

Yorba Linda Housing Element Update

NOISE AND VIBRATION IMPACT ANALYSIS CITY OF YORBA LINDA

PREPARED BY:

Bill Lawson, PE, INCE blawson@urbanxroads.com (949) 584-3148

April 12, 2024

15459-02 NA



TABLE OF CONTENTS

AF LIS LIS	PPEND T OF E T OF T T OF A ECUTI	F CONTENTS ICES EXHIBITS ABLES	. IV . IV V . VI 1
	1.1	Project Description	
•	1.2	Project Related Noise Source Activities	
2			
	2.1	Range of Noise	
	2.2 2.3	Noise Descriptors Sound Propagation	
	2.5	Noise Control	
	2.5	Noise Barrier Attenuation	
	2.6	Land Use Compatibility With Noise	
	2.7	Community Response to Noise	
	2.8	Vibration	. 10
3	RE	GULATORY SETTING	.13
	3.1	State of California Noise Requirements	. 13
	3.2	State of California Building Standards	
	3.3	City of Yorba Linda Adopted General Plan Noise Element	
	3.4	City of Yorba Linda Municipal Code	
	3.5	Construction Noise Standards	
	3.6	Vibration Standards	
4	SIG		
	4.1	Noise Level Increases (Threshold A)	
	4.2	Vibration (Threshold B)	
	4.3	CEQA Guidelines Not Further Analyzed (Threshold C)	
	4.4	Significance Criteria Summary	
5	EXI	STING NOISE LEVEL MEASUREMENTS	
	5.1	Measurement Procedure and Criteria	
	5.2	Noise Measurement Locations	
	5.3	Noise Measurement Results	
6 7		ISE/LAND USE COMPATIBLITY AFFIC NOISE METHODS AND PROCEDURES	
	7.1	FHWA Traffic Noise Prediction Model	. 29
8	OF	F-SITE TRAFFIC NOISE ANALYSIS	.33
	8.1	Noise Contours	. 33
	8.2	Existing with Project Traffic Noise Level Increases	
	8.3	Horizon Year (2045) Project Traffic Noise Level Increases	. 38
9	ST/	ATIONARY SOURCE NOISE ANALYSIS	.39



	9.1	Potential Stationary Source Noise Activities	. 39
	9.2	Reference Noise Levels	. 39
	9.3	Noise Prediction Calculations	40
	9.4	Project Stationary Source Noise Levels	. 40
	9.5	Project Stationary Source Noise Level Compliance	41
	9.6	Project Stationary Source Noise Regulations	41
	9.7	Project Stationary Source Noise Mitigation	42
	9.8	Stationary Source Vibration Levels	
10	COI	NSTRUCTION IMPACTS	43
	10.1	Construction Noise Levels	43
	10.2	Construction Noise Level Compliance	43
		Construction Noise Regulations	
	10.4	Construction Vibration Impacts	44
		Construction Noise and Vibration Mitigation Measures	
11	REF	ERENCES	47
12		RTIFICATION	

APPENDICES

APPENDIX 3.1:	CITY OF YORBA LINDA MUNICIPAL CODE
APPENDIX 5.1:	NOISE MEASUREMENT STUDY AREA PHOTOS
APPENDIX 5.2:	NOISE LEVEL MEASUREMENT WORKSHEETS
APPENDIX 8.1:	OFF-SITE TRAFFIC NOISE LEVEL CONTOURS
APPENDIX 9.1:	STATIONARY SOURCE NOISE CALCULATIONS

LIST OF EXHIBITS

EXHIBIT 1-A:	HOUSING ELEMENT SITE LOCATION MAP	.4
EXHIBIT 2-A:	TYPICAL NOISE LEVELS	7
EXHIBIT 2-B:	NOISE LEVEL INCREASE PERCEPTION	10
EXHIBIT 2-C:	TYPICAL LEVELS OF GROUND-BORNE VIBRATION	12
EXHIBIT 3-A:	CRITERIA FOR NOISE-COMPATIBLE LAND USE	16
EXHIBIT 5-A:	NOISE MEASUREMENT LOCATIONS	25



LIST OF TABLES

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS	1
TABLE 1-1: SUMMARY OF HOUSING ELEMENT UNITS PER SITE	5
TABLE 3-1: STATIONARY SOURCE NOISE LEVEL STANDARDS	.17
TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY	.21
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS	.24
TABLE 6-1: GENERAL PLAN NOISE/LAND USE COMPATIBILITY	.28
TABLE 7-1: OFF-SITE ROADWAY PARAMETERS	.30
TABLE 7-2: AVERAGE DAILY TRAFFIC VOLUMES	
TABLE 7-3: TIME OF DAY VEHICLE SPLITS	.31
TABLE 7-4: TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)	.31
TABLE 8-1: EXISTING WITHOUT PROJECT CONTOURS	.33
TABLE 8-2: EXISTING WITH PROJECT CONTOURS	
TABLE 8-3: HORIZON YEAR (2045) WITHOUT PROJECT CONTOURS	
TABLE 8-4: HORIZON YEAR (2045) WITH PROJECT CONTOURS	.36
TABLE 8-5: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES	.37
TABLE 8-6: HORIZON YEAR (2045) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES	.38
TABLE 9-1: PROJECT STATIONARY SOURCE NOISE LEVELS	.40
TABLE 9-2: PROJECT STATIONARY SOURCE NOISE LEVEL COMPLIANCE	.41
TABLE 10-1: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT	.44
TABLE 10-2: CONSTRUCTION EQUIPMENT VIBRATION LEVELS	.45

LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L _{eq}	Equivalent continuous (average) sound level
L _{max}	Maximum level measured over the time interval
L _{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Yorba Linda Housing Element Update
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels



EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this program-level Noise and Vibration Impact Analysis to evaluate the proposed Yorba Linda Housing Element Update ("Project"). The Project will be used to support the proposed Addendum to the 2024 Housing Element Program Environmental Impact Report (PEIR). The Housing Element proposes a rezoning program of 18 vacant or underutilized sites for multi-family residential use at densities of 10 to 60 units per acre. The Yorba Linda 2021 – 2029 Housing Element will revise the General Plan land use and development intensities for the identified sites to accommodate approximately 1,747 additional dwelling units for a total of 1,929 dwelling units (including the existing zoning), which is an overall reduction of 481 units from the certified 2024 Housing Element PEIR

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

Anghais	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	vise 8 Less Than Significa		-		
Stationary Source Noise	9	Potentially Significant	Less than Significant		
Stationary Source Vibration	9	Less Than Significant	-		
Construction Noise	10	Potentially Significant	Significant and Unavoidable		
Construction Vibration	10	Potentially Significant	Less than Significant		

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS



This page intentionally left blank



1 INTRODUCTION

This program-level Noise and Vibration Impact Analysis has been completed to determine the noise impacts due to development associated with the Yorba Linda Housing Element Update ("Project"). This Noise and Vibration Impact Analysis briefly describes typical compliance conditions for the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise impacts.

1.1 PROJECT DESCRIPTION

The Noise and Vibration Impact Analysis will be used to support the proposed Addendum to the 2024 Housing Element Program Environmental Impact Report (PEIR). The Housing Element proposes a rezoning program of 18 vacant or underutilized sites for multi-family residential use at densities of 10 to 60 units per acre. The Yorba Linda 2021 – 2029 Housing Element will revise the General Plan land use and development intensities for the identified sites to accommodate approximately 1,747 additional dwelling units for a total of 1,929 dwelling units (including the existing zoning), which is an overall reduction of 481 units from the certified 2024 Housing Element PEIR. This Noise and Vibration Impact Analysis will evaluate the proposed development intensities expected for the 18 vacant or underutilized sites and assess the potential off-site traffic noise level increases that result from the implementation of the rezoning and changes to land use. Exhibit 1-A identifies the locations of each of the Housing Element sites summarized on Table 1-1.

1.2 PROJECT RELATED NOISE SOURCE ACTIVITIES

The Yorba Linda Housing Element Update is not expected to include any specific type of stationary source levels beyond the typical noise sources associated with the planned multifamily residential land use. This includes residents moving around each of the sites, residential air conditioning units, and parking lot activities. Residential land use is generally considered a noise-sensitive receiving land use and is not expected to generate meaningful stationary source noise levels. In addition, Section 21085 of the recently adopted 2023 California Public Resources Code (PRC), established that "noise effects" on humans that are associated with "project occupants and guests" within residential Projects are not considered an impact on the environment.



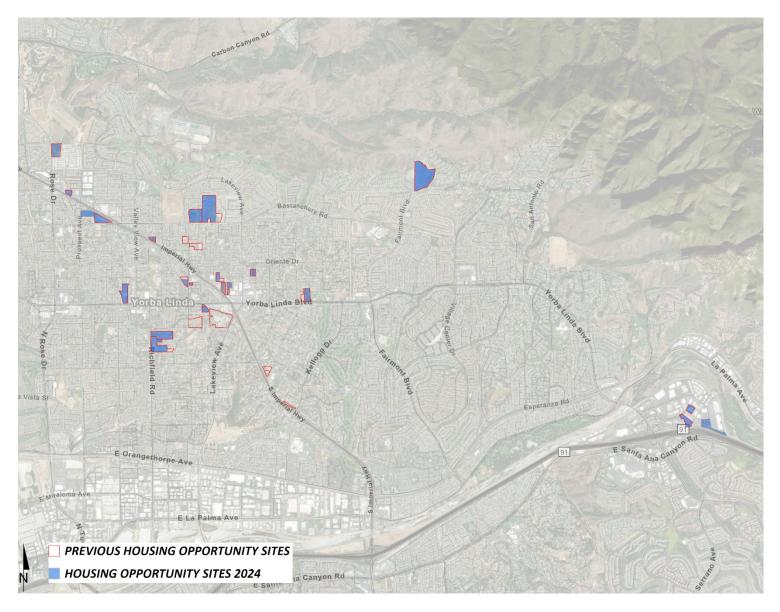


EXHIBIT 1-A: HOUSING ELEMENT SITE LOCATION MAP



#	HE Site ID	Site	Current Zoning	Proposed Zoning	Acres	Total Net Unit Potential
1	S1-021	W. of 16951 Imperial Highway	CG	Commercial Mixed Use Overlay	1.76	62
2	S1-200	SEC Rose Dr. & Blake Rd.	RE	RM-20 w/ Affordable Overlay	5.94	208
3	S2-008	17151 Bastanchury Rd.	RE	Congregational Land Overlay	4.92	60
4	S3-012	5320 Richfield Rd.	RU	Congregational Land Overlay	9.48	55
5	S3-207	5300-5392 Richfield Rd.	RU	RM-20 w/ Affordable Overlay	9.7	340
6	S2-013	4861 Liverpool St.	RU	Congregational Land Overlay	6.2	40
7	S3-074	18132 Yorba Linda Bl.	CG	RM-20 w/ Affordable Overlay	0.42	15
8	S3-024	Friends Church Overflow Parking	RE	Congregational Land Overlay	17.45	48
9	S3-033	4382 Eureka Av.	RS	Congregational Land Overlay	3.88	30
10	S3-210	18111 Bastanchury Rd.	PD-26	Congregational Land Overlay	9.23	105
11	S3-082	4791 & 4811 Eureka Av.	CG	RM-20 w/ Affordable Overlay	1.75	61
12	S4-075	4742 Plumosa Dr.	CG	RM-20 w/ Affordable Overlay	1.62	57
13	S6-015	22722 Old Canal Rd.	PD	Affordable Housing Overlay	2.56	89
14	S6-020	22711 Oak Crest Circle	PD	RM-20 w/ Affordable Housing Overlay	10.35	143
15	S7-001	Bryant Ranch Shopping Center	CG	Commercial Mixed Use Overlay	9.15	320
16	S3-034	4341 Eureka Av.	RS	RM	2.19	22
18	S3-203	18101-18251 Bastanchury Rd.	PD	PD	22.83	228
19	S3-205A	5225 & 5227 Highland Av.	RE	RM	7.08	71
20	S4-200	18597-18602 Altrudy Ln.	RS	RM-20	2	40
21	S4-204A	19045 Yorba Linda Bl.	RE	Congregational Land Overlay	1.85	17
	S4-204B	19081-19111 Yorba Linda Bl.	RE	RM-20	3.9	78
23	S3-211	17651 Imperial Highway	RS	RM	2.32	23
24	S4-053	SWC of Kellogg Dr. & Grandview Av.	RE	RM	0.98	10
25	S4-060	5541 S. Ohio St.	RE	RM	0.96	10
	S4-201	5531 S. Ohio St.	RE	RM	1.82	18
26	S5-008	Fairmont Bl.	PD	RM	23.01	230
27	S7-005	NEC of Camino del Bryant & Meadowland	RU	RM	3.06	30
				TOTAL	166.41	2,410

TABLE 1-1: SUMMARY OF HOUSING ELEMENT UNITS PER SITE



This page intentionally left blank



2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140			
NEAR JET ENGINE		130	INTOLERABLE OR		
		120	DEAFENING	HEARING LOSS	
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110			
LOUD AUTO HORN		100			
GAS LAWN MOWER AT 1m (3 ft)		90			
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80			
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60			
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40			
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	VERT FAINT		

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{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 noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Yorba Linda relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

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



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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

2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.



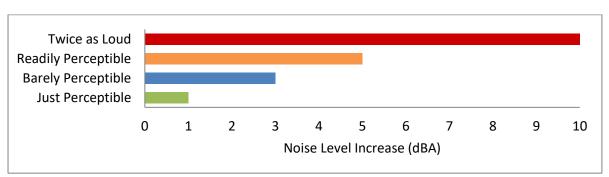
2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)





2.8 VIBRATION

Per the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, vibration is the periodic oscillation of a medium or object. The rumbling sound caused



by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (8). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structures reduce vibration levels due to the coupling of the building to the soil.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal (8). The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body (8). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (9). Thus, either can be used in the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits. (8) Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels. As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration 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.



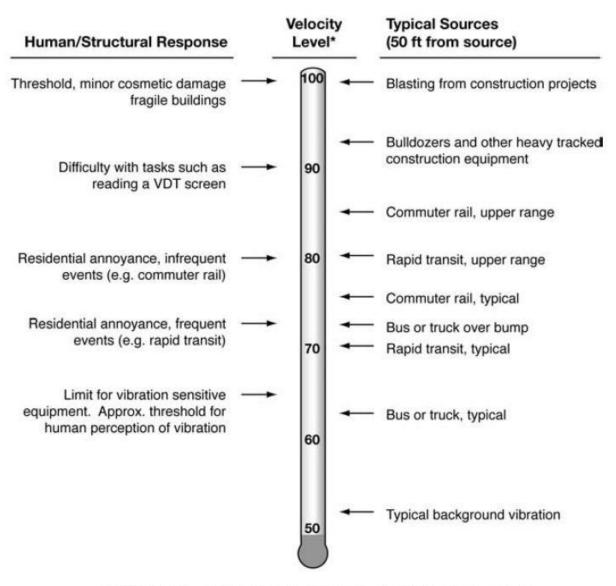


EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

* 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 STATE OF CALIFORNIA BUILDING STANDARDS

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.3 CITY OF YORBA LINDA ADOPTED GENERAL PLAN NOISE ELEMENT

City of Yorba Linda previously adopted a Noise Element of the General Plan (Chapter 12), to protect citizens from excessive exposure to noise conflicts and problems. (11) The Noise Element Policy Program identifies the following goals and polices related to noise:

Goal N-1: Indoor and outdoor living areas that are adequately protected from excessive transportation noise impacts.



