledium Tru	cks: 80.3	% 4.7%	14.9%	1.49%
Barrier Type (0-W	/all 1-Rerm) [.]	0.0			Heavy Tru	cks: 75.9	% 8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet		Noise O			64)		
Centerline Dist.	to Observer:	44.0 feet		Noise S	ource Elev	ations (in	reet)		
Barrier Distance	to Observer:	0.0 feet		Madiu	Autos:	0.000			
Observer Height	(Above Pad):	5.0 feet		Weald	Trucks.	2.297	Grade Adi	iustmont	H 0 0
P	ad Elevation:	0.0 feet		пеа	vy mucks.	0.004	Grade Auj	usuneni	. 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	Distance (ii	n feet)		
	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degree	s	Mediu	m Trucks:	40.241			
	Right View:	90.0 degree	s	Hea	vy Trucks:	40.262			
FHWA Noise Mod	el Calculation:	s							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	68.46	-3.22		1.28	-1.20	-4.6	1 0.0	00	0.000
Medium Trucks:	79.45	-21.39		1.31	-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	84.25	-23.19		1.31	-1.20	-5.5	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier at	tenuation)					-
VehicleType	Leq Peak Hou	r Leq Day	Leo	evening	Leq N	ight	Ldn	C	NEL
Autos:	65	.3 (64.1	63.0)	58.9	66.5	ز	67.0
Medium Trucks:	58	.2	57.6	51.3	;	51.5	59.2	2	59.4
Heavy Trucks:	61	.2	60.3	56.7	,	54.8	62.4	ţ	62.7
Vehicle Noise:	67	.3	66.3	64.2	2	60.9	68.5	i	68.9
Centerline Distant	ce to Noise Co	ontour (in feet)							-
			7	70 dBA	65 dE	BA	60 dBA	55	dBA
			Ldn:	35		75	161		347
		CI	IEL:	37		80	172		370

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION MC	DEL (S	/12/2	021)		
Scenar	io: OY NP					Project N	<i>lame:</i> F	CSP	& POCC		
Road Nan	ne: County Line	e Rd.				Job Nu	mber: 1	5411			
Road Segme	nt: e/o Calime	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	ODE	L INPUTS	3	
Highway Data				5	Site Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	11,690 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	lour Volume:	900 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleTvpe		Dav	Evenina	Night	Dailv
Site Data						AL	itos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-W	/all, 1-Berm):	0.0			I	Heavy Tru	cks:	75.9%	8.2%	15.9%	0.98%
Centerline Di	st. to Barrier:	44.0 feet			loise Sc	ource Fle	vations	in fe	pet)		
Centerline Dist.	to Observer:	44.0 feet		-	10,00 00	Autos	0.0	000	.00		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	007			
Observer Height	(Above Pad):	5.0 feet			Heat	n Trucks.	2.2	04	Grade Adi	ustment	0.0
P	ad Elevation:	0.0 feet			near	ly macks.	0.0	/04	,		0.0
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent I	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.40		1.28	3	-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-20.57		1.31	1	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-22.37		1.31	1	-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	V	Leq Ev	rening	Leq N	light		Ldn	CI	NEL
Autos:	66	5.1	65.0		63.8		59.7		67.3		67.8
Medium Trucks:	59	58.4		52.1		52.3		60.0)	60.2	
Heavy Trucks:	62	2.0	61.1		57.5		55.6		63.2		63.5
Vehicle Noise:	68	3.1	67.1		65.0		61.7		69.3		69.7
Centerline Distan	ce to Noise Co	ontour (in fee	9			r					
			L	70 a	IBA	65 di	BA	6	60 dBA	55	dBA
	Ldn:						85		183		394
		C	NEL:		42		90		195		420

	THURAND	-77-100 111011	WAT	NOISI	FREDIC		ODEL (9/12/2	021)		
Scenario	CY WP					Project	Name: I	CSP	& POCC		
Road Name	County Line	Rd.				Job N	umber:	15411			
Road Segmen	t: e/o Calimes	a Blvd.									
SITE S	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data					Site Cond	ditions	(Hard =	10, So	oft = 15)		
Average Daily 7	raffic (Adt):	11,908 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.70%			Med	dium Tri	icks (2 A	(xles)	15		
Peak Ho	our Volume:	917 vehicle	s		Hea	avy Truo	cks (3+ A	(xles)	15		
Veh	icle Speed:	45 mph			Vehicle N	lix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						/	Autos:	70.6%	13.6%	15.8%	97.58%
Bari	ier Heiaht:	0.0 feet			Me	dium Ti	ucks:	80.3%	4.7%	14.9%	1.46%
Barrier Type (0-Wa	ill, 1-Berm):	0.0			h	leavy Ti	ucks:	75.9%	8.2%	15.9%	0.96%
Centerline Dis	t. to Barrier:	44.0 feet			Noise So	urce El	evation	in f	eet)		
Centerline Dist. t	o Observer:	44.0 feet				Auto	s [.] 01	000			
Barrier Distance to	o Observer:	0.0 feet			Mediun	n Truck	s: 2.5	297			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	justment	: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet			Lane Equ	ivalent	Distanc	e (in	reet)		
R	oad Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degree	es		Meaiun	n Truck	s: 40.	241			
	Right view:	90.0 degree	es		Heav	y Truck	5. 40.	202			
FHWA Noise Mode	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	68.46	-2.32		1.1	28	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-20.57		1.3	31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-22.37		1.3	31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	er attei	nuation)						
VehicleType	eq Peak Hou	r Leq Day	<i>(</i>	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	66.	.2	65.0		63.9		59.8		67.4	4	67.
Medium Trucks:	59.	.0	58.4		52.1		52.3		60.	0	60.
Heavy Trucks:	62.	61.1		57.5		55.6		63.	2	63.	
Vehicle Noise:	68.	.2	67.1		65.0		61.7		69.3	3	69.
Centerline Distance	e to Noise Co	ntour (in feet,)					_			
			. L	70	dBA	65	dBA		60 dBA	55	dBA
		-	Ldn:		40		85		184	-	397
		C	VEL:		42		91		196		423