Policies:

- *N-1.1* Ensure existing transportation noise sources comply with the City's noise ordinance.
- *N-1.2* Consider appropriate technologies to mitigate excessive noise levels where necessary or where feasible
- *N-1.3* Ensure noise mitigation measures are clearly articulated and implemented prior to the approval of new roadway projects.
- *N-1.4* Ensure potentially excessive noise generators provide for the highest feasible level of noise mitigation and compliance with local, state, and federal noise standards.
- *N-1.5 Promote alternative transportation modes such as walking, bicycling, equestrian transportation, and transit to contribute to reducing or minimizing potential noise impacts*
- *Goal N-2:* Noise and land use compatibility.

Policies:

- *N-2.1* Ensure compliance with the City's established noise thresholds for various land uses.
- *N-2.2* Ensure compliance with the City's established noise thresholds for noise sensitive receptors, land uses, and activities.
- *N-2.3* Ensure noise producing land uses and activities are designed and located to consider impacts to adjacent uses and activities.
- **Goal N-3:** Mitigate noise impacts from non-transportation sources

Policies:

- *N-3.1* Ensure compliance with standards and procedures for mitigating construction related activities that introduce excessive noise levels.
- *N-3.2 Promote coordination among City agencies involved in noise abatement.*
- Goal N-4: Mitigate noise impacts from non-transportation sources

Policies:

- *N-4.1* Consider noise impacts in the siting, design, and construction of new development to minimize noise impacts.
- *N-4.2 Consider alternative architectural layouts as a means of meeting noise requirements.*
- *N-4.3* Consider a combination of noise barriers, landscape berms, and architectural design treatments when needed to mitigate noise impacts.
- *N-4.4 Consider measures which alter, prohibit or mitigate noise generating uses through site design.*



3.3.1 LAND USE COMPATIBILITY

The Noise Element provides several policies to ensure compatibility of land uses with their existing and future noise environments (Goal N-2) that includes establishing acceptable noise levels for various land uses. The City of Yorba Linda has adopted the transportation noise criteria contained in the California Office of Planning and Research (OPR) *General Plan Guidelines*. (12) 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*. (12) The noise criteria identified in the City of Yorba Linda General Plan Noise Element, are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provide City of Yorba Linda with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise environment.

Single-family residential uses are considered *normally acceptable* with exterior noise levels of up to 60 CNEL and *conditionally acceptable* up to 70 CNEL. Multi-family residential land use is considered *normally acceptable* in exterior noise environments up to 65 CNEL and *conditionally acceptable* up to 70 CNEL. Schools, libraries, and churches are considered *normally acceptable* up to 70 CNEL, as are office buildings and business, commercial and professional uses. (11) A *conditionally acceptable* designation indicates that *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are incorporated in the design. Conventional construction, but with windows closed and fresh air supply systems or air conditioning will normally suffice. By comparison, a <i>normally acceptable* designation indicates that standard construction can occur with no special noise reduction requirements.

3.3.2 TRANSPORTATION NOISE STANDARDS

To control transportation-related noise sources such as arterial roads, freeways, airports, and railroads, City of Yorba Linda has established the land use compatibility guidelines for exterior noise levels as previously described, and shown on Exhibit 3-A. For noise-sensitive uses, the Noise Element identifies the exterior noise level of 65 dBA CNEL for *conditionally acceptable* use. In addition, an interior noise level standard of 45 dBA CNEL for noise-sensitive interior uses is utilized in this Noise and Vibration Impact Analysis consistent with California Code of Regulations, Title 24, Building Standards for residential use.



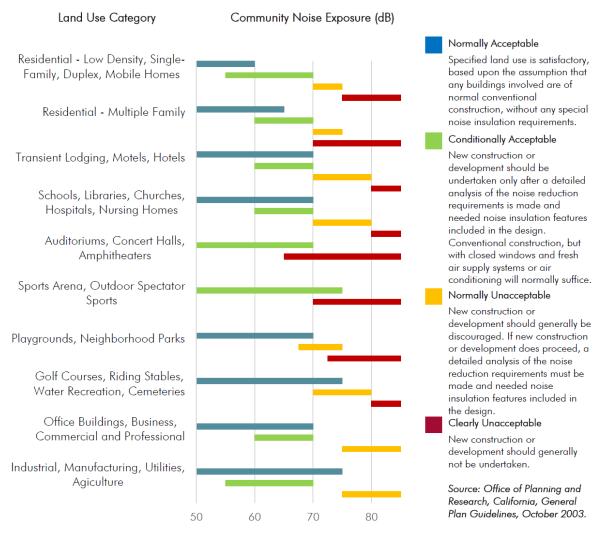


EXHIBIT 3-A: CRITERIA FOR NOISE-COMPATIBLE LAND USE

Source: City of Yorba Linda General Plan Noise Element Adopted October 2016, Page N-9.

3.4 CITY OF YORBA LINDA MUNICIPAL CODE

To analyze noise impacts originating from a designated fixed location or private property such as the Yorba Linda Housing Element Update, stationary-source (operational) noise such as the expected residents moving around each of the sites, residential air conditioning units, and parking lot activities are typically evaluated against standards established under a jurisdiction's Municipal Code. For all noise-sensitive residential properties, Section 8.32.060 of the Municipal Code identifies stationary source noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 55 dBA L_{eq} and 50 dBA L_{eq} during the nighttime (10:00 p.m. to 7:00 a.m.) hours. (13) The exterior noise level standards shall apply for a cumulative period of more than 30 minutes in any hour, as well as the standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour, or the standard plus 20 dBA for any period of time. Further, Section 8.32.060 indicates that if the



existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be adjusted to reflect the ambient conditions. The City of Yorba Linda Municipal Code noise standards are shown on Table 3-1 and included in Appendix 3.1.

		Exterior Noise Level Standards (dBA) ²					
Land Use	Time Period	L₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)	
Desidential ¹	Daytime (7:00 a.m. to 10:00 p.m.)	55	60	65	70	75	
Residential ¹	Nighttime (10:00 p.m. to 7:00 a.m.)	50	55	60	65	70	

TABLE 3-1: STATIONARY SOURCE NOISE LEVEL STANDARDS

¹Noise Zone 1 includes all residential properties in the City (Municipal Code, Section 8.32.050).

² Exterior noise standards (Municipal Code, Section 8.32.060).

The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{50} is the noise level exceeded 50% of the time.

The percentile noise descriptors are provided to ensure that the duration of the noise source is fully considered. However, due to the relatively constant intensity of the Project stationary source activities, the L_{50} or average L_{eq} noise level metrics best describe the residents moving around each of the sites, residential air conditioning units, and parking lot activities. In addition, the L_{eq} noise level metric accounts for noise fluctuations over time by averaging the louder and quieter events and giving more weight to the louder events. In addition, due to the mathematical relationship between the median (L_{50}) and the mean (L_{eq}), the L_{eq} will always be larger than or equal to the L_{50} . The more variable the noise becomes, the larger the L_{eq} becomes in comparison to the L_{50} . Therefore, this noise study conservatively relies on the average L_{eq} sound level limits to describe the Project stationary source noise levels.

3.5 CONSTRUCTION NOISE STANDARDS

According to Section 8.32.090[D] of the Municipal Code, noise sources associated with construction-related activities are typically exempt provided the activities do not take place between the hours of 7:00 a.m. to 8:00 p.m. on weekdays, including Saturday, or at any time on Sunday or federal holidays. While the City establishes limits to the hours during which construction activity may take place, neither the City of Yorba Linda 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} (8 p. 179).

3.6 VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (8) To analyze vibration impacts originating from the Yorba Linda Housing Element Update, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code if such standards exist. However, the City of Yorba Linda does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (9 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the 18 vacant or underutilized sites can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration. Fragile buildings represent structures and/or finishes that are possibly weakened due to the method of construction (such as unreinforced masonry) and deterioration with age and/or lack of adequate maintenance. Therefore, a more conservative maximum acceptable continuous vibration threshold for fragile buildings of 0.10 PPV (in/sec) is used.



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.* (15) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

The Federal Interagency Committee on Noise (FICON) (16) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}). The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or readily perceptible, 3 dBA or barely perceptible, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (17 p. 2 48).



4.2 VIBRATION (THRESHOLD B)

As described in Section 3.6, the vibration impacts originating from the construction of the Yorba Linda Housing Element Update, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. Most buildings near the 27 vacant or underutilized sites can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec). A more conservative maximum acceptable continuous vibration threshold for fragile buildings of 0.10 PPV (in/sec) is used.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is the John Wayne Airport located roughly 13 miles southwest of the city. 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.

Amelyaia		Significan	ce Criteria	
Analysis	Condition(s)	Daytime	Nighttime	
0((c))	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
Off-Site Traffic ¹	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL P	roject increase	
manie	If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	Project increase	
	Exterior Noise Level Standards ²	55 dBA L _{eq}	50 dBA L _{eq}	
Stationary-	If ambient is < 60 dBA Leq ¹	≥ 5 dBA L _{eq} Project increase		
Source	If ambient is 60 - 65 dBA Leq ¹	≥ 3 dBA L _{eq} Project increase		
	If ambient is > 65 dBA Leq ¹	≥ 1.5 dBA L _{eq} Project increase		
Construction	Exempt provided the activities do not tal p.m. and seven a.m. on weekdays, includir or federal ho	uding Saturday, or at any time on Sunday		
Construction	Noise Level Threshold ⁴	80 dBA L _{eq}	70 dBA L _{eq}	
		0.3 PPV (in/sec) ⁶		
	Vibration Level Threshold ⁵	0.1 PPV (in/sec) ⁷		

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

¹ FICON, 1992.

² City of Yorba Linda Municipal Code, Section 8.32.060 (See Table 3-1)

³ City of Yorba Linda Municipal Code, Section 8.32.090[D] (See Table 3-1)

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

⁵ Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

⁶ Older Residential Structures.

⁷ Fragile Buildings.

"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, noise level measurements were taken at ten sensitive receiver locations near the vacant or underutilized sites for multifamily residential use. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, May 5, 2022. Since the environmental factors such as traffic patterns, and the physical environment have not significantly changed since 2022, it is expected that these existing measurements accurately describe the baseline ambient conditions. Appendix 5.1 includes study area photos and details of the individual noise level measurement locations.

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. 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. (18)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community (8).*



Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting 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 average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (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 Average Noise Level (dBA L _{eq}) ²		
		Daytime	Nighttime		
L1	Site S1-021 - Vacant Parcel (W of 16951 Imperial Hwy)	55.4	51.9	59.5	
L2	Site S2-008 - Friendship Baptist Church (17151 Bastanchury Rd.)	60.3	55.3	63.1	
L3	Site S3-012 - Richfield Community Church (5320 Richfield Rd.)	49.0	42.1	50.7	
L4	Site S2-013 - Messiah Lutheran Church (4861 Liverpool St.)	61.4	45.8	60.1	
L5	Site S3-210 - Shinno-En USA (18111 Bastanchury Rd.)	58.0	52.5	60.6	
L6	Site S4-075 - 4742 Plumosa Drive	51.9	47.6	55.4	
L7	Site S6-015 - 22722 Old Canal Road	59.1	56.9	64.0	
L8	Site S5-008 - Vacant Parcel on Fairmont Boulevard	66.0	60.0	68.3	
L9	Site S3-024 - Friend Church Overflow Parking	55.1	47.6	56.7	
L10	Site S4-204B - 19081-19111 Yorba Linda Blvd.	57.8	52.0	60.1	

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.

"Day" = 7:00 a.m. to 6:00 p.m.; "Evening" = 6:00 p.m. to 10:00 p.m.; "Night" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.



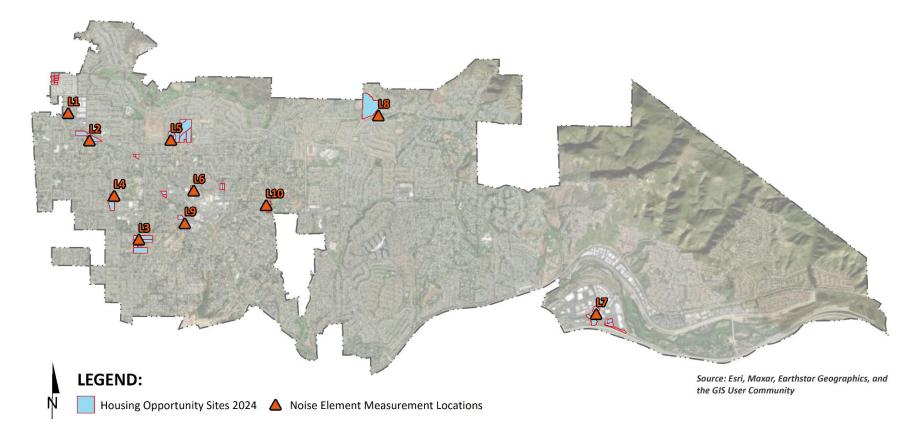


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



This page intentionally left blank



6 NOISE/LAND USE COMPATIBLITY

The Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. The compatibility criteria, shown on Exhibit 3-A, provides the city with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Criteria for Noise Compatible Land Use* describes categories of compatibility and not specific noise standards. Table 6-1 summarizes the existing ambient noise level conditions in relation to the compatibility guidelines identified in the City of Yorba Linda Noise Element (Exhibit 3-A).

The General Plan Noise/Land Use Compatibility guidelines are provided to address potential noise impacts to future residents of the Yorba Linda Housing Element Update. While the General Plan considers potential impacts from the environment to future Project developments, land use compatibility and potential impacts from the existing environment on future Project development is not considered under CEQA. Therefore, no determination of significance is provided for General Plan Noise/Land Use Compatibility.

Table 6-1 shows that the majority of the proposed Yorba Linda Housing Element Update multifamily residential land uses are generally considered as *normally acceptable* with the *Criteria for Noise Compatible Land Use*. *Normally acceptable* land use is considered satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements. However, Table 6-1 indicates that General Plan Noise/Land Use Compatibility for Housing Element Site S5-008 (Location L8) representing the vacant parcel on Fairmont Boulevard is considered conditionally acceptable. For *conditionally acceptable* land use, new construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Location ¹	Description	Proposed Zoning	CNEL ²	General Plan Noise/Land Use Compatibility ³	
L1	Site S1-021 - Vacant Parcel (W of 16951 Imperial Hwy)	Commercial Mixed-Use Overlay	59.5	Normally Acceptable	
L2	Site S2-008 - Friendship Baptist Church (17151 Bastanchury Rd.)	Congregational Land Overlay	63.1	Normally Acceptable	
L3	Site S3-012 - Richfield Community Church (5320 Richfield Rd.)	Congregational Land Overlay	50.7	Normally Acceptable	
L4	Site S2-013 - Messiah Lutheran Church (4861 Liverpool St.)	Congregational Land Overlay	60.1	Normally Acceptable	
L5	Site S3-210 - Shinno-En USA (18111 Bastanchury Rd.)	Congregational Land Overlay	60.6	Normally Acceptable	
L6	Site S4-075 - 4742 Plumosa Drive	RM-20 w/Affordable Overlay	55.4	Normally Acceptable	
L7	Site S6-015 - 22722 Old Canal Road	Affordable Housing Overlay	64.0	Normally Acceptable	
L8	Site S5-008 - Vacant Parcel on Fairmont Boulevard	Residential Medium	68.3	Conditionally Acceptable	
L9	Site S3-024 - Friend Church Overflow Parking	Congregational Land Overlay	56.7	Normally Acceptable	
L10	Site S4-204B - 19081-19111 Yorba Linda Blvd.	Residential Medium	60.1	Normally Acceptable	

TABLE 6-1: GENERAL PLAN NOISE/LAND USE COMPATIBILITY

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

² The long-term 24-hour measurement worksheets are included in Appendix 5.2.

³ General Plan compatibility criteria for the proposed multifamily residential use.

7 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 the City of Yorba Linda *Land Use Compatibility* guidelines, all transportation related noise levels are presented in terms of the 24-hour CNELs.