Thursday, August 17, 2023

FHWA-R	D-77-108 HIGH	IWAY N	OISE F	PREDIC	TION MC	DEL (9	9/12/2	021)		
Scenario: OY Int NP Road Name: County Lin Road Segment: e/o Calime	e Rd. sa Blvd.				Project N Job Nu	lame: F mber: 1	-CSP 15411	& POCC		
SITE SPECIFIC II	NPUT DATA				NC	DISE N	IODE	L INPUT	5	
Highway Data			S	ite Con	ditions (F	lard =	10, So	oft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	11,690 vehicl 7.70% 900 vehicle	es s		Me He	dium Truc avy Truck	/ cks (2 A is (3+ A	Autos: (xles): (xles):	15 15 15		
Vehicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far Lane Distance:	36 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data					AL	itos:	70.6%	13.6%	15.8%	6 97.53%
Barrier Height:	0.0 feet			Me	edium Tru	cks:	80.3%	4.7%	14.9%	6 1.49%
Barrier Type (0-Wall, 1-Berm):	0.0			ŀ	leavy Tru	cks:	75.9%	8.2%	15.9%	6 0.98%
Centerline Dist. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	s (in fe	eet)		
Centerline Dist. to Observer:	44.0 feet				Autos:	0.0	000	í		
Barrier Distance to Observer:	0.0 feet			Mediur	m Trucks:	2.2	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	004	Grade Adj	ustmer	t: 0.0
Pad Elevation:	0.0 feet				,					
Road Elevation:	0.0 feet		Li	ane Equ	uivalent I	Distanc	e (in	feet)		
Road Grade:	0.0%				Autos:	40.4	460			
Left View:	-90.0 degre	es		Mediur	m Trucks:	40.2	241			
Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Model Calculation	s									
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos: 68.46	-2.40		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks: 79.45	-20.57		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 84.25	-22.37		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType Leq Peak Ho	ur Leq Da	/ [leq Eve	ening	Leq N	light		Ldn	(ONEL
Autos: 6	5.1	65.0		63.8		59.7		67.3	3	67.8
Medium Trucks: 5	9.0	58.4		52.1		52.3		60.0)	60.2
Heavy Trucks: 6	2.0	61.1		57.5		55.6		63.2	2	63.5
		07.1		05.0		01.7		09.3	,	09.7
Centerline Distance to Noise C	ontour (in feel	2	70 dF	за	65 di	BA		50 dBA	5	5 dBA
		Ldn:		39	00 0.	85	<u>`</u>	183		394
	CNEL:							195		420

	FHWA-RL	0-77-108 HIGH	WATN	IOISEI	PREDIC		ODEL (9/12/2	021)		
Scenari	o: OY Int WP					Project	Name: I	FCSP	& POCC		
Road Nam	e: County Line	e Rd.				Job N	umber:	15411			
Road Segmer	nt: e/o Calimes	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE		s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	11,690 vehicle	es					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2 A	(xles)	15		
Peak H	our Volume:	900 vehicle	5		He	avy Truc	:ks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		v	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-	Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	6 97.53%
Bai	rier Height	0.0 feet			Me	edium Tr	ucks:	80.3%	4.7%	14.9%	6 1.49%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	6 0.98%
Centerline Dis	t. to Barrier:	44.0 feet		N	loise So	urce El	evation	s (in fi	eef)		
Centerline Dist.	to Observer:	44.0 feet			0.00 00	Autos	· 01	200			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	2	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	. 2.	104	Grade Ad	iustmen	t: 0.0
Pa	d Elevation:	0.0 feet			nour	<i>y maon</i>	. 0.				
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	ce (in	feet)		
ŀ	Road Grade:	0.0%				Autos	s: 40	460			
	Left View:	-90.0 degree	es		Mediur	n Trucks	s: 40.:	241			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 40.	262			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-2.40		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-20.57		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.37		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	· .	Leq Ev	ening	Leq	Night		Ldn	0	NEL
Autos:	66	.1	65.0		63.8		59.7	,	67.3	3	67.8
Medium Trucks:	59	.0	58.4		52.1		52.3	3	60.)	60.2
Heavy Trucks:	62	.0	61.1		57.5		55.6	6	63.	2	63.5
Vehicle Noise:	68	.1	67.1		65.0		61.7	, 	69.3	3	69.7
Centerline Distance	e to Noise Co	ontour (in feet,									
				70 d	BA	65 0	dBA		60 dBA	55	5 dBA
			Ldn:		39		85		183		394
		C	NEL:		42		90		195		420

	FHWA-R	D-77-108 HIGH	IWAY N		REDIC	TION MC	DEL (S	9/12/20	021)		
Scenai Road Nan Road Segme	rio: 2050 NP ne: County Lin ent: e/o Calime	e Rd. sa Blvd.				Project N Job Nu	lame: F mber: 1	CSP 15411	& POCC		
SITE	SPECIFIC II	NPUT DATA				N	DISE N	IODE	L INPUTS	3	
Highway Data				S	ite Con	ditions (I	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	14,660 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Truo	cks (2 A	(xles):	15		
Peak H	lour Volume:	1,129 vehicle	s		He	avy Truck	(S (3+ A	(xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.8%	97.53%
Ba	rrier Heiaht:	0.0 feet			M	edium Tru	icks:	80.3%	4.7%	14.9%	1.49%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	75.9%	8.2%	15.9%	0.98%
Centerline D	ist. to Barrier:	44.0 feet		N	oise Sc	ource Ele	vations	s (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet		-		,					
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distanc	e (in i	'eet)		
	Road Grade:	0.0%				Autos:	40.4	460			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.42		1.28		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-19.59		1.31		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.39		1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ [Leq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	67	65.9		64.8		60.7		68.3	1	68.8	
Medium Trucks:	60	59.4		53.1		53.3		61.0)	61.2	
Heavy Trucks:	Heavy Trucks: 63.0 62						56.6		64.2		64.5
Vehicle Noise:	69	9.1	68.1		66.0		62.7		70.3		70.7
Centerline Distan	ce to Noise C	ontour (in feel)								
				70 dE	BA	65 d	BA	6	60 dBA	55	dBA
	Ldn:						99		212		458
		С	NEL:		49		105		226		488

	FHWA-RD-			SE PREDIC		UDEL (S	12/2	021)		
Scenario	2050 WP				Project	Name: F	CSP	& POCC		
Road Name	: County Line	Rd.			Job Ni	imber: 1	5411			
Road Segment	: e/o Calimesa	I Blvd.								
SITE S	PECIFIC INF	PUT DATA			N	OISE N	IODE	L INPUT	s	
Highway Data				Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt): 1	4,878 vehicles				A	Autos:	15		
Peak Hour F	ercentage:	7.70%		Me	dium Tru	cks (2 A	xles):	15		
Peak Ho	ur Volume: 1	1,146 vehicles		He	avy Truc	ks (3+ A	xles):	15		
Veh	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	36 feet		Veh	icleType	1	Day	Evening	Night	Daily
Site Data					A	utos:	70.6%	13.6%	15.8%	97.57
Barr	ier Heiaht:	0.0 feet		М	edium Tr	ucks:	80.3%	4.7%	14.9%	1.469
Barrier Type (0-Wa	ll, 1-Berm):	0.0		1	Heavy Tr	ucks:	75.9%	8.2%	15.9%	0.979
Centerline Dist	to Barrier:	44.0 feet		Noise So	ource Ele	vations	(in fe	eet)		
Centerline Dist. to	Observer:	44.0 feet			Autos	: 0.0	00	,		
Barrier Distance to	Observer:	0.0 feet		Mediu	m Trucks	2.2	97			
Observer Height (A	bove Pad):	5.0 feet		Heav	y Trucks	: 8.0	04	Grade Ad	justment	0.0
Pac	d Elevation:	0.0 feet		Long Eg	vivalant	Distanc	o (in	fact)		
Road	d Elevation:	0.0 feet		Lane Eq	avent	Distanc		leel)		
R	oad Grade:	0.0%		Madiu	Autos	40.4	100			
	Dight View:	-90.0 degrees		Heat	w Trucks	. 40.2	-41 262			
	Night view.	50.0 degrees		11001	y macha	. 40.2	-02			
FHWA Noise Model	Calculations									
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.35		1.28	-1.20		4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.59		1.31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.39		1.31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (withou	ut Topo and b	arrier at	tenuation)						
VehicleType L	.eq Peak Hour	Leq Day	Leo	q Evening	Leq I	Vight		Ldn	C	NEL
Autos:	67.2	2 6	5.0	64.9		60.8		68.4	4	68
Medium Trucks:	60.0) 59	9.4	53.1		53.3		61.	D	61
Heavy Trucks:	63.0	6	2.1	58.5		56.6		64.	2	64.
Vehicle Noise:	69.1	6	3.1	66.0		62.7		70.3	3	70.
Centerline Distance	e to Noise Cor	tour (in feet)		70 dBA	67 -	ID A	,	C dBA		dBA
				IU OBA	050	IDA 00			55	uBA 40
				46		100		214		461
		CN	- L	49		106		228		491

Thursday, August 17, 2023

	FHWA-RD	D-77-108 HIGH	WAY NC	ISE I	PREDIC	TION M	ODEL (9/12/2	021)		
Scenario Road Name Road Segmen	o: 2050 Int NF e: County Line nt: e/o Calimes	e Rd. sa Blvd.				Project Job N	Name: I umber:	CSP 15411	& POCC		
SITE S	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	14,927 vehicle	s				,	Autos:	15		
Peak Hour I	Percentage:	7.70%			Me	dium Tru	icks (2 A	Axles).	15		
Peak Ho	our Volume:	1,149 vehicles	6		He	avy Truc	:ks (3+ A	Axles).	15		
Vel	hicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far Lar	ne Distance:	36 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data					-	4	Autos:	70.6%	6 13.6%	15.89	6 97.53%
Bar	rier Heiaht:	0.0 feet			M	edium Tr	ucks:	80.3%	6 4.7%	14.9%	6 1.49%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	75.9%	6 8.2%	15.9%	6 0.98%
Centerline Dis	t. to Barrier:	44.0 feet		N	loise Sr	ource El	evation	s (in f	eef)		
Centerline Dist. t	to Observer:	44.0 feet		-	0.00 00	Autos	s' 0 (000			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck	s: 2.3	297			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks	s: 8.0	004	Grade Ad	justmer	nt: 0.0
Pa	d Elevation:	0.0 feet		_							
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Autos	s: 40.	460			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 40.	241			
	Right View:	90.0 degree	es		Heav	у ттиска	5. 40.	202			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos:	68.46	-1.34		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.51		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.31		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)					-	
VehicleType	Leq Peak Hou	ir Leq Day	Le	q Ev	ening	Leq	Night		Ldn	(CNEL
Autos:	67	.2	66.0		64.9		60.8	3	68.4	4	68.9
Medium Trucks:	Medium Trucks: 60.0						53.4		61.	1	61.3
Heavy Trucks:	Heavy Trucks: 63.0 6				58.6		56.7	,	64.2	2	64.5
venicie ivoise:	69	.2	08.2		66.0		62.7		70.	3	70.8
Centerline Distanc	e to Noise Co	ontour (in feet,		70 d	RΔ	65	dRΔ		60 dBA	5	5 dB4
			I dn	, o u	46	001	100	I'	215		463
	CNEL:						106		213		494