7.1 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. (19) 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. (20) 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. (21)

7.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 7-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 7-1 identifies the 18 off-site study area roadway segments, the distance from the centerline to adjacent receiving land use based on the functional roadway classifications per the City of Yorba Linda General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study are presented on Table 7-2 are based on the *Yorba Linda Housing Element Update Traffic Analysis* prepared by Urban Crossroads, Inc. (22) for the following traffic conditions:

- Existing (2024) Without Project Conditions
- Existing (2024) With Project Conditions
- Horizon Year (2045) Without Project Conditions
- Horizon Year (2045) With Project Conditions



ID	Roadway	Segment	Classification ¹	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Rose Dr.	s/o Imperial Hwy.	Modified Primary	40'	50
2	Imperial Hwy.	w/o Prospect Av.	Smart Street	50'	55
3	Imperial Hwy.	e/o Prospect Av.	Smart Street	50'	55
4	Bastanchury Rd.	w/o Imperial Hwy.	Modified Primary	40'	50
5	Bastanchury Rd.	e/o Imperial Hwy.	Modified Primary	40'	50
6	Imperial Hwy.	n/o Lemon Dr.	Smart Street	50'	55
7	Imperial Hwy.	s/o Lemon Dr.	Smart Street	50'	55
8	Lakeview Av.	n/o Buena Vista Av.	Primary	50'	45
9	Lakeview Av.	s/o Buena Vista Av.	Primary	50'	45
10	Buena Vista Av.	w/o Lakeview Av.	Secondary	40'	45
11	Bastanchury Rd.	w/o Plumosa Dr.	Modified Primary	40'	50
12	Lakeview Av.	s/o Bastanchury Rd.	Secondary	40'	45
13	Bastanchury Rd.	w/o Lakeview Av.	Modified Primary	40'	50
14	Bastanchury Rd.	e/o Lakeview Av.	Modified Primary	40'	50
15	Lakeview Av.	s/o Yorba Linda Bl.	Primary	50'	45
16	Yorba Linda Bl.	w/o Lakeview Av.	Modified Major	50'	50
17	Gypsum Canyon Rd.	s/o La Palma Av.	Secondary	40'	45
18	La Palma Av.	e/o Gypsum Canyon Rd.	Modified Primary	40'	50

¹ City of Yorba Linda General Plan Circulation Element

² Distance to receiving land use is based upon the right-of-way distances.

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. Table 7-3 provides the time of day (daytime, evening, and nighttime) vehicle splits and Table 7-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

			A	verage Daily T	raffic Volumes	5 ¹	
ID	Roadway	Sogmont	Exist	ting	HY (2045)		
שו		Segment	Without Project	With Project	Without Project	With Project	
1	Rose Dr.	s/o Imperial Hwy.	14,417	15,183	17,381	18,147	
2	Imperial Hwy.	w/o Prospect Av.	42,046	42,679	47,022	47,655	
3	Imperial Hwy.	e/o Prospect Av.	39,992	40,595	44,725	45,328	
4	Bastanchury Rd.	w/o Imperial Hwy.	15,308	15,780	17,120	17,592	
5	Bastanchury Rd.	e/o Imperial Hwy.	18,846	19,231	22,406	22,791	
6	Imperial Hwy.	n/o Lemon Dr.	35,798	36,338	40,035	40,574	
7	Imperial Hwy.	s/o Lemon Dr.	33,408	33,912	37,362	37,865	
8	Lakeview Av.	n/o Buena Vista Av.	14,406	14,926	17,586	18,106	
9	Lakeview Av.	s/o Buena Vista Av.	12,516	13,058	14,418	14,960	
10	Buena Vista Av.	w/o Lakeview Av.	7,627	8,317	8,390	9,080	
11	Bastanchury Rd.	w/o Plumosa Dr.	15,449	15,682	17,278	17,510	
12	Lakeview Av.	s/o Bastanchury Rd.	8,941	9,713	9,836	10,607	
13	Bastanchury Rd.	w/o Lakeview Av.	15,504	16,867	18,510	19,873	
14	Bastanchury Rd.	e/o Lakeview Av.	18,676	18,698	21,229	21,251	
15	Lakeview Av.	s/o Yorba Linda Bl.	13,287	13,766	16,137	16,616	
16	Yorba Linda Bl.	w/o Lakeview Av.	28,182	28,536	24,502	24,856	
17	Gypsum Canyon Rd.	s/o La Palma Av.	12,309	13,238	13,540	13,717	
18	La Palma Av.	e/o Gypsum Canyon Rd.	8,746	9,563	9,621	9,751	

¹ Yorba Linda Housing Element Update Traffic Analysis, Urban Crossroads, Inc.

TABLE 7-3: TIME OF DAY VEHICLE SPLITS

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

¹ Typical Southern California vehicle mix.

"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 7-4: TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Roadways ¹	97.42%	1.84%	0.74%	100.00%

¹ Typical Southern California vehicle mix.



This page intentionally left blank



8 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the on the *Yorba Linda Housing Element Update Traffic Analysis* prepared by Urban Crossroads, Inc. (22). Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

8.1 NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at receiving land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. To be conservative, 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 8-1 through 8-4 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation. Appendix 8.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.

ID	Road Segment		CNEL at Receiving	Distance to Contour from Centerline (Feet)		
	Koad	Segment	Land Use (dBA) ¹	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Rose Dr.	s/o Imperial Hwy.	72.2	57	122	262
2	Imperial Hwy.	w/o Prospect Av.	77.5	157	339	730
3	Imperial Hwy.	e/o Prospect Av.	77.3	152	328	706
4	Bastanchury Rd.	w/o Imperial Hwy.	72.5	59	127	273
5	Bastanchury Rd.	e/o Imperial Hwy.	73.4	68	146	314
6	Imperial Hwy.	n/o Lemon Dr.	76.8	141	305	656
7	Imperial Hwy.	s/o Lemon Dr.	76.5	135	291	627
8	Lakeview Av.	n/o Buena Vista Av.	69.1	43	93	201
9	Lakeview Av.	s/o Buena Vista Av.	68.5	39	85	183
10	Buena Vista Av.	w/o Lakeview Av.	67.5	27	58	126
11	Bastanchury Rd.	w/o Plumosa Dr.	72.6	59	127	275
12	Lakeview Av.	s/o Bastanchury Rd.	68.2	30	65	140
13	Bastanchury Rd.	w/o Lakeview Av.	72.6	59	128	275
14	Bastanchury Rd.	e/o Lakeview Av.	73.4	67	145	312
15	Lakeview Av.	s/o Yorba Linda Bl.	68.7	41	88	191

TABLE 8-1: EXISTING WITHOUT PROJECT CONTOURS



	Deed	Comment	CNEL at Receiving		e to Contou nterline (Fe	-
ID	D Road Segment	Land Use (dBA) ¹	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
16	Yorba Linda Bl.	w/o Lakeview Av.	74.7	103	221	476
17	Gypsum Canyon Rd.	s/o La Palma Av.	69.5	37	80	173
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.1	40 87		188

¹ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Road	Segment	CNEL at Receiving		ce to Conto nterline (Fe	
	Road	Segment	Land Use (dBA) ¹	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Rose Dr.	s/o Imperial Hwy.	72.5	58	126	271
2	Imperial Hwy.	w/o Prospect Av.	77.5	159	342	738
3	Imperial Hwy.	e/o Prospect Av.	77.3	154	331	714
4	Bastanchury Rd.	w/o Imperial Hwy.	72.6	60	129	279
5	Bastanchury Rd.	e/o Imperial Hwy.	73.5	68	148	318
6	Imperial Hwy.	n/o Lemon Dr.	76.8	143	308	663
7	Imperial Hwy.	s/o Lemon Dr.	76.5	136	294	633
8	Lakeview Av.	n/o Buena Vista Av.	69.2	44	96	206
9	Lakeview Av.	s/o Buena Vista Av.	68.6	41	87	188
10	Buena Vista Av.	w/o Lakeview Av.	67.8	29	62	133
11	Bastanchury Rd.	w/o Plumosa Dr.	72.6	60	129	277
12	Lakeview Av.	s/o Bastanchury Rd.	68.5	32	69	148
13	Bastanchury Rd.	w/o Lakeview Av.	72.9	63	135	291
14	Bastanchury Rd.	e/o Lakeview Av.	73.4	67	145	312
15	Lakeview Av.	s/o Yorba Linda Bl.	68.9	42	91	195
16	Yorba Linda Bl.	w/o Lakeview Av.	74.7	103	223	480
17	Gypsum Canyon Rd.	s/o La Palma Av.	69.9	39 84 182		182
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.5	43	93	199

TABLE 8-2: EXISTING WITH PROJECT CONTOURS

¹ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



ID	Road	Compat	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
	Road Segment		Land Use (dBA) ¹	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Rose Dr.	s/o Imperial Hwy.	73.1	64	138	297	
2	Imperial Hwy.	w/o Prospect Av.	78.0	170	365	787	
3	Imperial Hwy.	e/o Prospect Av.	77.7	164	353	761	
4	Bastanchury Rd.	w/o Imperial Hwy.	73.0	63	137	294	
5	Bastanchury Rd.	e/o Imperial Hwy.	74.2	76	163	352	
6	Imperial Hwy.	n/o Lemon Dr.	77.3	152	328	707	
7	Imperial Hwy.	s/o Lemon Dr.	77.0	145	313	675	
8	Lakeview Av.	n/o Buena Vista Av.	69.9	49	107	230	
9	Lakeview Av.	s/o Buena Vista Av.	69.1	43	93	201	
10	Buena Vista Av.	w/o Lakeview Av.	67.9	29	62	134	
11	Bastanchury Rd.	w/o Plumosa Dr.	73.0	64	137	296	
12	Lakeview Av.	s/o Bastanchury Rd.	68.6	32	69	149	
13	Bastanchury Rd.	w/o Lakeview Av.	73.3	67	144	310	
14	Bastanchury Rd.	e/o Lakeview Av.	73.9	73	158	339	
15	Lakeview Av.	s/o Yorba Linda Bl.	69.6	47	101	217	
16	Yorba Linda Bl.	w/o Lakeview Av.	74.1	93	201	434	
17	Gypsum Canyon Rd.	s/o La Palma Av.	70.0	40	86	184	
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.5	43	93	200	

TABLE 8-3: HORIZON YEAR (2045) WITHOUT PROJECT CONTOURS

¹ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Road	Compat	CNEL at Receiving		e to Conto nterline (Fe	
	Koad	Segment	Land Use (dBA) ¹	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Rose Dr.	s/o Imperial Hwy.	73.2	66	142	306
2	Imperial Hwy.	w/o Prospect Av.	78.0	171	369	794
3	Imperial Hwy.	e/o Prospect Av.	77.8	165	356	768
4	Bastanchury Rd.	w/o Imperial Hwy.	73.1	65	139	299
5	Bastanchury Rd.	e/o Imperial Hwy.	74.2	77	165	356
6	Imperial Hwy.	n/o Lemon Dr.	77.3	154	331	713
7	Imperial Hwy.	s/o Lemon Dr.	77.0	147	316	681
8	Lakeview Av.	n/o Buena Vista Av.	70.1	50	109	234
9	Lakeview Av.	s/o Buena Vista Av.	69.2	44	96	206
10	Buena Vista Av.	w/o Lakeview Av.	68.2	30	66	141
11	Bastanchury Rd.	w/o Plumosa Dr.	73.1	64	139	299
12	Lakeview Av.	s/o Bastanchury Rd.	68.9	34	73	157
13	Bastanchury Rd.	w/o Lakeview Av.	73.6	70	151	325
14	Bastanchury Rd.	e/o Lakeview Av.	73.9	73	158	340
15	Lakeview Av.	s/o Yorba Linda Bl.	69.7	48	103	221
16	Yorba Linda Bl.	w/o Lakeview Av.	74.1	94	203	438
17	Gypsum Canyon Rd.	s/o La Palma Av.	70.0	40	86	186
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.6	44	94	202

TABLE 8-4: HORIZON YEAR (2045) WITH PROJECT CONTOURS

¹ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

8.2 EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report to fully analyze all the existing traffic scenarios identified in the *Yorba Linda Housing Element Update Traffic Analysis*. This condition realistically would not occur since the Project will not be fully developed and occupied under Existing conditions. Table 8-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 67.5 to 77.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 8-2 shows the Existing with Project conditions will range from 67.8 to 77.5 dBA CNEL. Table 8-5 shows that the Project offsite traffic noise level impacts will range from 0.1 to 0.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.



ID	Road	Segment	CNEL at Receiving Land Use (dBA) ¹			Incremental Noise Level Increase Threshold ²	
			No Project	With Project	Project Addition	Limit	Exceeded?
1	Rose Dr.	s/o Imperial Hwy.	72.2	72.5	0.3	1.5	No
2	Imperial Hwy.	w/o Prospect Av.	77.5	77.5	0.0	1.5	No
3	Imperial Hwy.	e/o Prospect Av.	77.3	77.3	0.0	1.5	No
4	Bastanchury Rd.	w/o Imperial Hwy.	72.5	72.6	0.1	1.5	No
5	Bastanchury Rd.	e/o Imperial Hwy.	73.4	73.5	0.1	1.5	No
6	Imperial Hwy.	n/o Lemon Dr.	76.8	76.8	0.0	1.5	No
7	Imperial Hwy.	s/o Lemon Dr.	76.5	76.5	0.0	1.5	No
8	Lakeview Av.	n/o Buena Vista Av.	69.1	69.2	0.1	1.5	No
9	Lakeview Av.	s/o Buena Vista Av.	68.5	68.6	0.1	1.5	No
10	Buena Vista Av.	w/o Lakeview Av.	67.5	67.8	0.3	1.5	No
11	Bastanchury Rd.	w/o Plumosa Dr.	72.6	72.6	0.0	1.5	No
12	Lakeview Av.	s/o Bastanchury Rd.	68.2	68.5	0.3	1.5	No
13	Bastanchury Rd.	w/o Lakeview Av.	72.6	72.9	0.3	1.5	No
14	Bastanchury Rd.	e/o Lakeview Av.	73.4	73.4	0.0	1.5	No
15	Lakeview Av.	s/o Yorba Linda Bl.	68.7	68.9	0.2	1.5	No
16	Yorba Linda Bl.	w/o Lakeview Av.	74.7	74.7	0.0	1.5	No
17	Gypsum Canyon Rd.	s/o La Palma Av.	69.5	69.9	0.4	1.5	No
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.1	70.5	0.4	1.5	No

TABLE 8-5: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

8.3 HORIZON YEAR (2045) PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 8-3 presents the Horizon Year (2045) without Project conditions CNEL noise levels. The Horizon Year (2045) without Project exterior noise levels are expected to range from 67.9 to 78.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 8-4 shows the Horizon Year (2045) with Project conditions will range from 68.2 to 78.0 dBA CNEL. Table 8-6 shows that the Project off-site traffic noise level increases will range from 0.0 to 0.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

ID	Road Segme	Segment	CNEL at Receiving Land Use (dBA) ¹			Incremental Noise Level Increase Threshold ²	
			No Project	With Project	Project Addition	Limit	Exceeded?
1	Rose Dr.	s/o Imperial Hwy.	73.1	73.2	0.1	1.5	No
2	Imperial Hwy.	w/o Prospect Av.	78.0	78.0	0.0	1.5	No
3	Imperial Hwy.	e/o Prospect Av.	77.7	77.8	0.1	1.5	No
4	Bastanchury Rd.	w/o Imperial Hwy.	73.0	73.1	0.1	1.5	No
5	Bastanchury Rd.	e/o Imperial Hwy.	74.2	74.2	0.0	1.5	No
6	Imperial Hwy.	n/o Lemon Dr.	77.3	77.3	0.0	1.5	No
7	Imperial Hwy.	s/o Lemon Dr.	77.0	77.0	0.0	1.5	No
8	Lakeview Av.	n/o Buena Vista Av.	69.9	70.1	0.2	1.5	No
9	Lakeview Av.	s/o Buena Vista Av.	69.1	69.2	0.1	1.5	No
10	Buena Vista Av.	w/o Lakeview Av.	67.9	68.2	0.3	1.5	No
11	Bastanchury Rd.	w/o Plumosa Dr.	73.0	73.1	0.1	1.5	No
12	Lakeview Av.	s/o Bastanchury Rd.	68.6	68.9	0.3	1.5	No
13	Bastanchury Rd.	w/o Lakeview Av.	73.3	73.6	0.3	1.5	No
14	Bastanchury Rd.	e/o Lakeview Av.	73.9	73.9	0.0	1.5	No
15	Lakeview Av.	s/o Yorba Linda Bl.	69.6	69.7	0.1	1.5	No
16	Yorba Linda Bl.	w/o Lakeview Av.	74.1	74.1	0.0	1.5	No
17	Gypsum Canyon Rd.	s/o La Palma Av.	70.0	70.0	0.0	1.5	No
18	La Palma Av.	e/o Gypsum Canyon Rd.	70.5	70.6	0.1	1.5	No

TABLE 8-6: HORIZON YEAR (2045) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use. ² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



9 STATIONARY SOURCE NOISE ANALYSIS

The proposed residential development is considered a noise-sensitive receiving land use and is not expected to include any specific type of stationary noise levels beyond those typically associated with residential land use in the Project study area. However, since the individual locations of potential stationary source noise activities for the 18 vacant or underutilized sites are not known currently, this section considers several potential stationary source noise activities. In addition, Section 21085 of the recently adopted 2023 California Public Resources Code (PRC), established that "noise effects" on humans that are associated with "project occupants and guests" within residential Projects are not considered an impact on the environment

9.1 POTENTIAL STATIONARY SOURCE NOISE ACTIVITIES

The stationary source noise activities are expected to include residents moving around each of the sites, residential air conditioning units, and parking lot activities. Since the actual plans for the 18 vacant or underutilized sites are not known at this time, the potential stationary source noise activities may also include trash enclosures, dog parks, pool/spas, or other similar source of outdoor activity. To ensure that stationary source noise activity does not represent a nuisance, the Project shall satisfy the exterior noise level limits outlined in the City of Yorba Linda Municipal Code Section 8.32.060 and satisfy any conditions of approval.

9.2 REFERENCE NOISE LEVELS

To estimate the Project stationary source noise level impact to existing nearby noise sensitive receivers, reference sound power levels (L_w) were collected from similar types of activities to represent the noise levels expected with the development of the 18 vacant or underutilized sites. 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 reference stationary source sound power noise levels used to estimate the potential stationary source noise activities are summarized below:

- <u>Residential Air Conditioning Units</u>: 75 dBA L_w according to the reference product data sheet for the Carrier model 24ACC4 Air Conditioner Unit.
- <u>Parking Lot Activities</u>: 88 dBA L_w based on reference noise level measurements collected by Urban Crossroads, Inc. The residential parking lot noise levels are mainly due to cars pulling in and out of spaces and residents going to and from their homes. Additional noise sources include key fob horn activities as well as vehicle loading and unloading activities.
- <u>Trash Enclosure Activities</u>: 89 dBA L_w based on reference noise level measurements collected by Urban Crossroads, Inc. at an existing trash enclosure containing two dumpster bins.



- <u>Dog Park Activities</u>: 79 dBA L_w based on reference noise level measurements collected by Urban Crossroads, Inc. at the La Paws Dog Park in the City of Mission Viejo. The reference noise level measurement describes large and small dogs with people talking, dogs running, playing fetch, chasing each other, growling, barking, and owners talking on cell phones.
- <u>Pool/Spa Activities</u>: 86 dBA L_w based on reference noise level measurements collected by Urban Crossroads, Inc. The pool activity noise levels include kids playing, running, screaming, splashing, playing with a ball, and parents talking.
- <u>Outdoor Activity</u>: 75 dBA L_w based on reference outdoor noise level measurements collected by Urban Crossroads, Inc. describing picnic tables, tot lots and areas of outdoor use.

9.3 Noise Prediction Calculations

To describe the exterior stationary source noise levels from the Project, Urban Crossroads, Inc. calculated the potential Project stationary source noise levels at distances ranging from 25 to 200 feet. The stationary source noise levels were estimated using the ISO 9613-2 protocol in the CadnaA (Computer Aided Noise Abatement) computer program. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on a reference sound power level (L_w) to describe individual noise sources. The stationary source noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed stationary source noise model calculations.

9.4 PROJECT STATIONARY SOURCE NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include residents moving around each of the sites, residential air conditioning units, and parking lot activities as well as trash enclosures, dog parks, pool/spas, or other similar source of outdoor activity, Urban Crossroads, Inc. calculated the stationary source noise levels. Table 9-1 shows that the Project operational noise levels at the off-site receiver locations are expected to range from 47.2 to 61.2 dBA L_{eq} at 25 feet.

Distance		Potential Stationary Source Noise Activity dBA (Leq) ¹									
to Const. Activity (Feet)	Air- Conditioning Units	Parking	Trash Enclosure	Dog Park	Pool/Spa	Outdoor	Highest Noise Level				
25'	47.2	60.2	61.2	51.2	58.2	61.2	61.2				
50'	39.6	52.6	53.6	43.6	50.6	53.6	53.6				
100'	30.8	43.8	44.8	34.8	41.8	44.8	44.8				
150'	20.5	33.5	34.5	24.5	31.5	34.5	34.5				
200'	16.5	29.5	30.5	20.5	27.5	30.5	30.5				

TABLE 9-1: PROJECT STATIONARY SOURCE NOISE LEVELS

¹Stationary source noise calculations are provided in Appendix 9.1.



9.5 PROJECT STATIONARY SOURCE NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the unmitigated Project stationary source noise levels are evaluated against the exterior noise level limits outlined in City of Yorba Linda Municipal Code Section 8.32.060. Table 9-2 shows the operational noise levels associated with the Yorba Linda Housing Element Update will satisfy the City of Yorba Linda daytime and nighttime exterior noise level limits at distances of greater than 50 feet from the stationary noise source activity. However, the existing noise sensitive receivers located within 50 feet of parking lot activities, trash enclosures, dog parks, pool/spas, or other similar source of outdoor activity may experience unmitigated exterior noise levels exceeding the exterior noise level limits. Therefore, the unmitigated stationary source noise impacts due to Project-related stationary source activities are considered less than *potentially significant*.

Distance to Const.	Project Operational	Noise Level Limits (dBA Leq) ²		Noise Level Limits Exceeded? ³	
Activity (Feet)	Noise Levels (dBA Leq) ¹	Daytime	Nighttime	Daytime	Nighttime
25'	61.2	55	50	Yes	Yes
50'	53.6	55	50	No	Yes
100'	44.8	55	50	No	No
150'	34.5	55	50	No	No
200'	30.5	55	50	No	No

TABLE 9-2: PROJECT STATIONARY SOURCE NOISE LEVEL COMPLIANCE

¹ Highest potential stationary source noise activity (Table 9-1).

² Exterior noise standards (Municipal Code, Section 8.32.060).

⁶ Do the estimated Project stationary source noise activities exceed the noise level limits?

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

9.6 PROJECT STATIONARY SOURCE NOISE REGULATIONS

To minimize the noise exposure to the existing noise sensitive residential areas, potential stationary source noise activities should be considered as part of the site planning process. This is consistent with Goal N-4 of the City of Yorba Linda General Plan Noise Element to *mitigate noise impacts from non-transportation sources*. Goal N-4 includes the following policies that are designed to minimize the *potentially significant* stationary source noise activities.

- *N-4.1* Consider noise impacts in the siting, design, and construction of new development to minimize noise impacts.
- *N-4.2 Consider alternative architectural layouts as a means of meeting noise requirements.*
- *N-4.3* Consider a combination of noise barriers, landscape berms, and architectural design treatments when needed to mitigate noise impacts.
- *N-4.4* Consider measures which alter, prohibit or mitigate noise generating uses through site design.

With the implementation of Goal N-4 of the City of Yorba Linda General Plan Noise Element and compliance with the exterior noise level limits outlined in the City of Yorba Linda Municipal Code Section 8.32.060, the Project stationary source impacts are considered *less than significant*.



9.7 PROJECT STATIONARY SOURCE NOISE MITIGATION

Prior to issuance of any construction permits, applicants for individual projects that are within 50 feet of a sensitive receptor, shall prepare and submit to the City of Yorba Linda Planning Department a study to evaluate potential operational-related stationary source noise impacts. The noise report shall be prepared by an acoustical engineer using the ISO 9613-2 protocol in the CadnaA (Computer Aided Noise Abatement) computer program. If the study determines a potential exceedance of the City's thresholds (55 dBA L_{eq} daytime, or 50 dBA L_{eq} nighttime), measures shall be identified that ensure noise levels are reduced to below the thresholds. Identified measures shall be included on all construction and building documents and submitted for verification to the City of Yorba Linda Planning Department.

9.8 STATIONARY SOURCE VIBRATION LEVELS

The Project's residential development is not expected to include any specific type of stationary vibration sources, and therefore, the potential stationary source vibration impacts for the Yorba Linda Housing Element Update residential land use is considered *less than significant*.



10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the construction activities associated with the development of the Project. To prevent high levels of construction noise from impacting noise-sensitive land uses, Section 8.32.090[D] the City of Yorba Linda Municipal Code, indicates that construction activity is considered exempt provided the activities do not take place between the hours of 7:00 a.m. to 8:00 p.m. on weekdays, including Saturday, or at any time on Sunday or federal holidays.

10.1 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. Hard site conditions are commonly used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver.

10.2 CONSTRUCTION NOISE LEVEL COMPLIANCE

The highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. The development of the 18 vacant or underutilized sites would likely occur in close proximity to existing noise sensitive receivers and elevate the ambient noise environment. Furthermore, the construction of future development projects could last for prolonged periods and result in a substantial or periodic increase in the ambient noise levels. Therefore, construction noise impacts from the Project are considered *potentially significant*.

10.3 CONSTRUCTION NOISE REGULATIONS

The City of Yorba Linda General Plan Noise Element includes the following policies that are designed to minimize the *potentially significant* construction related noise activities.

- *N-3.1* Ensure compliance with standards and procedures for mitigating construction related activities that introduce excessive noise levels.
- *N-4.1* Consider noise impacts in the siting, design, and construction of new development to minimize noise impacts.

These measures would contribute to minimizing construction-related noise. However, due to the unknown number of construction activities that could occur at one time, proximity of construction activities to sensitive receivers, and other factors that cannot be quantified at this time, such as the longevity of activities, construction-related noise impacts may not be reduced



to less than significant levels for some projects. Therefore, construction noise impacts would remain *significant and unavoidable*.

10.4 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. Ground-borne vibration levels resulting from typical construction activities occurring within the Project area were estimated by data published by the Federal Transit Administration (FTA). (8) While vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used.

Ground vibration levels associated with various types of construction equipment are summarized on Table 10-1. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

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

TABLE 10-1: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source levels of construction equipment provided on Table 10-1 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Based on the reference vibration levels provided by the FTA, a vibratory roller represents the peak source of vibration with a reference velocity of 0.21 in/sec PPV at 25 feet. Table 10-2 presents the expected Project related vibration levels at distances ranging from 25 to 200 feet from construction activity. Table 10-2 shows that construction vibration levels are expected to range from 0.009 to 0.210 in/sec PPV.

Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels for nearby "older residential structures" will fall below the building damage thresholds at 25 feet. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities.



Distance to Const.		vels				
Activity (Feet)	Vibratory Roller	Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level
25'	0.210	0.210	0.035	0.076	0.089	0.210
50'	0.074	0.074	0.012	0.027	0.031	0.074
100'	0.026	0.026	0.004	0.010	0.011	0.026
150'	0.014	0.014	0.002	0.005	0.006	0.014
200'	0.009	0.009	0.002	0.003	0.004	0.009

TABLE 10-2: CONSTRUCTION EQUIPMENT VIBRATION LEVELS

¹Based on the Vibration Source Levels of Construction Equipment included on Table 10-1. "PPV" = Peak Particle Velocity

10.5 CONSTRUCTION NOISE AND VIBRATION MITIGATION MEASURES

The following construction noise mitigation measures would reduce noise and vibration levels produced by construction equipment to nearby noise-sensitive uses.

- **NOI-1** Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards, and all stationary construction equipment shall be placed so that emitted noise is directed away from the noise-sensitive use nearest the construction activity.
- **NOI-2** The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receiver nearest to the construction activity.
- **NOI-3** The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment by Section 8.32.090[D] of the City of Yorba Linda Municipal Code. The contractor shall design delivery routes to minimize the exposure of sensitive land uses to delivery truck noise.
- **NOI-4** Prior to issuance of any construction permits, applicants for individual projects that involve vibration-intensive construction activities, such as pile drivers, jack hammers, and vibratory rollers, within 25 feet of sensitive receptors (e.g., residences and fragile structures), shall prepare and submit to the City of Yorba Linda Planning Department a study to evaluate potential construction-related vibration impacts. The vibration assessment shall be prepared by an acoustical engineer and be based on recognized vibration-induced architectural damage criterion. If the study determines a potential exceedance of the thresholds, measures shall be identified that ensure vibration levels are reduced to below the thresholds. Identified measures shall be included on all construction and building documents and submitted for verification to the City of Yorba Linda Planning Department.



This page intentionally left blank



11 REFERENCES

- 1. State of California. California Environmental Quality Act, Appendix G. 2024.
- 2. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
- 3. 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.
- 4. 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.
- 5. U.S. Department of Transportation Federal Highway Administration. *Highway Noise Barrier Design Handbook*. 2001.
- 6. U.S. Department of Transportation, Federal Highway Administration. *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
- 7. 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.
- 8. U.S. Department of Transportation, Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123.* September 2018.
- 9. California Department of Transportation. *Transportation and Construction Vibration Guidance Manual*. April 2020.
- 10. Office of Planning and Research. State of California General Plan Guidlines. 2017.
- 11. City of Yorba Linda. General Plan Noise Element. 2016.
- 12. —. Municipal Code, Chapter 8.32 Noise Control.
- 13. California Court of Appeal. *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; Cal.Rptr.3d, October 2008.
- 14. Federal Interagency Committee on Noise. Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.
- 15. California Department of Transportation. Technical Noise Supplement. November 2009.
- 16. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 17. U.S. Department of Transportation, Federal Highway Administration. FHWA Highway Traffic Noise Prediction Model. December 1978. FHWA-RD-77-108.
- 18. 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.
- 19. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 20. Urban Crossroads, Inc. Yorba Linda Housing Element Update Traffic Analysis. April 2024.



This page intentionally left blank



12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Yorba Linda Housing Element Update 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 YORBA LINDA MUNICIPAL CODE



This page intentionally left blank



CHAPTER 8.32 NOISE CONTROL

Article I Noise Standards

§ 8.32.010. Purpose and intent of provisions.

- A. In order to control unnecessary, excessive and annoying sounds emanating from incorporated areas of the City, it is hereby declared to be the policy of the City to prohibit such sounds generated from all sources as specified in this chapter.
- B. It is determined that certain sound levels are detrimental to the public health, welfare and safety, and contrary to public interest.

(Prior code § 19A-1)

§ 8.32.020. Definitions.

The following words, phrases and terms, as used in this chapter, shall have the meaning indicated below:

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (dB)" means a unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Emergency machinery, vehicle or work" means any machinery, vehicle or work used, employed or performed in an effort to protect, provide or restore safe conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

"Fixed noise source" means a stationary device which creates sounds while fixed or motionless, including but not limited to industrial and commercial machinery and equipment, pumps, fans, compressors, generators, air conditioners and refrigeration equipment.