	FHWA-RI	0-77-108 HIGH	WAYI	NOISE	PREDIC	TION M	ODEL (9/12/2	021)		
Scenar	io: 2050 Int W	P				Project	Name:	FCSP	& POCC		
Road Nan	ne: County Line	e Rd.				Job N	umber:	15411			
Road Segme	nt: e/o Calime	sa Blvd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE	L INPUT	S	
Highway Data					Site Con	ditions	'Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,927 vehicle	es					Autos:	15		
Peak Hour	Percentage:	7.70%			Me	dium Tru	icks (2)	Axles):	15		
Peak H	lour Volume:	1,149 vehicle	5		He	avy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.6%	13.6%	15.89	6 97.53%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	80.3%	4.7%	14.9%	6 1.49%
Barrier Type (0-W	/all_1-Rerm):	0.0			ŀ	leavy Tr	ucks:	75.9%	8.2%	15.9%	6 0.98%
Centerline Di	st. to Barrier:	44.0 feet		H	N 0-			- 6- 4	41		
Centerline Dist.	to Observer:	44.0 feet		Ľ	Noise Sc	ource El	evation	s (in te	eet)		
Barrier Distance	to Observer:	0.0 feet			Martin	Autos	: U.	000			
Observer Height	(Above Pad):	5.0 feet			Mediui	TI Trucks	i: 2.	297	Grade Ac	liustmor	+ 0.0
P	ad Elevation:	0.0 feet			neav	y mucks	. 0.	004	Graue Au	jusunen	1. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 40.	460			
	Left View:	-90.0 degree	es		Mediur	n Trucks	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Trucks	: 40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresr	nel	Barrier At	ten Be	erm Atten
Autos:	68.46	-1.34		1.2	8	-1.20		-4.61	0.	000	0.000
Medium Trucks:	79.45	-19.51		1.3	1	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-21.31		1.3	1	-1.20		-5.50	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	r	Leq E	vening	Leq	Vight		Ldn	0	ONEL
Autos:	67	.2	66.0		64.9		60.8	3	68.	4	68.9
Medium Trucks:	60	59.4		53.2		53.4	1	61.	1	61.3	
Heavy Trucks:	63	.0	62.2		58.6		56.	7	64.	2	64.5
Vehicle Noise:	69	.2	68.2		66.0		62.1	7	70.	3	70.8
Centerline Distant	ce to Noise Co	ontour (in feet,)								
							1BA	6	60 dBA	5	5 dBA
		-	Ldn:		46		100		215	5	463
		C	VEL:		49		106		229)	494

This page intentionally left blank



APPENDIX 9.1:

OPERATIONAL NOISE CALCULATIONS



This page intentionally left blank



15411 - FCSP & POCC

CadnaA Noise Prediction Model: 15411-02.cna Date: 23.08.23 Analyst: B. Lawson

Calculation Configuration

Configurat	ion
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
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 Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
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 (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Lir	nit. Val	ue		Land	l Use	Height		C	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	43.5	43.4	50.1	55.0	55.0	0.0				5.00	а	6309116.91	2314741.67	5.00
R2		R2	39.6	39.6	46.3	55.0	55.0	0.0				5.00	а	6311443.60	2314783.94	5.00
R3		R3	40.8	40.8	47.4	55.0	55.0	0.0				5.00	а	6312231.80	2313129.43	5.00
R4		R4	42.3	42.2	48.9	55.0	55.0	0.0				5.00	а	6311625.11	2309675.87	5.00
R5		R5	40.0	39.9	46.6	55.0	55.0	0.0				5.00	а	6311657.66	2308523.99	5.00
R6		R6	34.6	34.5	41.2	55.0	55.0	0.0				5.00	а	6301629.89	2310707.58	5.00
R7		R7	35.4	35.4	42.0	55.0	55.0	0.0				5.00	а	6302758.19	2315004.38	5.00

Point Source(s)

Name	М.	ID	R	Result. PWL			Lw / L	i	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		585.00	0.00	252.00	5.00	g	6306390.11	2312668.40	51.00
POINTSOURCE		AC11	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6306430.68	2312622.04	51.00
POINTSOURCE		AC10	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6306384.32	2312029.48	51.00
POINTSOURCE		AC09	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6306430.68	2312071.50	51.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6307875.13	2312646.67	51.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6307831.66	2312604.65	51.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6307859.19	2311997.61	51.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6307805.58	2312038.17	51.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6308555.92	2311699.05	51.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6308637.12	2311654.39	51.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6309189.31	2311954.84	51.00
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6309150.74	2311863.49	51.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6306378.48	2312881.48	5.00

Name	М.	ID	Result. PWL				Lw/L	i	Ope	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		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6307895.67	2312904.94	5.00
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6307685.82	2311794.42	5.00
POINTSOURCE		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6306542.72	2311868.72	5.00
POINTSOURCE		TRASH05	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6308389.45	2311528.52	5.00
POINTSOURCE		TRASH06	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6308890.89	2310401.81	5.00
POINTSOURCE		TRASH07	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6309376.08	2311916.27	5.00
POINTSOURCE		TRASH08	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6309845.04	2310702.26	5.00

Line Source(s)

Name	М.	ID	R	esult. PW	'L	Result. PWL'				Lw / L	i	Ор	erating Ti	me	Moving Pt. Src				Heigh	nt
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	Number		Speed			
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	67.9	67.9	67.9	Lw	93.2									8	а
LINESOURCE		TRUCK02	93.2	93.2	93.2	64.1	64.1	64.1	Lw	93.2									8	а
LINESOURCE		TRUCK03	93.2	93.2	93.2	66.5	66.5	66.5	Lw	93.2									8	а
LINESOURCE		TRUCK04	93.2	93.2	93.2	61.2	61.2	61.2	Lw	93.2									8	а
LINESOURCE		TRUCK05	93.2	93.2	93.2	62.8	62.8	62.8	Lw	93.2									8	а