"Impact noise" means and includes the noise produced by the collision of one mass in motion with a second mass which may be either in motion or at rest.

"Mobile noise source" any noise source other than a fixed noise source.

"Noise level" means the A-weighted sound pressure level in decibels obtained by using a sound level meter at slow response with a reference pressure of twenty micronewtons per square meter. The unit of measurement shall be designated as dB(A).

"Person" means a person, firm, association, copartnership, joint venture, corporation or

any entity, public or private in nature.

"Residential property" means a parcel of real property which is developed and used either in part or in whole for residential purposes, other than transient uses such as hotels and motels.

"Simple tone noise" means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

"Sound amplifying equipment" means and includes any machine or device for the amplification of the human voice, music or any other sound or by which the human voice, music or any other sound is amplified. Sound amplifying equipment shall not include warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.

"Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 for Type 1 or Type 2 sound level meters or an instrument, and the associated recording and analyzing equipment, which will provide equivalent data.

"Sound pressure level" of a sound, in decibels, means twenty times the logarithm to the base ten of the ratio of the pressure of the sound to a reference pressure, which reference pressure is explicitly stated.

(Prior code § 19A-2)

§ 8.32.030. Enforcement authority.

- A. The Council Health Officer and his or her duly authorized representatives are directed to enforce the provisions of this chapter. The County Health Officer and his or her duly authorized representatives are authorized, pursuant to Penal Code Section 836.5, to arrest any person without a warrant when they have reasonable cause to believe that such person has committed a misdemeanor in their presence.
- B. No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter which such person is engaged in the performance of his or her duty.

(Prior code § 19A-11)

§ 8.32.040. Measurement criteria.

Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter as defined in Section 8.32.020 of this chapter. (Prior code § 19A-3)

§ 8.32.050. Noise zones designated.

The residential properties hereinafter described are assigned to the following noise zones: Noise Zone 1: All residential properties in the City. (Prior code § 19A-4)

§ 8.32.060. Noise standards—Exterior.

§ 8.32.060

A. The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone:

Noise Standards					
Noise Zone	Noise Level	Time Period			
Ι	55 dB(A)	7 a.m.—10 p.m.			
	50 dB(A)	10 p.m.—7 a.m.			

- B. It is unlawful for any person, at any location within the City, to create any noise which causes the noise level when measured on any residential property to exceed:
 - 1. The noise standard for a cumulative period of more than thirty minutes in any hour;
 - 2. The noise standard plus five dB(A) for a cumulative period of more than fifteen minutes in any hour;
 - 3. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour;
 - 4. The noise standard plus fifteen dB(A) for a cumulative period of more than one minute in any hour; or
 - 5. The noise standard plus twenty dB(A) for any period of time.
- C. In the event the ambient noise level exceeds any of the five noise limit categories stated in subsection B of this section, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. Furthermore, the maximum permissible noise level shall never exceed the maximum ambient noise level.
- D. Each of the noise limits specified in this section shall be reduced by five dB(A) for impact or simple tone noises or for noises consisting of speech or music.
 (Prior code § 19A-5)

§ 8.32.070. Noise standards—Interior.

- A. It is unlawful for any person at any location within the City to create any noise which causes the noise level when measured within a dwelling unit on any residential property during the period ten p.m. to seven a.m. to exceed:
 - 1. Forty-five dB(A) for a cumulative period of more than five minutes in any hour;
 - 2. Fifty dB(A) for a cumulative period of more than one minute in any hour; or
 - 3. Fifty-five dB(A) for any period of time.
- B. In the event that the ambient noise level exceeds any of the above three noise limit

categories, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. Furthermore, the maximum permissible noise level shall never exceed the maximum ambient noise level.

(Prior code § 19A-6)

§ 8.32.080. Exterior and interior noise level measurement.

The location selected for measuring exterior noise levels shall be at any point on the affected residential property. In the case of interior noise measurement, the windows shall be closed and the measurements shall be made at a point at least four feet from the wall, ceiling or floor nearest the noise source.

(Prior code § 19A-10)

§ 8.32.090. Exemptions.

The following activities shall be exempt from the provisions of this chapter:

- School bands, school athletic and school entertainment events; A.
- B. Activities otherwise lawfully conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity;
- C. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicles or work;
- Noise sources associated with construction, repair, remodeling, or grading of any D. real property, provided said activities do not take place between the hours of eight p.m. and seven a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday;
- E. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions;
- F. Mobile noise sources associated with agricultural operations, provided such operations do not take place between the hours of eight p.m. and seven a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday;
- G. Mobile noise sources associated with agricultural pest control through pesticide application, provided that the application is made in accordance with restricted material permits issued by or regulations enforced by the Agricultural Commissioner;
- H. Noise sources associated with the maintenance of real property used for residential purposes, provided said activities take place between the hours of seven a.m. and eight p.m. on any day except Sunday, or between the hours of nine a.m. and eight p.m. on Sunday;
- I. Any activity to the extent regulation thereof has been preempted by State or Federal

§ 8.32.090

law.

J Noise sources associated with the maintenance of real property owned or operated by a public entity, such as but not limited to golf courses, libraries, municipal buildings, parks, playgrounds, recreation facilities, and school grounds.

(Prior code § 19A-7; Ord. 2008-922, § 1, 2008)

§ 8.32.100. Noise standards—Schools, hospitals and churches.

It is unlawful for any person to create any noise which causes the noise level at any school, hospital or church, while the same is in use, to exceed the noise limits as specified in Section 8.32.060 prescribed for the assigned noise zone in which the school, hospital or church is located, or which noise level unreasonably interferes with the use of such institution or which unreasonably disturbs or annoys patients in the hospital, provided conspicuous signs are displayed in three separate locations within one-tenth of a mile of the institution indicating the presence of a school, church, or hospital. (Prior code § 19A-8)

§ 8.32.110. Special provisions for air-conditioning and refrigeration.

During the five year period following the effective date of the ordinance codified in this chapter, the noise standards enumerated in Sections 8.32.060 and 8.32.070 shall be increased eight dB(A) where the alleged offensive noise source is an air-conditioning or refrigeration system or associated equipment which was installed prior to the effective date of the ordinance codified in this chapter.

(Prior code § 19A-9)

§ 8.32.120. Variance procedure.

- The owner or operator of a noise source which violates any of the provisions of this A. chapter may file an application with the Health Officer for a variance from the provisions thereof wherein the owner or operator shall set forth all actions taken to comply with said provisions, the reasons why immediate compliance cannot be achieved, a proposed method of achieving compliance, and a proposed time schedule for its accomplishment.
- B. The application shall be accompanied by a fee set by resolution of the City Council, which may be updated from time to time.
- A separate application shall be filed for each noise source; provided, however, that C. several mobile sources under common ownership, or several fixed sources of a single property, may be combined into one application.
- D. Upon receipt of said application and fee, the Health Officer shall refer it with his or her recommendation thereon within thirty days to the noise variance board for action thereon in accordance with the provisions of this chapter.
- E. An applicant for a variance shall remain subject to prosecution under the terms of this chapter until the variance is granted.

(Prior code § 19A-12; Ord. 2019-1061 § 2)

§ 8.32.130. Noise Variance Board—Composition and duties of.

- A. There is hereby created a Noise Variance Board consisting of five members. Two of the members shall be professional engineers, registered in this State, one of whom shall have demonstrated knowledge and experience in the field of acoustics; the other shall be a registered mechanical engineer. One member shall be a physician, licensed in this state and qualified in the field of physiological effects of noise; one, a representative of business and industry, and one, a representative of the general public.
- B. The Noise Variance Board shall evaluate all applications for variance from the requirements of this chapter and may grant variances with respect to time for compliance, subject to such terms, conditions and requirements as it may deem reasonable to achieve maximum compliance with the provisions of this chapter.
- C. Terms, conditions, and requirements may include, but shall not be limited to, limitations on noise levels and operating hours. Each such variance shall set forth in detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations the Board shall consider:
 - 1. The magnitude of nuisance caused by the offensive noise;
 - 2. The uses of property within the area of impingement by the noise;
 - 3. The time factors related to study, design, financing and construction of remedial work;
 - 4. The economic factors related to age and useful life of equipment; and
 - 5. The general public interest and welfare.
- D. Any variance granted by the Board shall be by enforcement. Any violation of the terms of said variance shall be unlawful.
- E. Members of the Variance Board shall be appointed by, and shall serve at the pleasure of, the Orange County Board of Supervisors. The Variance Board shall adopt reasonable rules and regulations for its own procedures in carrying out its functions under the provisions of this chapter.
- F. Three members shall constitute a quorum and at least three affirmative votes shall be required in support of any action.
- G. The Health Officer, or his or her appointed representative, shall be a nonvoting exofficio member of the Variance Board, and shall act as secretary of the Board.
- H. Meetings of the Noise Variance Board shall be held at the call of the secretary and at such times and locations as said board shall determine. All such meetings shall be open to the public.

(Prior code § 19A-13)

- A. Within fifteen days following the decision of the Variance Board on an application, the applicant, the Health Officer, or any member of the City Council, may appeal the decision to the City Council by filing a notice of appeal with the secretary of the Variance Board. In the case of an appeal by the applicant for a variance, the notice of appeal shall be accompanied by a fee to be computed by the secretary on the basis of the estimated cost of preparing the materials required to be forwarded to the city council as discussed hereafter. If the actual cost of such preparation differs from the estimated cost, the applicant shall pay the amount of any deficiency to the secretary and the secretary shall pay the amount of any excess to the applicant.
- B. Within fifteen days following receipt of a notice of appeal and the appeal fee, the secretary of the Variance Board shall forward to the City Council:
 - 1. Copies of the application for variance;
 - 2. The recommendation of the Health Officer;
 - 3. The notice of appeal;
 - 4. All evidence concerning the application received by the variance board and its decision thereon.
- C. In addition, any person may file with the City Council written arguments supporting or attacking the decision and the City Council may in its discretion hear oral arguments thereon.
- D. The City Clerk shall mail the applicant a notice of the date set for hearing of the appeal. The notice shall be mailed at least ten days prior to the hearing date.
- E. Within sixty days following its receipt of the notice of appeal, the City Council shall either affirm, modify or reverse the decision of the Variance Board. Such decision shall be based upon the Council's evaluation of the matters submitted to the Council in light of the powers conferred on the Variance Board and the factors to be considered, both as enumerated in Sections 8.32.120 and 8.32.130.
- F. As part of its decision, the Council may direct the Variance Board to conduct further proceedings on the application. Failure of the City Council to affirm, modify or reverse the decision of the Variance Board within the sixty-day period shall constitute an affirmance of the decision.

(Prior code § 19A-14)

Article II Sound Amplifying Equipment

§ 8.32.150. Permit required.

- A. No person shall operate a loudspeaker, public address system or sound amplification system or play any musical instrument anywhere in the City if such loudspeaker, public address system or sound amplification system or musical instrument can be heard outside any building, save and excepting as follows:
 - 1. If the loudspeaker, public address system or sound amplification system is to be operated or musical instrument is to be played from a motor vehicle, it must be done in accordance with Section 10.04.140 and any other applicable ordinances of the City.
 - 2. If the loudspeaker, public address system or sound amplification system is to be operated, or musical instrument is to be played, other than from an automobile at any time of the day or night, such operation must first be approved by the City Manager by the issuance of a permit.
 - 3. If the loudspeaker, public address system, sound amplification system or musical instrument is used in connection with a parade for which a permit has been obtained, this section shall not be applicable.
 - 4. No person shall use or operate any sound amplifying equipment so that the sound being emitted therefrom is raucous, jarring, or disturbing to those within the area of audibility.

(Prior code § 19A-15)

§ 8.32.160. Application for permit—Procedure—Term.

The application for any such permit shall be in writing signed by an applicant at least eighteen years of age and filed with the City Clerk at least three business days prior to the event unless excused for cause by the City Manager. It shall state the following:

- A. Name and home address of the applicant;
- B. Address and place of business of applicant;
- C. Name and address of person having direct charge of the sound amplifying equipment desired to be used;
- D. The purpose for which the sound amplifying equipment will be used;
- E. The address and type of place where the sound amplifying equipment will be used;
- F. The hours during which such sound amplifying equipment will be used;
- G. Proposed days and number of days of operation;
- H. A general description of the sound amplifying equipment which is to be used;

§ 8.32.160

- I. The maximum sound producing power of the sound amplifying equipment to be used; and
 - 1. The wattage to be used,
 - 2. The approximate maximum distance for which sound will be thrown from the room, stadium, structure, public place or lot in or on which such sound amplifying equipment will be located;
- J. The form of application for permit shall be provided by the City and shall provide for the above information together with a reference to Civil Code Section 1714.1 for the information of the applicant.

K. All permits shall be issued for one day at a time. (Prior code § 19A-16)

§ 8.32.170. Permit—Terms and conditions.

All such permits issued for the use of such sound amplifying equipment shall be issued subject to the following conditions:

- A. The sound amplifying equipment shall not be used between the hours of eleven p.m. and eight a.m., except that for Easter sunrise services such equipment may be permitted starting at six a.m.
- B. Sound from the sound amplifying equipment shall not be cast such a distance that it will interfere with or disturb the occupants of any hospital, sanitarium, school, church, courtroom, place of residence or public assemblage.
- C. The sound amplifying equipment shall be used only for the producing of human speech or song or music and the speech or song shall not be profane, lewd, indecent, slanderous or of such character as to tend to incite riot or other public disorder nor shall such speech or song advocate disloyalty to or the overthrow of the government of the United States by arms or other unlawful means nor shall such speech or song urge any unlawful conduct or encourage or reasonably tend to encourage a breach of the public peace of the community.
- D. The sound from the sound amplifying equipment shall not interfere unreasonably with the rest, repose, peace or normal activities of those persons within the vicinity of the location of such sound amplifying equipment.
- E. The sound amplifying equipment shall be used only in accordance with and in compliance with the statements set forth in the application for the permit.(Prior code § 19A-17)

§ 8.32.180. Permit—Display of required.

It shall be the duty of the applicant to display any permit received pursuant to this chapter at any event in which said permit is utilized. (Prior code § 19A-19)

§ 8.32.190. Permit—Revocation when.

After the issuance of the permit, the City Manager shall revoke such permit if the sound amplifying equipment permitted to be used thereby is used or operated contrary to any of the provisions of this chapter.

(Prior code § 19A-18)

§ 8.32.200. Violation—Penalty.

Any person violating any of the provisions of this chapter is guilty of a misdemeanor. Each day such violation is committed or permitted to continue constitutes a separate offense and is punishable as such. The provisions of this chapter shall not be construed as permitting conduct not prescribed herein and shall not affect the enforceability of any other applicable provisions of law.

(Prior code § 19A-20)

APPENDIX 5.1:

NOISE MEASUREMENT STUDY AREA PHOTOS



This page intentionally left blank



JN:15459



L1_E 33, 54' 13.850000", 117, 50' 20.330000"



L1_N 33, 54' 13.830000", 117, 50' 20.280000"



L1_S 33, 54' 13.860000", 117, 50' 20.280000"



L1_W 33, 54' 13.890000", 117, 50' 20.390000"



L2_E 33, 53' 58.520000", 117, 50' 5.420000"



L2_N 33, 53' 58.580000", 117, 50' 5.450000"

JN:15459



L2_S 33, 53' 58.550000", 117, 50' 5.450000"



L2_W 33, 53' 58.520000", 117, 50' 5.470000"



L3_E 33, 53' 2.840000", 117, 49' 30.950000"



L3_N 33, 53' 2.840000", 117, 49' 31.030000"



L3_S 33, 53' 2.810000", 117, 49' 31.010000"



L3_W 33, 53' 2.810000", 117, 49' 30.950000"



L4_E 33, 53' 27.270000", 117, 49' 48.120000"



L4_N 33, 53' 27.400000", 117, 49' 48.170000"



L4_S 33, 53' 27.320000", 117, 49' 48.140000"



L4_W 33, 53' 27.250000", 117, 49' 48.140000"



L5_E 33, 53' 59.520000", 117, 49' 10.130000"

L5_N 33, 53' 59.550000", 117, 49' 10.190000"



L5_S 33, 53' 59.540000", 117, 49' 10.190000"



L5_W 33, 53' 59.500000", 117, 49' 10.160000"



L6_E 33, 53' 30.990000", 117, 48' 54.040000"



L6_N 33, 53' 30.950000", 117, 48' 54.120000"



L6_S 33, 53' 30.950000", 117, 48' 54.120000"



L6_W 33, 53' 30.990000", 117, 48' 54.060000"



L7_E 33, 52' 24.420000", 117, 44' 19.410000"

L7_N 33, 52' 24.400000", 117, 44' 19.520000"



L7_S 33, 52' 24.410000", 117, 44' 19.490000"



L7_W 33, 52' 24.440000", 117, 44' 19.380000"



L8_E 33, 54' 15.100000", 117, 46' 49.450000"



L8_N 33, 54' 15.170000", 117, 46' 49.480000"



L8_S 33, 54' 15.070000", 117, 46' 49.450000"



L8_W 33, 54' 15.070000", 117, 46' 49.420000"



L9_E 33, 53' 12.860000", 117, 48' 59.720000"



L9_N 33, 53' 12.930000", 117, 48' 59.500000"

AGATT



L9_S 33, 53' 12.870000", 117, 48' 59.670000"





L10_E 33, 53' 23.270000", 117, 48' 4.710000"



L10_N 33, 53' 23.310000", 117, 48' 4.740000"



L10_S 33, 53' 23.280000", 117, 48' 4.710000"



L10_W 33, 53' 23.240000", 117, 48' 4.740000"

This page intentionally left blank



APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



This page intentionally left blank



	Thursday, I				Location): 11 - Site S1-0	our Noise L				Mete	er: Piccolo II				15459
Project:	Yorba Linda	a Housing ar	nd General Pl	an	Source	::		dBA Readings							Analyst:	A. Khan
							HOUNY L _{eq} (ива кейитуз	(unaajustea	/						
85.0 80.0 75.0																
(Yap) 80.0 75.0 70.0																
- 60.0 - 60.0																
A 55.0 50.0 45.0						<u></u>		<mark>8.2 4</mark>				N 0				
A 55.0 50.0 45.0 40.0	48.6	50.7	47.1	50.0	55.8	56.6	•	54.4	23.6	54.2 56.	- <mark>S</mark>	55.2 54.0	54. 55.	2 <mark>6.</mark>	53.6 52.9	50.9
35.0	ō															
	0	1 2	2 3	4 5	6	7 8	9 1	LO 11 Hour B	12 eginning	13 14	15	16 17	18 19	20	21 22	23
meframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L
	0	48.6	53.8	45.7	53.6	53.3	52.5	51.8	49.2	47.4	46.1	45.9	45.8	48.6	10.0	58.6
	1 2	50.7 47.1	59.7 52.5	45.2 44.5	59.3 52.3	58.9 51.9	57.8 50.9	56.4 50.1	48.9 47.4	46.9 45.7	45.6 44.9	45.4 44.8	45.2 44.6	50.7 47.1	10.0 10.0	60.7 57.1
Night	3	48.6	54.2	45.4	54.0	53.6	52.9	52.4	49.2	47.0	45.8	45.7	45.5	48.6	10.0	58.6
	4	50.0	55.4	46.5	55.1	54.7	53.9	53.3	50.7	48.9	47.0	46.8	46.6	50.0	10.0	60.0
	5	54.7	60.8	50.3	60.3	59.9	58.9	58.2	55.2	53.5	51.3	50.9	50.5	54.7	10.0	64.7
	6	55.8 56.6	62.0 62.1	50.5 51.5	61.6 61.7	61.3 61.4	60.1 60.4	59.3 59.7	56.7 57.5	54.5 55.6	51.3 52.6	50.9 52.0	50.6 51.7	55.8 56.6	10.0 0.0	65.8 56.6
	8	55.6	61.2	51.5	60.8	60.4	59.5	58.8	56.3	55.6	52.6	51.2	50.7	55.6	0.0	55.6
	9	55.2	62.6	48.2	61.8	61.3	60.2	59.7	55.7	53.3	49.5	48.9	48.4	55.2	0.0	55.2
	10	54.4	61.5	49.2	60.9	60.3	59.0	57.9	54.9	53.1	50.3	49.8	49.3	54.4	0.0	54.4
	11	58.2	63.3	55.2	63.0	62.8	61.9	61.0	58.4	57.3	55.9	55.6	55.3	58.2	0.0	58.
	12 13	53.6 54.2	68.2 60.3	48.3 48.3	67.0 59.8	65.9 59.3	63.2 58.4	61.1 57.6	57.2 55.1	54.1 53.1	49.6 49.5	49.0 48.9	48.5 48.4	53.6 54.2	0.0 0.0	53. 54.
Day	14	56.7	67.4	49.6	66.5	65.0	61.7	60.0	56.6	54.2	50.8	50.3	49.8	56.7	0.0	54.
	15	55.7	62.3	50.8	61.7	61.1	59.9	58.9	56.3	54.6	51.9	51.4	50.9	55.7	0.0	55.
	16	55.2	60.8	50.7	60.4	59.9	59.0	58.4	55.8	54.2	51.9	51.3	50.8	55.2	0.0	55.
	17 18	54.0	62.2 61.5	49.0	61.0	59.8	58.3 59.2	57.0 58.4	54.5	52.8	50.1	49.6 49.6	49.1 49.1	54.0 54.9	0.0 0.0	54.
	18	54.9 55.0	62.8	49.0 47.9	61.0 62.5	60.4 62.1	59.2 61.0	58.4 59.4	55.7 55.1	53.8 52.9	50.2 49.3	49.6	49.1 48.1	54.9	5.0	54. 60.
	20	56.0	62.1	48.3	61.9	61.6	60.8	60.1	57.1	54.3	49.7	49.0	48.5	56.0	5.0	61.
	21	53.6	59.5	47.6	59.2	58.9	58.1	57.4	54.6	52.2	48.6	48.2	47.7	53.6	5.0	58.
Night	22 23	52.9 50.9	58.5 56.2	48.2 47.2	58.3 55.9	57.9 55.5	57.1 54.7	56.5 54.1	53.7 51.6	51.6 49.7	49.0 47.8	48.6 47.6	48.3 47.3	52.9 50.9	10.0 10.0	62. 60.
meframe	Hour	L eq	L max	<i>L</i> min	L1%	L2%	L5%	L8%	L25%	49.7 L50%	47.8 L90%	47.0 L95%	47.3 L99%	50.5	L _{eq} (dBA)	00.
Day	Min	53.6	59.5	47.6	59.2	58.9	58.1	57.0	54.5	52.2	48.6	48.2	47.7	24-Hour	Daytime	Nightt
	Max	58.2	68.2	55.2	67.0	65.9	63.2	61.1	58.4	57.3	55.9	55.6	55.3	CNEL	(7am-10pm)	(10pm-7
Energy	Average Min	55.4 47.1	Av 52.5	erage: 44.5	<u>62.0</u> 52.3	<u>61.4</u> 51.9	60.0 50.9	59.0 50.1	56.1 47.4	54.0 45.7	50.8 44.9	50.2 44.8	49.8 44.6	59.5	55.4	51
Night	Max	47.1 55.8	52.5 62.0	44.5 50.5	52.3 61.6	61.3	50.9 60.1	50.1	47.4 56.7	45.7 54.5	44.9 51.3	44.8 50.9	44.6 50.6	53.5	55.4	21
Energy	Average	51.9		erage:	56.7	56.3	55.4	55.5	51.4	49.5	47.6	47.4	47.2			

						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date:	Thursday, N	May 5, 2022			Location:	L2 - Site S2-0)08 - 17151 B	astanchury F	Road		Meter:	Piccolo II			JN:	15459
Project:	Yorba Linda	a Housing and	d General Pla	in	Source:		.00 1/1510	ascancinary i	louu						Analyst:	A. Khan
							Hourly L _{eq}	dBA Readings	(unadjusted)							
0E /	0															
85.0 80.0 75.0																
(Yanger) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (100) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (1000) (
	0										a					
1 55.0 1 50.0 0 45.0	0				62.9	<mark>61.2</mark>	<mark>63.3</mark>	<u>v</u> – v		vi — ri —	6.9 0.63	י <u>ה</u>	<u></u> 🕺	•	n	
A 55.0 J 50.0 A 50.0 A 50.0 A 50.0 A 50.0 A 50.0	48.9	49.2 47.1	47.6	50.4 54.6		9 9		2 <mark>.58 - 29</mark>	2 <mark>.5</mark>	20	25	28.	<mark>57.3</mark>		55.9 53.8	51.6
± 40.0 35.0		4 4	4	- u			+							+		- <u>0</u> -
	0	1 2	3	4 5	6	7 8	9 1	LO 11	12 1	.3 14	15 1	6 17	18 19	20	21 22	23
								Hour B	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	48.9 49.2	57.7 58.0	43.4 43.2	57.5 57.6	57.1 57.0	55.3 55.6	53.8 54.3	48.1 48.7	45.6 45.3	43.9 43.8	43.7 43.6	43.5 43.4	48.9 49.2	10.0 10.0	58.9 59.2
	1 2	49.2	58.0	43.2	57.6	57.0	55.6	54.3	48.7	45.3	43.8	43.0	43.4	49.2	10.0	59.2 57.1
Night	3	47.6	56.1	43.3	55.8	55.4	53.7	51.9	46.5	45.0	43.7	43.6	43.4	47.6	10.0	57.6
	4	50.4	58.6	45.2	58.4	58.1	56.4	54.7	49.9	47.7	45.8	45.6	45.3	50.4	10.0	60.4
	5	54.6	63.4	48.2	63.1	62.7	61.1	59.4	53.8	51.0	48.9	48.6	48.3	54.6	10.0	64.6
	6 7	62.9 61.2	74.5 67.6	50.5 52.7	74.0	73.5 66.9	71.2	68.4 65.2	59.0 62.6	55.8 59.8	51.5 54.0	51.0 53.3	50.6 52.8	62.9 61.2	10.0 0.0	72.9
	8	61.1	68.8	51.6	68.5	68.1	66.6	65.7	62.0	58.8	53.2	52.4	51.7	61.1	0.0	61.1
	9	63.3	75.1	50.4	74.9	74.3	70.7	67.6	60.5	56.9	51.8	51.1	50.6	63.3	0.0	63.3
	10	59.2	67.8	50.8	67.5	67.0	64.7	63.2	59.6	56.7	52.3	51.7	51.0	59.2	0.0	59.2
	11 12	58.2 57.3	66.7 64.9	49.1	66.4	65.9 64.2	64.0 62.9	62.6 62.0	58.8	55.4	50.2 49.9	49.8 49.3	49.3	58.2 57.3	0.0 0.0	58.2 57.3
	12	57.3	70.4	48.7 48.4	64.6 70.0	69.0	66.5	62.0	58.4 59.3	54.6 55.2	49.9 50.1	49.3 49.2	48.8 48.6	57.3	0.0	57.3
Day	14	58.5	65.8	48.3	65.5	65.1	63.9	62.9	59.9	56.1	50.1	49.2	48.5	58.5	0.0	58.5
	15	59.9	68.5	49.6	68.0	67.3	65.4	64.1	60.7	57.7	51.6	50.6	49.8	59.9	0.0	59.9
	16	64.9	79.5	50.5	77.8	75.8	71.0	67.6	61.9	58.7	53.8	52.4	51.0	64.9	0.0	64.9
	17 18	58.5 59.3	65.7 66.4	49.1 48.8	65.5 66.1	65.0 65.8	63.5 64.5	62.6 63.5	59.7 60.4	56.7 57.6	50.8 50.8	50.0 49.8	49.3 49.0	58.5 59.3	0.0 0.0	58.5 59.3
	18	57.8	67.3	48.8	66.8	65.9	63.7	62.1	58.7	54.7	48.3	49.8	43.0	57.8	5.0	62.8
	20	58.0	67.6	47.4	67.2	66.4	64.1	62.4	58.5	54.7	49.2	48.2	47.5	58.0	5.0	63.0
	21	55.9	64.2	46.8	63.9	63.6	62.2	60.7	56.4	52.5	47.7	47.2	46.9	55.9	5.0	60.9
Night	22 23	53.8 51.6	61.9 60.7	46.8 45.2	61.7 60.4	61.4 60.0	59.9 58.0	58.7 56.4	54.0 51.3	50.3 47.8	47.6 45.8	47.2 45.6	46.9 45.3	53.8 51.6	10.0 10.0	63.8 61.6
Timeframe	25 Hour	L _{eq}	L max	45.2 L _{min}	60.4 L1%	L2%	L5%	56.4 L8%	L25%	47.8 L50%	45.8 L90%	45.0 L95%	45.5 L99%	51.0	L _{eq} (dBA)	01.0
Day	Min	55.9	64.2	46.8	63.9	63.6	62.2	60.7	56.4	52.5	47.7	47.2	46.9	24-Hour	Daytime	Nighttime
,	Max	64.9	79.5	52.7	77.8	75.8	71.0	67.6	62.6	59.8	54.0	53.3	52.8	CNEL	(7am-10pm)	(10pm-7am
Energy	Average Min	60.2 47.1	Ave 56.1	rage: 41.8	68.0 55.8	67.4 55.4	65.3 53.7	63.8 51.9	59.8 45.2	56.4 43.6	50.9 42.3	50.1 42.2	49.5 42.0	63.1	60.2	55.3
Night	Max	47.1 62.9	74.5	41.8 50.5	55.8 74.0	55.4 73.5	53.7	51.9 68.4	45.2 59.0	43.6 55.8	42.3 51.5	42.2 51.0	42.0 50.6	05.1	00.2	55.5
Energy	Average	55.3	-	rage:	60.5	60.1	58.4	56.6	50.7	48.0	45.9	45.7	45.4			