Name	ID	Height			Coordinates						
		Begin		End	х	У	z	Ground			
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)			
LINESOURCE	TRUCK01	8.00	а		6306367.09	2312803.03	8.00	0.00			
					6306138.03	2312801.15	8.00	0.00			
					6305920.24	2311946.88	8.00	0.00			
LINESOURCE	TRUCK02	8.00	а		6306367.09	2312803.03	8.00	0.00			
					6308075.63	2312763.60	8.00	0.00			
					6308092.52	2312722.30	8.00	0.00			
					6308068.12	2311901.82	8.00	0.00			
					6308105.67	2311822.96	8.00	0.00			
LINESOURCE	TRUCK03	8.00	а		6306526.67	2311950.64	8.00	0.00			
					6308068.78	2311924.05	8.00	0.00			
LINESOURCE	TRUCK04	8.00	а		6309077.66	2312450.19	8.00	0.00			
					6309323.30	2311837.10	8.00	0.00			
					6309792.26	2310637.30	8.00	0.00			
					6308992.39	2310324.66	8.00	0.00			
					6308466.45	2311646.93	8.00	0.00			
					6308462.12	2311656.99	8.00	0.00			
					6308456.24	2311666.24	8.00	0.00			
					6308448.97	2311674.44	8.00	0.00			
					6308440.49	2311681.38	8.00	0.00			
					6308431.02	2311686.89	8.00	0.00			
					6308420.79	2311690.82	8.00	0.00			
					6308410.07	2311693.08	8.00	0.00			
					6308399.12	2311693.61	8.00	0.00			
					6308388.23	2311692.40	8.00	0.00			
					6308377.67	2311689.47	8.00	0.00			
					6308367.71	2311684.91	8.00	0.00			
					6307615.97	2311396.56	8.00	0.00			
LINESOURCE	TRUCK05	8.00	а		6308440.20	2310550.00	8.00	0.00			
					6308334.63	2310681.96	8.00	0.00			
					6308052.45	2311390.47	8.00	0.00			
					6308241.25	2311459.50	8.00	0.00			
					6308576.22	2310598.73	8.00	0.00			
					6308442.23	2310547.97	8.00	0.00			
					6308381.33	2310523.61	8.00	0.00			
					6308352.91	2310535.79	8.00	0.00			
					6307628.15	2311297.09	8.00	0.00			
					6307618.00	2311329.57	8.00	0.00			
					6307615.97	2311396.56	8.00	0.00			
					6307579.43	2311563.03	8.00	0.00			

Area Source(s)

Name	М.	ID	R	esult. PW	/L	R	esult. PW		Lw / L	i	Op	Height				
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	Ι
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		Γ
AREASOURCE		CAR01	81.1	81.1	81.1	41.7	41.7	41.7	Lw	81.1					5	а
AREASOURCE		CAR02	81.1	81.1	81.1	41.7	41.7	41.7	Lw	81.1					5	а
AREASOURCE		CAR03	81.1	81.1	81.1	38.8	38.8	38.8	Lw	81.1					5	а
AREASOURCE		COLD01	111.5	111.5	111.5	71.8	71.8	71.8	Lw	111.5					8	а
AREASOURCE		COLD02	111.5	111.5	111.5	74.8	74.8	74.8	Lw	111.5					8	а
AREASOURCE		COLD03	111.5	111.5	111.5	73.0	73.0	73.0	Lw	111.5					8	а
AREASOURCE		COLD04	111.5	111.5	111.5	73.0	73.0	73.0	Lw	111.5					8	а
AREASOURCE		DRY01	103.4	103.4	103.4	61.7	61.7	61.7	Lw	103.4					8	а
AREASOURCE		DRY02	103.4	103.4	103.4	63.0	63.0	63.0	Lw	103.4					8	а
AREASOURCE		DRY03	103.4	103.4	103.4	64.3	64.3	64.3	Lw	103.4					8	а

Name	М.	ID	Result. PWL			Result. PWL"				Lw/L	i	Op	Height			
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min) (min)		(min)		
AREASOURCE		DRY04	103.4	103.4	103.4	64.0	64.0	64.0	Lw	103.4					8	а
AREASOURCE		DRY05	103.4	103.4	103.4	66.7	66.7	66.7	Lw	103.4					8	а
AREASOURCE		DRY06	103.4	103.4	103.4	62.2	62.2	62.2	Lw	103.4					8	а
AREASOURCE		DRY07	103.4	103.4	103.4	64.6	64.6	64.6	Lw	103.4					8	а

Name	ID	ŀ	lei	ght					
		Begin		End		x	у	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	CAR01	5.00	а			6306235.09	2312748.08	5.00	0.00
			-			6306326.37	2312746.63	5.00	0.00
						6306326.37	2312722.00	5.00	0.00
						6306342.30	2312722.00	5.00	0.00
						6206220 71	2312722.00	5.00	0.00
						6306330.71	2012042.02	5.00	0.00
						0300300.08	2312042.32	5.00	0.00
						6306313.33	2311999.06	5.00	0.00
						6306217.71	2311997.61	5.00	0.00
						6306219.16	2312058.46	5.00	0.00
						6306200.32	2312061.35	5.00	0.00
						6306216.26	2312723.45	5.00	0.00
						6306235.09	2312727.80	5.00	0.00
AREASOURCE	CAR02	5.00	а			6307937.42	2312714.76	5.00	0.00
						6308028.70	2312710.41	5.00	0.00
						6308031.60	2312690.13	5.00	0.00
						6308047.53	2312685.78	5.00	0.00
					-	6308034.49	2311994.71	5.00	0.00
						6308017 11	2311994 71	5.00	0.00
			Η			6308015 66	2311972 02	5.00	0.00
			Η			6307021 40	2311074 42	5.00	0.00
			Η			6207021 40	23112020.02	5.00	0.00
			\vdash		_	6207022.49	2312030.93	5.00	0.00
			\mid			030/902.65	2312028.03	5.00	0.00
						6307921.49	2312690.13	5.00	0.00
						6307938.87	2312688.68	5.00	0.00
AREASOURCE	CAR03	5.00	а			6308334.63	2311816.80	5.00	0.00
						6308545.77	2311973.11	5.00	0.00
						6308744.72	2312044.17	5.00	0.00
						6308736.60	2312072.59	5.00	0.00
						6308874.65	2312155.82	5.00	0.00
						6308992.39	2312202.52	5.00	0.00
						6308982.24	2312241.09	5.00	0.00
						6308998.48	2312269.51	5.00	0.00
					_	6309089.84	2312308.08	5.00	0.00
						6309191 34	2312036.05	5.00	0.00
						6200154.90	2312030.05	5.00	0.00
						6309154.80	2312025.90	5.00	0.00
						6309160.89	2312009.66	5.00	0.00
						6308531.56	2311761.98	5.00	0.00
						6308525.47	2311776.19	5.00	0.00
						6308371.18	2311719.35	5.00	0.00
AREASOURCE	COLD01	8.00	а			6306356.79	2312713.31	8.00	0.00
						6306358.24	2312777.06	8.00	0.00
						6307905.55	2312746.63	8.00	0.00
						6307901.15	2312681.50	8.00	0.00
AREASOURCE	COLD02	8.00	а			6306526.30	2312038.17	8.00	0.00
						6307709.96	2312019.34	8.00	0.00
						6307709.96	2311974.43	8.00	0.00
						6306526.30	2311997.61	8.00	0.00
	01 003	8 00	2			6309209 61	2311873 64	8 00	0.00
	222003	0.00	4			6309260 27	2311220 20	8 00	0.00
			H			6309751 65	2310641 24	8.00 8.00	0.00
			\vdash			6200600 75	2210627.15	0.00	0.00
	01004	0.00	+			6209524 50	201027.15	0.00	0.00
AKEASOURCE	COLD04	8.00	a			0308531.56	2311015.81	8.00	0.00
						6308584.34	2311630.03	8.00	0.00
						6309071.57	2310389.63	8.00	0.00
						6309016.75	2310365.26	8.00	0.00
AREASOURCE	DRY01	8.00	а			6306362.59	2312832.11	8.00	0.00
						6306359.69	2312894.41	8.00	0.00
						6306665.38	2312890.06	8.00	0.00
					_	6306666.83	2312942.22	8.00	0.00
						6307911.35	2312919.04	8.00	0.00
						6307905.55	2312810.38	8.00	0.00
AREASOURCE	DRY02	8.00	a			6306524.85	2311912.13	8.00	0.00
						6307704.17	2311893.29	8.00	0.00
					_	6307701.27	2311783.19	8.00	0.00
			H			6306724 78	2311799 12	8 00	0.00
			H		_	6306720 50	2311855 62	2.00 2.00	0.00
			Η			6306522 40	2311957 00	8.00 8.00	0.00
	DRVOD	0.00				6207021.02	2211225.00	0.00	0.00
AREASOURCE	UKIUS	8.00	a			030/821.02	2311335.66	8.00	0.00
						0308013.88	2311412.80	8.00	0.00