						24	Hour Noise	e Level Me	easureme	ent Su	mmary								
Date:	Thursday, I	May 5, 2022			Location	: 13 - Site	52-012 - 5320	Richfield Ro	had			Me	ter: Pi	ccolo II				JN:	15459
Project:	Yorba Linda	a Housing ar	d General Pl	an	Source	20 - 5110	52-012 - 5520	Mennelu K	au									Analyst:	A. Khan
							Hourly L	_{eq} dBA Read	ings (unadji	usted)									
	0																		
85.0 2 80.0																			
1/3 1/5 .0	0																		
(80 .0 75.0 70.0 65.0 60.0	0																		
- 55.0	ğ —																		
A J N N N N N N N N N N	40.7	38.3	38.8	40.9 45.0	45.5	<mark>46.</mark> 6	48.1 47.8	47.7	56.1	49.8	47.3	48.9	<mark>47.</mark> 0	46.9	4.	45.6 43.6	44.0	43.0	42.1
± 40.0	0 - 4	- M - N	, m	4 4	4	4	<u>4</u> 4	- 4 4	i	4	4	4	4	4	47	4 4	- 4 -	4	4
	0	1 2	3	4 5	6	7	89	10 1	1 12	13	14	15	16	17	18	19 20	21	22	23
								Ηοι	ır Beginnin	g									
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%			L50%	L90%		L95%	L99%	Cų		Adj.	Adj. L _{eq}
	0	40.7	45.8	37.2	45.5	45.1	44.5	44.1			39.1	37.9		37.7	37.4			10.0	50.7
	1 2	38.3 37.0	42.2 39.5	36.4 35.9	41.7 39.3	41.3 39.1	40.6 38.6	40.2 38.3			37.7 36.7	36.8 36.2		36.7 36.1	36.5 36.0			10.0 10.0	48.3 47.0
Night	3	38.8	41.3	37.4	41.1	40.9	40.4	40.1	-		38.5	37.9		37.7	37.5			10.0	48.8
-	4	40.9	44.0	39.0	43.7	43.5	42.9	42.6	41	.4	40.6	39.5		39.3	39.1	40.9		10.0	50.9
	5	45.0	50.2	42.2	49.7	49.1	47.8	47.2			44.3	42.9		42.7	42.4			10.0	55.0
	6	45.5 46.6	49.7 52.2	42.7 42.8	49.2 51.8	48.8	48.1	47.6			44.9 45.5	43.4		43.1 43.3	42.9	45.5		10.0	55.5 46.6
	8	40.0	54.9	42.8	54.6	54.3	53.4	52.7			45.5	43.0		43.3	42.5			0.0	40.0
	9	47.8	54.3	41.3	53.9	53.4	52.5	51.9	49	.2	45.7	42.5		41.9	41.5	47.8		0.0	47.8
	10	47.7	54.5	42.0	54.1	53.7	52.9	52.1		-	45.7	43.4		42.7	42.2			0.0	47.7
	11 12	49.4 56.1	54.5 69.9	44.3 57.5	54.1 69.0	53.7 68.0	53.0 66.2	52.5 65.2		-	48.3 59.5	45.5 58.2		45.0 58.0	44.4 57.6			0.0 0.0	49.4 56.1
	12	49.8	71.6	57.5	70.1	68.6	65.9	64.4		-	59.5	56.2		52.9	57.6			0.0	49.8
Day	14	47.3	52.8	42.4	52.5	52.1	51.3	50.5			46.1	43.5		43.0	42.5			0.0	47.3
	15	48.9	56.8	43.0	56.3	55.6	54.0	52.9			46.8	44.0		43.6	43.1	48.9		0.0	48.9
	16 17	47.0 46.9	54.0 54.8	42.3	53.5	53.0	51.8 51.5	50.7 50.6			45.4	43.2 43.0		42.8 42.6	42.4 42.1			0.0 0.0	47.0 46.9
	17	46.9	54.8 55.5	42.0 41.0	54.2 55.2	53.6 54.7	51.5	50.6			45.2 44.8	43.0		42.6 41.7	42.1			0.0	46.9 47.4
	19	45.6	52.7	40.3	52.2	51.6	50.4	49.6			43.9	41.3		40.9	40.4			5.0	50.6
	20	43.6	49.2	39.3	48.9	48.5	47.5	46.7			42.4	40.0		39.7	39.4			5.0	48.6
	21 22	44.0 43.0	49.1 48.0	39.8	48.9	48.6	48.0	47.3			42.8 41.8	40.5		40.2 39.9	40.0		_	5.0 10.0	49.0 53.0
Night	22	43.0	48.0 48.9	39.6 38.5	47.8 48.5	47.5 47.9	46.8 47.0	46.4			41.8	40.1 39.1		39.9 38.8	39.8			10.0	53.0
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%			L50%	L90%		L95%	L99%			q (dBA)	
Day	Min	43.6	49.1	39.3	48.9	48.5	47.5	46.7		-	42.4	40.0		39.7	39.4		r D	aytime	Nighttime
	Max Average	56.1 49.0	71.6	57.5 erage:	70.1 55.3	68.6 54.7	66.2 53.4	65.2 52.6			59.5 47.0	58.2 44.6		58.0 44.1	57.6 43.6		(7a	m-10pm)	(10pm-7am
	Min	37.0	39.5	35.9	39.3	39.1	38.6	38.3			36.7	36.2		36.1	36.0		7 /	19.0	42.1
Night	Max	45.5	50.2	42.7	49.7	49.1	48.1	47.6			44.9	43.4		43.1	42.9				76.1
Energy	Average	42.1	Av	erage:	45.2	44.8	44.1	43.6	41	.7	40.4	39.3		39.1	38.9				

						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date:	Thursday, I	May 5, 2022			Location	: 11 - Site S2-0	13 - <u>4861 Liv</u>	erpool Stree	+		Meter:	Piccolo II			JN:	15459
Project:	Yorba Linda	a Housing an	d General Pla	an	Source	<i>L</i> + - 5ite 52-0	15 - 4001 LIV	erpoor stree	L						Analyst:	A. Khan
							Hourly L _{eq}	dBA Readings	(unadjusted)							
05.0																
85.0 80.0 75.0 70.0 65.0 65.0																
8 75.0	ğ —															
e 70.0	ŏ — —							N 0	9	_						
60.0 ت 60.0 > 55.0								67.3	<u> </u>	2	~~~					
λι 55.0 μη 55.0 μη 50.0 μη	, o	0 4	ः न	ு ப	L.	<mark>56.8</mark>	28.5			28.0	<u>σ</u> σ		ni ni	m	न र	m
	0 - 4 -	4 4		44.5 47.5	49.5	2 <mark>.5</mark>				•• _		48.0	<mark>50.</mark>	2 <mark>0.</mark>	47.1 48.4	44
35.0							+ - + -		10 1		45 44		10 10		24 22	
	0	1 2	3	4 5	6	7 8	9 3	10 11 Hour Br	12 1 eginning	3 14	15 16	5 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}
Timejrume	0	45.0	54.3	40.7	53.5	52.9	51.6	50.1	43.4	42.1	41.1	41.0	40.8	45.0	10.0	55.0
	1	41.0	43.3	39.9	43.0	42.8	42.3	42.0	41.3	40.8	40.2	40.1	40.0	41.0	10.0	51.0
	2	40.6	43.7	39.6	43.4	43.0	42.3	41.7	40.7	40.3	39.9	39.8	39.7	40.6	10.0	50.6
Night	3	42.1	44.4	40.9	44.2	44.0	43.7	43.4	42.5	41.9	41.2	41.1	41.0	42.1	10.0	52.1
	4	44.5	49.7	42.8	49.4	49.0	47.7	46.5	44.4	43.7	43.1	43.0	42.9	44.5	10.0	54.5
	5	47.5 49.5	51.2 56.7	45.8 47.4	50.8 56.4	50.4 56.0	49.6 51.8	49.0 50.5	47.8 49.1	47.1 48.5	46.3 47.8	46.2 47.7	45.9 47.5	47.5 49.5	10.0 10.0	57.5 59.5
	7	51.9	60.5	47.6	60.0	59.3	57.2	55.7	52.1	48.3	47.8	47.7	47.8	51.9	0.0	51.9
	8	56.8	62.7	49.3	62.4	62.1	61.4	60.9	58.1	55.2	50.9	50.3	49.5	56.8	0.0	56.8
	9	58.9	63.5	51.5	63.2	63.0	62.4	62.0	60.0	58.6	54.0	53.1	51.8	58.9	0.0	58.9
	10	67.2	71.5	61.4	71.3	71.0	70.5	70.1	68.2	66.4	63.5	62.8	61.6	67.2	0.0	67.2
	11 12	66.0 67.6	73.7 76.3	61.5 58.4	72.2 75.0	71.0 74.2	68.8 72.2	67.9 71.2	66.5 68.6	65.3 66.3	63.1 60.4	62.5 59.7	61.8 58.8	66.0 67.6	0.0 0.0	66.0 67.6
	12	63.2	76.5	50.4	73.8	74.2	68.5	66.7	62.9	59.9	54.2	53.2	58.8	63.2	0.0	63.2
Day	14	58.0	65.5	53.6	64.9	64.4	63.1	62.0	57.9	56.1	54.3	54.0	53.8	58.0	0.0	58.0
	15	59.2	64.8	53.7	64.5	64.1	63.3	62.5	59.9	58.2	55.4	54.8	53.9	59.2	0.0	59.2
	16	54.9	61.0	49.8	60.7	60.4	59.2	58.3	55.8	53.6	50.7	50.3	49.9	54.9	0.0	54.9
	17 18	48.0 50.5	56.0 58.3	43.6	55.6 57.9	55.0 57.5	53.1 56.2	51.8 55.2	47.8 50.7	45.8	44.2 44.9	44.0	43.7 44.2	48.0 50.5	0.0 0.0	48.0
	18	50.5 47.3	58.3	44.1 42.5	57.9	57.5	50.2	55.2	47.3	47.6 44.9	44.9	44.5 42.9	44.2	50.5 47.3	0.0 5.0	50.5 52.3
	20	50.3	57.4	43.9	57.0	56.7	55.8	54.9	51.1	47.5	44.9	44.5	44.1	50.3	5.0	55.3
	21	47.1	53.1	43.9	52.5	52.0	50.9	50.0	47.5	46.0	44.5	44.3	44.0	47.1	5.0	52.1
Night	22	48.4	56.0	44.8	55.7	55.3	53.9	52.9	47.6	46.1	45.2	45.1	44.9	48.4	10.0	58.4
Timeframe	23 Hour	44.3	48.7 L max	42.6 L _{min}	48.5 L1%	48.1 L2%	47.1 L5%	46.1 L8%	44.3 L25%	43.7 L50%	43.0 L90%	42.9 L95%	42.7 L99%	44.3	10.0 L _{eq} (dBA)	54.3
	Min	L _{eq} 47.1	53.1	42.5	52.5	52.0	50.9	50.0	47.3	44.9	43.1	42.9	42.6	24-Hour	Daytime	Nighttime
Day	Max	67.6	76.3	61.5	75.0	74.2	72.2	71.2	68.6	66.4	63.5	62.8	61.8	CNEL	(7am-10pm)	(10pm-7am
Energy /	Average	61.4		erage:	63.1	62.5	61.0	60.0	57.0	54.7	51.8	51.3	50.6	60.6	<u> </u>	48.0
Night	Min	40.6	43.3	39.6	43.0	42.8	42.3	41.7	40.7	40.3	39.9	39.8	39.7	60.1	61.4	45.8
Energy /	Max Average	49.5 45.8	56.7 Ave	47.4 erage:	56.4 49.4	56.0 49.1	53.9 47.8	52.9 46.9	49.1 44.6	48.5 43.8	47.8 43.1	47.7 43.0	47.5 42.8			
Life By /					-9.4	49.1	-7.0	40.5	-+.0		3.1	-5.0	72.0			

						24-Ho	our Noise L	evel Meas	urement S	ummary						
	Thursday, N				Location	15 - Site S3-2	910 - 18111 B	astanchury F	Road		Meter:	Piccolo II			JN:	15459
Project:	Yorba Linda	a Housing and	d General Pla	an	Source			aotanonary i							Analyst:	A. Khan
							Hourly L _{eq}	dBA Readings	(unadjusted)							
85 (0															
	ŏ															
a 75.0 p 70.0	0															
85.0 80.0 75.0 70.0 65.0 60.0																
A A I A I A I D B B C C C C C C C C C C	õ –				u	u o	N	0.1 62.9	N	x	- <mark>7</mark>	n <u>n</u>	<u></u>			
p 45.0	23.1	51.1	50.2	49.8	55.6	5 <mark>58.</mark>	<mark></mark>		56.2	57.	23	<mark> 2</mark>	55.8	22.2	53.5 52.5	51.6
▲ 40.0 35.0	0 - 0	_ n n		4 v											<u> </u>	- <u>n</u>
	0	1 2	3	4 5	6	7 8	9 1	LO 11	12 1	.3 14	15 1	6 17	18 19	20	21 22	23
								Hour B	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	53.1	58.2	45.5	57.7	57.3	56.5	56.0	54.3	52.6	48.5	47.5	46.1	53.1	10.0	63.1
	1 2	51.1 52.4	56.8 60.5	44.5 43.7	56.4 59.8	56.1 59.3	55.3 58.0	54.5 56.8	52.1 52.8	50.1 50.4	46.5 46.1	45.8 45.2	44.9 44.1	51.1 52.4	10.0 10.0	61.1 62.4
Night	3	50.2	56.1	44.5	55.5	55.2	54.3	53.5	51.2	49.0	45.9	45.4	44.8	50.2	10.0	60.2
Ŭ	4	49.8	56.2	45.7	55.9	55.5	54.6	53.6	50.3	48.0	46.3	46.1	45.8	49.8	10.0	59.8
	5	53.0	59.7	48.2	59.3	59.0	57.8	56.7	53.5	51.1	48.9	48.7	48.4	53.0	10.0	63.0
	6	55.6	61.1	50.2	60.9	60.6	59.6	58.9	56.6	54.3	51.1	50.7	50.3	55.6	10.0	65.6
	8	57.5 58.0	62.3 65.7	52.3 51.0	62.0 65.4	61.8 64.8	61.1 62.9	60.5 61.7	58.6 58.4	56.8 56.5	53.4 52.4	52.9 51.7	52.4 51.2	57.5 58.0	0.0 0.0	57.5 58.0
	9	57.2	62.8	50.4	62.2	61.8	61.0	60.2	58.3	56.5	52.3	51.5	50.6	57.2	0.0	57.2
	10	60.1	71.0	58.3	70.6	70.1	69.3	68.6	65.4	62.1	59.4	58.9	58.5	60.1	0.0	60.1
	11	62.9	75.4	58.1	75.1	74.6	73.8	73.0	70.1	64.8	60.1	59.3	58.3	62.9	0.0	62.9
	12 13	56.2 56.8	64.0 63.8	48.7 49.1	63.6 63.3	63.2 63.0	61.4 62.1	59.9 61.1	56.7 57.3	54.6 55.1	50.3 50.8	49.5 50.0	48.8 49.3	56.2 56.8	0.0 0.0	56.2 56.8
Day	13	57.0	63.4	50.3	62.9	62.5	61.3	60.5	57.7	55.9	52.3	51.3	50.5	57.0	0.0	57.0
	15	59.4	66.9	52.6	66.6	66.1	65.1	63.6	59.4	57.4	54.3	53.4	52.8	59.4	0.0	59.4
	16	57.5	63.9	50.8	63.4	62.8	61.8	60.8	58.2	56.6	52.5	51.8	51.0	57.5	0.0	57.5
	17	57.5	64.4	49.6	64.2	63.8	62.2	61.0	58.2	56.3	51.5	50.6	49.8	57.5	0.0	57.5
	18 19	56.5 55.8	62.2 63.5	48.1 46.7	62.0 63.2	61.7 62.8	61.0 61.0	60.3 59.7	57.6 56.6	55.5 54.1	50.1 48.4	49.0 47.5	48.3 46.8	56.5 55.8	0.0 5.0	56.5 60.8
	20	55.2	62.2	46.0	61.8	61.5	60.4	59.3	56.3	53.6	47.9	46.9	46.2	55.2	5.0	60.2
	21	53.5	61.1	44.9	60.7	60.1	58.7	57.8	54.5	51.0	46.2	45.5	45.0	53.5	5.0	58.5
Night	22	52.5	59.5	47.3	59.2	58.8	57.8	56.7	53.0	50.2	47.9	47.7	47.4	52.5	10.0	62.5
Timeframe	23 Hour	51.6 L _{eq}	56.9 L _{max}	46.6 L _{min}	56.5 L1%	56.3 L2%	55.6 L5%	55.0 L8%	52.4 L25%	50.4 L50%	47.7 L90%	47.3 L95%	46.8 L99%	51.6	10.0 L _{eg} (dBA)	61.6
	Min	53.5	61.1	44.9	60.7	60.1	58.7	57.8	54.5	51.0	46.2	45.5	45.0	24-Hour	Daytime	Nighttime
Day	Max	62.9	75.4	58.3	75.1	74.6	73.8	73.0	70.1	64.8	60.1	59.3	58.5	CNEL	(7am-10pm)	(10pm-7am)
Energy	Average	58.0		erage:	64.5	64.0	62.9	61.9	58.9	56.5	52.1	51.3	50.6	<u> </u>		га г
Night	Min Max	49.8 55.6	56.1 61.1	43.7 50.2	55.5 60.9	55.2 60.6	54.3 59.6	53.5 58.9	50.3 56.6	48.0 54.3	45.9 51.1	45.2 50.7	44.1 50.3	60.6	58.0	52.5
Energy	Average	52.5		erage:	57.9	57.6	56.6	55.8	52.9	50.7	47.7	47.1	46.5			