Name	ID	ŀ	lei	ght	Coordinates							
		Begin		End	х	У	z	Ground				
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)				
					6308233.13	2310817.98	8.00	0.00				
					6308180.35	2310801.74	8.00	0.00				
					6308115.38	2310964.15	8.00	0.00				
					6308052.45	2310945.88	8.00	0.00				
					6307997.64	2311106.26	8.00	0.00				
					6307934.70	2311083.92	8.00	0.00				
AREASOURCE	DRY04	8.00	а		6308099.14	2311374.23	8.00	0.00				
					6308210.80	2311416.86	8.00	0.00				
					6308521.41	2310617.00	8.00	0.00				
					6308468.62	2310596.70	8.00	0.00				
					6308417.87	2310710.38	8.00	0.00				
					6308365.09	2310700.23	8.00	0.00				
AREASOURCE	DRY05	8.00	а		6308257.49	2311491.98	8.00	0.00				
					6308312.30	2311508.22	8.00	0.00				
					6308643.21	2310665.72	8.00	0.00				
					6308592.46	2310649.48	8.00	0.00				
AREASOURCE	DRY06	8.00	а		6308356.97	2311544.76	8.00	0.00				
					6308460.50	2311577.24	8.00	0.00				
					6308931.49	2310393.69	8.00	0.00				
					6308876.68	2310373.38	8.00	0.00				
					6308858.40	2310416.02	8.00	0.00				
					6308803.59	2310399.78	8.00	0.00				
AREASOURCE	DRY07	8.00	а		6309323.30	2311914.24	8.00	0.00				
					6309384.20	2311934.54	8.00	0.00				
					6309871.43	2310692.11	8.00	0.00				
					6309818.65	2310669.78	8.00	0.00				

Building(s)

	<u> </u>															
Name	Sel.	М.	ID	RB	Residents	Absorption	Height		Coordinates							
							Begin		х	у	z	Ground				
							(ft)		(ft)	(ft)	(ft)	(ft)				
BUILDING			BUILDING00001	x	0		46.00	а	6306356.79	2312713.31	46.00	0.00				
									6307904.10	2312681.44	46.00	0.00				
									6307892.51	2311970.08	46.00	0.00				
									6307709.96	2311974.43	46.00	0.00				
									6307709.96	2312019.34	46.00	0.00				
									6306526.30	2312046.87	46.00	0.00				
									6306526.30	2311997.61	46.00	0.00				
									6306340.85	2312000.51	46.00	0.00				
BUILDING			BUILDING00002	х	0		46.00	а	6308495.01	2311729.50	46.00	0.00				
									6309209.61	2312007.63	46.00	0.00				
									6309260.37	2311889.88	46.00	0.00				
									6309209.61	2311873.64	46.00	0.00				
									6309690.75	2310627.15	46.00	0.00				
									6309071.57	2310389.63	46.00	0.00				
									6308584.34	2311630.03	46.00	0.00				
									6308531.56	2311615.81	46.00	0.00				
APPENDIX 10.1:

CONSTRUCTION NOISE CALCULATIONS



This page intentionally left blank

15411 - FCSP & POCC

CadnaA Noise Prediction Model: 15411-02_construction.cna Date: 23.08.23 Analyst: B. Lawson

Calculation Configuration

Configurat	ion
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	3048.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
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 Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
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 (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Lir	nit. Val	ue		Land	Use	Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	55.5	55.5	62.2	55.0	55.0	0.0				5.00	а	6309116.91	2314741.67	5.00
R2		R2	49.1	49.1	55.7	55.0	55.0	0.0				5.00	а	6311443.60	2314783.94	5.00
R3		R3	48.9	48.9	55.6	55.0	55.0	0.0				5.00	а	6312231.80	2313129.43	5.00
R4		R4	51.7	51.7	58.3	55.0	55.0	0.0				5.00	а	6311625.11	2309675.87	5.00
R5		R5	49.0	49.0	55.7	55.0	55.0	0.0				5.00	а	6311657.66	2308523.99	5.00
R6		R6	49.6	49.6	56.3	55.0	55.0	0.0				5.00	а	6301629.89	2310707.58	5.00
R7		R7	48.8	48.8	55.4	55.0	55.0	0.0				5.00	а	6302758.19	2315004.38	5.00

Point Source(s)

			·-/													
Name	М.	ID	R	esult. PW	/L		Lw/L	i	Op	erating T	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)
		conspt01	115.6	115.6	115.6	Lw	115.6					8.00	а	6308822.27	2313620.03	8.00
		conspt02	115.6	115.6	115.6	Lw	115.6					8.00	а	6309156.30	2313356.98	8.00
		conspt03	115.6	115.6	115.6	Lw	115.6					8.00	а	6310062.35	2310697.28	8.00
		conspt04	115.6	115.6	115.6	Lw	115.6					8.00	а	6309548.79	2310000.00	8.00
		conspt05	115.6	115.6	115.6	Lw	115.6					8.00	а	6303281.58	2311816.28	8.00
		conspt06	115.6	115.6	115.6	Lw	115.6					8.00	а	6303949.64	2312935.27	8.00

Area Source(s)

	Day	Evening	Night	Davi										
		0	Tagine	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
SITEBOUNDARY CONSTRUCTIO	NO1 115.6	115.6	115.6	54.4	54.4	54.4	Lw	115.6					8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin	_	End	x	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION01	8.00	а		6309275.75	2313616.68	8.00	0.00
			L		6309308.30	2313080.22	8.00	0.00
					6309564.24	2312779.36	8.00	0.00
					6309429.12	2312144.90	8.00	0.00
					6309827.86	2311105.82	8.00	0.00
					6310013.36	2311071.96	8.00	0.00
					6310201.88	2310670.18	8.00	0.00
					6309637.45	2310177.60	8.00	0.00
					6309683 20	2300008 03	8.00	0.00
					6200102.62	2309908.93	8.00	0.00
					6309103.02	2309911.03	8.00	0.00
					6309009.75	2310220.36	8.00	0.00
					6308722.07	2310314.90	8.00	0.00
					6308649.98	2310274.81	8.00	0.00
					6308595.93	2310308.36	8.00	0.00
					6308540.73	2310339.98	8.00	0.00
					6308484.45	2310369.63	8.00	0.00
					6308427.16	2310397.27	8.00	0.00
					6308368.92	2310422.88	8.00	0.00
					6308309.82	2310446.41	8.00	0.00
					6308249.92	2310467.84	8.00	0.00
					6308189.31	2310487.15	8.00	0.00
					6308128.05	2310504.30	8.00	0.00
					6308033 20	2310536 79	8.00	0.00
			\vdash	<u>├</u>	6307769 21	2310742 81	8 00	0.00
			-	\vdash	6307171 44	23100742.01	0.00 8 00	0.00
					0307171.44	2310972.33	8.00	0.00
			-	\vdash	6206610.25	2311503.00	8.00	0.00
					6306610.25	2311592.83	8.00	0.00
				\vdash	0306425.36	2311/33.45	8.00	0.00
					6306282.13	2311715.22	8.00	0.00
					6306297.75	2311483.45	8.00	0.00
					6305769.11	2311512.10	8.00	0.00
					6305633.69	2311665.74	8.00	0.00
					6305404.52	2311598.04	8.00	0.00
					6305188.38	2311738.66	8.00	0.00
					6305063.38	2311944.39	8.00	0.00
					6303776.79	2311728.00	8.00	0.00
					6303695.76	2311606.93	8.00	0.00
					6303564.95	2311496.64	8.00	0.00
					6303484 84	2311695.09	8.00	0.00
					6303401.20	23117/2 23	8.00	0.00
					6202200 60	2311/42.23	8.00	0.00
					6303300.60	2311687.08	8.00	0.00
					6303148.12	2311/21.64	8.00	0.00
					6303147.60	2311775.65	8.00	0.00
					6303186.57	2311850.31	8.00	0.00
					6302880.69	2312129.73	8.00	0.00
					6302938.72	2312166.31	8.00	0.00
					6302995.32	2312205.08	8.00	0.00
					6303050.40	2312245.98	8.00	0.00
					6303103.88	2312288.94	8.00	0.00
					6303155.68	2312333.91	8.00	0.00
					6303205.74	2312380.83	8.00	0.00
					6303253.97	2312429.61	8.00	0.00
			-		6303300.30	2312480.20	8.00	0.00
					6303344 68	2312532 52	8 00	0.00
			\vdash	\vdash	6303387 02	2312586 /0	8 00	0.00
			\vdash	\vdash	6302427 20	2312500.49	0.00 8 00	0.00
			-	\vdash	6202470 70	2212706 74	0.00	0.00
			\vdash	\vdash	0303470.78	2312706./1	8.00	0.00
			-	\vdash	0303516.24	2312//0.01	8.00	0.00
					6303563.62	2312831.89	8.00	0.00
					6303612.87	2312892.29	8.00	0.00
					6303663.95	2312951.15	8.00	0.00
					6303676.77	2312945.99	8.00	0.00
			L		6303690.22	2312942.81	8.00	0.00
					6303703.99	2312941.68	8.00	0.00
					6303717.78	2312942.61	8.00	0.00
					6303767.31	2312950.68	8.00	0.00
					6303816.47	2312960.77	8.00	0.00
			-		6303865 17	2312972 85	8 00	0.00
			\vdash		6303913 35	2312986 91	8 00	0.00
			\vdash	\vdash	6303960 01	2313002 02	8 00	0.00
			-	\vdash	6304022.00	2212014 05	0.00	0.00
			\vdash	\vdash	6204224.00	201014.85	0.00	0.00
			-	├ ── ├	0304234.66	2313105.00	8.00	0.00
					6304283.43	2313126.81	8.00	0.00
					6304438.40	2313264.08	8.00	0.00
					6304475.06	2313274.22	8.00	0.00
					6304611.15	2313261.38	8.00	0.00
			1		6304737.27	2313275.42	8.00	0.00

Name	ID	ŀ	lei	ght	Coordinates		es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6304751.36	2313273.47	8.00	0.00
					6304764.97	2313269.30	8.00	0.00
					6304777.72	2313263.00	8.00	0.00
					6304789.32	2313254.75	8.00	0.00
					6304799.44	2313244.76	8.00	0.00
					6304838.41	2313204.23	8.00	0.00
					6305129.76	2313278.82	8.00	0.00
					6305431.80	2313326.24	8.00	0.00
					6305602.29	2313190.01	8.00	0.00
					6305627.80	2313175.95	8.00	0.00
					6305654.21	2313163.65	8.00	0.00
					6305681.39	2313153.17	8.00	0.00
					6305709.22	2313144.56	8.00	0.00
					6305750.81	2313140.46	8.00	0.00
					6305792.52	2313137.93	8.00	0.00
					6305834.29	2313136.96	8.00	0.00
					6305868.38	2313139.50	8.00	0.00
					6305902.28	2313143.87	8.00	0.00
					6305935.90	2313150.04	8.00	0.00
					6305969.14	2313158.01	8.00	0.00
					6306001.90	2313167.75	8.00	0.00
					6306011.44	2313167.79	8.00	0.00
					6306020.88	2313166.45	8.00	0.00
					6306030.03	2313163.74	8.00	0.00
					6306064.59	2313153.50	8.00	0.00
					6306075.81	2313151.65	8.00	0.00
					6306087.19	2313151.72	8.00	0.00
					6306098.39	2313153.69	8.00	0.00
					6306109.11	2313157.50	8.00	0.00
					6306119.03	2313163.06	8.00	0.00
					6306172.72	2313202.47	8.00	0.00
					6306184.92	2313209.79	8.00	0.00
					6306198.14	2313215.05	8.00	0.00
					6306212.03	2313218.13	8.00	0.00
					6306226.24	2313218.95	8.00	0.00
					6306240.39	2313217.47	8.00	0.00
					6306531.77	2313097.60	8.00	0.00
					6306782.26	2313262.51	8.00	0.00
					6307062.21	2313387.51	8.00	0.00
					6307512.73	2313447.41	8.00	0.00
					6307704.14	2313944.81	8.00	0.00
					6307812.21	2313908.35	8.00	0.00
					6307869.50	2313947.41	8.00	0.00
					6308149.91	2313910.89	8.00	0.00

This page intentionally left blank



APPENDIX 10.2:

NIGHTTIME CONCRETE POUR NOISE CALCULATIONS



This page intentionally left blank



15411 - FCSP & POCC

CadnaA Noise Prediction Model: 15411-02_pour.cna Date: 23.08.23 Analyst: B. Lawson

Calculation Configuration

Configurat	ion
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	3048.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
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 Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
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 (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Lii	mit. Val	ue		Land	l Use	Height	:	C	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	31.7	31.7	38.4	55.0	55.0	0.0				5.00	а	6309116.91	2314741.67	5.00
R2		R2	28.3	28.3	35.0	55.0	55.0	0.0				5.00	а	6311443.60	2314783.94	5.00
R3		R3	29.3	29.3	35.9	55.0	55.0	0.0				5.00	а	6312231.80	2313129.43	5.00
R4		R4	31.3	31.3	38.0	55.0	55.0	0.0				5.00	а	6311625.11	2309675.87	5.00
R5		R5	29.2	29.2	35.9	55.0	55.0	0.0				5.00	а	6311657.66	2308523.99	5.00
R6		R6	24.3	24.3	31.0	55.0	55.0	0.0				5.00	а	6301629.89	2310707.58	5.00
R7		R7	25.0	25.0	31.7	55.0	55.0	0.0				5.00	a	6302758.19	2315004.38	5.00

Area Source(s)

Name	М.	ID	R	esult. PW	/L	Re	esult. PW	L''		Lw/L	i	Op	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)		
CONCRETE		POUR01	100.3	100.3	100.3	47.7	47.7	47.7	Lw	100.3					8	а
CONCRETE		POUR02	100.3	100.3	100.3	48.5	48.5	48.5	Lw	100.3					8	а
CONCRETE		POUR03	100.3	100.3	100.3	54.3	54.3	54.3	Lw	100.3					8	а

Name	ID	ł	lei	ght		Coordinat	es	
		Begin		End	x	у	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
CONCRETE	POUR01	8.00	а		6306344.72	2312897.09	8.00	0.00
					6306656.28	2312902.11	8.00	0.00
					6306666.33	2312967.44	8.00	0.00
					6307912.56	2312932.26	8.00	0.00
					6307912.56	2312796.58	8.00	0.00
					6308113.57	2312786.53	8.00	0.00

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6308128.64	2311876.99	8.00	0.00
					6307706.53	2311887.04	8.00	0.00
					6307711.56	2311751.36	8.00	0.00
					6306721.61	2311791.56	8.00	0.00
					6306726.63	2311841.81	8.00	0.00
					6306520.60	2311841.81	8.00	0.00
					6306515.58	2311937.29	8.00	0.00
					6306349.75	2311907.14	8.00	0.00
CONCRETE	POUR02	8.00	а		6308515.57	2311741.31	8.00	0.00
					6309214.07	2312007.64	8.00	0.00
					6309254.27	2311892.06	8.00	0.00
					6309389.95	2311937.29	8.00	0.00
					6309887.43	2310686.03	8.00	0.00
					6309817.08	2310670.96	8.00	0.00
					6309832.16	2310620.70	8.00	0.00
					6308992.96	2310289.05	8.00	0.00
					6308932.66	2310349.35	8.00	0.00
					6308786.93	2310399.60	8.00	0.00
					6308369.85	2311550.35	8.00	0.00
					6308580.90	2311630.75	8.00	0.00
CONCRETE	POUR03	8.00	а		6307807.03	2311324.22	8.00	0.00
					6308309.54	2311525.23	8.00	0.00
					6308656.28	2310600.60	8.00	0.00
					6308364.82	2310485.03	8.00	0.00
					6308163.82	2310776.48	8.00	0.00