						24-Ho	our Noise L	evel Meas	urement S	Summary						
Date:	Thursday, N	May 5, 2022			Location	: 16 - Site S4-0	075 - 4742 Plu	imosa Drive			Meter	Piccolo II			JN:	15459
Project:	Yorba Linda	a Housing an	d General Pla	an	Source	:	575 I7 IZ I I								Analyst:	A. Khan
							Hourly L _{eq}	dBA Readings	s (unadjusted)						
85 (n															
85.0 2 80.0																
1 20 75.0																
(80.0 75.0 70.0 65.0 60.0																
→ 55.0												_				
A A I A I A I D B B C C C C C C C C C C		42.1 40.4	· · ·	52.0	50.9	2.9	23.0	50.7 51.1	<mark>52.1</mark>	<mark>52.2</mark> 52.3		52.7 53.1	1.0 1.0		49.4 50.2	46.1
± 40.0	4	42.40		- 4 - iii	ŭ	2 <mark>. 22</mark>		5 <mark>. 50.</mark>	- <u>10</u>	22 22	21	<u>й — ій </u>	<mark>5151</mark>	<mark></mark>	4 <u>0</u>	4
	0	1 2	3	4 5	6	7 8	9 2	10 11	12 :	13 14	15 1	6 17	18 19	20	21 22	23
								Hour B	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	42.8 42.1	48.7 47.8	39.4 38.8	48.4 47.3	47.9 46.8	46.6 45.7	46.0 45.1	43.3 42.8	41.5 41.0	40.0 39.4	39.8 39.2	39.5 39.0	42.8 42.1	10.0 10.0	52.8 52.1
	2	42.1	47.8	38.8	47.3	46.8	45.7	45.1	42.8	41.0 39.1	39.4 38.1	39.2	39.0	42.1 40.4	10.0	52.1
Night	3	42.5	48.0	39.4	47.7	47.2	46.1	45.5	43.0	41.2	39.9	39.7	39.5	42.5	10.0	52.5
	4	44.9	49.8	41.7	49.5	49.2	48.3	47.7	45.6	43.8	42.2	42.0	41.8	44.9	10.0	54.9
	5	52.0	57.9	46.7	57.3	56.9	55.8	55.0	52.7	51.2	48.6	47.9	47.1	52.0	10.0	62.0
	6	50.9 52.2	57.2 57.6	46.4	56.8 57.2	56.2 56.8	54.9 55.7	54.1 55.0	51.6 53.0	49.7	47.4 49.1	47.0 48.6	46.5	50.9 52.2	10.0 0.0	60.9 52.2
	8	52.2	57.6	47.9	57.2	58.7	57.2	56.2	53.3	51.5	49.1	48.0 48.4	48.1	52.2	0.0	52.2
	9	53.0	61.2	47.8	60.2	59.1	57.2	56.3	53.3	51.6	49.2	48.6	48.0	53.0	0.0	53.0
	10	50.7	57.4	45.9	56.9	56.3	55.0	54.2	51.1	49.2	46.9	46.5	46.0	50.7	0.0	50.7
	11	51.1	56.8	47.2	56.3	55.8	54.6	53.9	51.8	50.2	48.1	47.8	47.4	51.1	0.0	51.1
	12 13	52.1 52.2	59.8 59.4	47.2 47.9	59.2 58.8	58.5 58.0	57.1 56.7	56.0 55.7	52.1 52.3	50.2 50.8	48.1 48.8	47.8 48.5	47.3 48.1	52.1 52.2	0.0 0.0	52.1 52.2
Day	14	52.2	57.4	48.8	56.9	56.4	55.5	54.8	52.9	51.6	49.8	49.4	49.0	52.2	0.0	52.3
	15	51.7	57.6	47.5	57.2	56.7	55.2	54.5	52.4	50.8	48.4	48.0	47.6	51.7	0.0	51.7
	16	52.7	61.3	47.2	60.9	60.3	57.4	56.6	52.9	50.5	48.2	47.7	47.3	52.7	0.0	52.7
	17 18	53.1 51.8	63.5 58.0	47.6 47.4	63.0 57.4	61.7 57.0	57.7 55.9	55.5 54.9	52.6 52.2	51.0 50.8	48.7 48.5	48.2 48.1	47.8 47.6	53.1 51.8	0.0 0.0	53.1 51.8
	18	51.8	58.0	47.4	57.4	57.0	55.9	54.9 54.8	52.2	50.8 49.4	48.5 46.5	48.1 46.1	47.6	51.8 51.0	5.0	51.8
	20	51.0	58.4	44.8	57.8	57.3	55.8	54.9	51.5	49.3	46.3	45.6	45.0	51.0	5.0	56.0
	21	49.4	56.6	43.9	56.2	55.7	54.6	53.5	49.8	47.5	44.8	44.4	44.1	49.4	5.0	54.4
Night	22 23	50.2 46.1	61.0 52.0	44.5 42.4	59.8 51.5	58.7 50.8	55.8 49.4	53.0 48.9	49.8 46.9	47.5 45.0	45.3 43.2	45.0 42.9	44.6 42.6	50.2 46.1	10.0 10.0	60.2 56.1
Timeframe	23 Hour	46.1 L _{eq}	52.0 L max	42.4 L _{min}	L1%	50.8 L2%	49.4 L5%	48.9 L8%	46.9 L25%	45.0 L50%	43.2 L90%	42.9 L95%	42.6 L99%	40.1	L _{eq} (dBA)	50.1
Day	Min	49.4	56.6	43.9	56.2	55.7	54.6	53.5	49.8	47.5	44.8	44.4	44.1	24-Hour	Daytime	Nighttime
	Max	53.1	63.5	48.8	63.0	61.7	57.7	56.6	53.3	51.6	49.8	49.4	49.0	CNEL	(7am-10pm)	(10pm-7am)
Energy	Average	51.9	46.6	erage:	58.4	57.7 45.7	56.1	55.1	52.2 40.6	50.4 39.1	48.0 38.1	47.6	47.1 37.8		E1 0	17 C
Night	Min Max	40.4 52.0	46.6 61.0	37.7 46.7	46.2 59.8	45.7 58.7	44.1 55.8	43.4 55.0	40.6 52.7	39.1 51.2	38.1 48.6	38.0 47.9	37.8 47.1	55.4	51.9	47.6
Energy	Average	47.6		erage:	51.6	51.0	49.6	48.7	46.3	44.5	42.7	42.4	42.1			



						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date:	Thursday, N	/lay 5, 2022			Location:	17 - Site S6-0)15 - 22722 O	ld Canal Roa	d		Meter:	Piccolo II			JN:	15459
Project:	Yorba Linda	Housing and	d General Pla	an	Source:		15 22722.0		u						Analyst:	A. Khan
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0	n															
85.0 (Vgp) 50.0 b 65.0 u																
Ag 75.0	3															
e 65.0																
<u>→</u> 55.0	ğ ————————————————————————————————————			- vi 4;		<mark></mark>		<mark>ט – יו</mark> –	- <mark>.</mark>	- <u>v</u> <u>v</u>	- <u>r</u> r		∞ <u>o</u>			
A 55.0 J 55.0 D 45.0 H 40.0	50.7	51.1	25.3	61.	59.	<mark>57.9</mark>	28	2 <mark>.59</mark>		<mark> </mark>	2 <mark>. 29.</mark>	28.8	<mark>57.8</mark> 59.0	26.7	56.5 54.1	53.6
± 40.0 35.0) – 0 –	51													U	- u
	0	1 2	3	4 5	6	7 8	9 1	.0 11	12 1	.3 14	15 10	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	50.7 51.1	56.6	47.3	56.3	56.1	54.9	53.8 53.9	51.0 51.4	49.7	47.9	47.6	47.4 48.1	50.7 51.1	10.0	60.7
	1 2	51.1	56.9 55.9	48.0 49.5	56.7 55.6	56.4 55.4	55.2 54.9	53.9	51.4	50.1 51.6	48.6 50.0	48.3 49.8	48.1 49.6	51.1	10.0 10.0	61.1 62.1
Night	3	55.3	58.9	51.9	58.7	58.5	57.9	57.3	56.0	54.9	52.7	52.4	52.0	55.3	10.0	65.3
	4	59.5	62.3	57.3	62.2	62.0	61.6	61.1	60.1	59.3	57.9	57.6	57.3	59.5	10.0	69.5
	5	61.4	68.0	58.3	67.7	67.2	65.6	64.3	61.5	60.1	58.8	58.6	58.4	61.4	10.0	71.4
	6	59.4 59.0	66.6 69.9	56.3 52.5	66.1 69.2	65.5 68.4	63.7 65.6	62.4 63.4	59.3 57.6	58.0 55.0	56.9 53.1	56.7 52.8	56.4 52.6	59.4 59.0	10.0 0.0	69.4 59.0
	8	59.0 57.9	69.9 66.4	52.5	69.2 66.1	65.7	63.9	62.3	57.6	55.0 54.8	53.1	52.8	52.6	59.0 57.9	0.0	59.0
	9	58.5	68.0	51.6	67.2	66.6	64.7	63.2	58.3	55.1	52.5	52.1	51.7	58.5	0.0	58.5
	10	59.9	69.0	51.5	68.6	68.1	66.6	65.1	59.7	55.2	52.2	51.9	51.6	59.9	0.0	59.9
	11	59.5	81.7	52.2	81.1	80.0	78.8	77.5	65.9	56.8	53.0	52.6	52.3	59.5	0.0	59.5
	12 13	60.7 59.7	70.0 68.2	52.4 52.7	69.6 67.9	68.9 67.4	67.1 65.8	65.6 64.4	60.8 60.0	56.6 56.5	53.2 53.5	52.8 53.2	52.5 52.9	60.7 59.7	0.0 0.0	60.7 59.7
Day	13	60.2	69.5	52.6	69.2	68.7	66.8	64.9	59.9	56.2	53.2	52.9	52.6	60.2	0.0	60.2
,	15	59.7	69.1	52.2	68.6	68.0	66.0	64.2	59.6	55.9	53.1	52.7	52.3	59.7	0.0	59.7
	16	59.7	69.7	51.9	69.3	68.6	66.6	64.8	58.7	54.9	52.5	52.2	52.0	59.7	0.0	59.7
	17	58.8	67.6	53.0	67.2	66.6	64.6	63.3	58.8	55.5	53.6	53.3	53.1	58.8	0.0	58.8
	18 19	57.8 59.0	66.0 67.2	52.5 53.7	65.8 66.9	65.4 66.4	63.7 64.5	62.1 63.2	57.5 59.1	54.8 56.4	53.1 54.3	52.9 54.0	52.6 53.8	57.8 59.0	0.0 5.0	57.8 64.0
	20	56.7	64.7	52.3	64.4	64.0	62.2	60.6	56.7	54.5	52.8	52.6	52.4	56.7	5.0	61.7
	21	56.5	63.8	51.0	63.6	63.3	62.1	60.9	56.9	53.7	51.5	51.3	51.1	56.5	5.0	61.5
Night	22	54.1	62.3	50.4	61.9	61.2	59.1	57.4	53.7	52.4	50.9	50.7	50.5	54.1	10.0	64.1
Timeframe	23 Hour	53.6 L _{eg}	61.7 L _{max}	49.3 L _{min}	61.6 L1%	61.3 L2%	59.1 L5%	56.9 L8%	53.2 L25%	51.7 L50%	49.9 L90%	49.6 L95%	49.4 L99%	53.6	10.0 L _{eg} (dBA)	63.6
	Min	56.5	63.8	51.0	63.6	63.3	62.1	60.6	56.7	53.7	51.5	51.3	51.1	24-Hour	Daytime	Nighttime
Day	Max	60.7	81.7	53.7	81.1	80.0	78.8	77.5	65.9	56.8	54.3	54.0	53.8	CNEL	(7am-10pm)	(10pm-7am)
Energy /		59.1		erage:	68.3	67.7	65.9	64.4	59.1	55.5	52.9	52.6	52.4	<u> </u>	F0 4	
Night	Min Max	50.7 61.4	55.9 68.0	47.3 58.3	55.6 67.7	55.4 67.2	54.9 65.6	53.8 64.3	51.0 61.5	49.7 60.1	47.9 58.8	47.6 58.6	47.4 58.4	64.0	59.1	56.9
Energy /		56.9		erage:	60.8	60.4	59.1	57.9	55.4	54.2	52.6	52.4	52.1			



						24-Ho	our Noise L	evel Meas	urement S	ummary						
Date:	Thursday, N	May 5, 2022			Location:	L8 - Site S5-0)08 - Vacant F	Parcel on Fai	mont Bouley	vard	Meter:	Piccolo II				15459
Project:	Yorba Linda	a Housing and	d General Pla	n	Source:	20 0110 00 0	in the second second		inone boulet	, un u					Analyst:	A. Khan
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0	0															
a 80.0																
ap 70.0 • 65.0 • 60.0	ŏ 🗕 🚽					0										
ے۔ 60.0 م	ğ — —					<mark>70.9</mark>		۲ – – <u>م</u> –		i — – ü –	67.4		o. 4			
A 55.0 Jun 50.0 0 45.0 H 40.0		0 7	26.6	60.4			<mark></mark>	65 64	<mark>- 65</mark>	6 <u> </u>		<u> </u>	62. 62.	<mark></mark>	59.4	
ድ 45.0 40.0	23.1	54.0	¥				± ±							T T		<u>6</u>
35.0					+ + +		+ - + -							+ - +		
	0	1 2	3	4 5	6	7 8	9 1	10 11 Hour Be	12 1 eginning	3 14	15 16	5 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	53.0	65.3	44.1	64.9	64.1	60.9	58.0	47.7	45.5	44.5	44.4	44.2	53.0	10.0	63.0
	1	54.0	67.1	46.1	66.6	65.6	60.9	56.7	49.7	47.3	46.4	46.3	46.2	54.0	10.0	64.0
	2	50.1	55.9	48.4	55.6	55.1	53.2	51.9	50.0	49.3	48.7	48.6	48.5	50.1	10.0	60.1
Night	3 4	56.6 60.4	69.5 73.7	50.0 48.1	69.0 73.2	67.8 71.9	63.6 67.5	59.7 64.7	51.8 56.3	50.8 50.0	50.3 48.4	50.2 48.3	50.1 48.1	56.6 60.4	10.0 10.0	66.6 70.4
	4 5	61.7	73.7	48.1	73.2	71.9	69.5	66.7	55.9	50.0	48.4 50.8	48.3 50.5	48.1 50.1	61.7	10.0	70.4
	6	66.1	78.8	51.5	78.2	77.2	74.0	71.6	61.7	54.9	52.1	51.9	51.6	66.1	10.0	76.1
	7	70.9	81.9	53.3	81.3	80.3	78.1	76.4	70.2	63.2	54.8	54.0	53.4	70.9	0.0	70.9
	8	69.2	80.9	49.1	80.3	79.3	76.4	74.6	68.1	59.9	50.5	49.8	49.3	69.2	0.0	69.2
	9	65.8	77.9	44.8	77.2	76.0	73.3	71.4	64.2	56.4	46.2	45.5	45.0	65.8	0.0	65.8
	10 11	65.4 64.9	77.1 77.0	43.2 44.9	76.6 76.5	75.6 75.4	73.0 72.6	71.2 70.4	63.4 62.4	55.1 55.0	45.8 47.2	44.5 46.2	43.5 45.3	65.4 64.9	0.0 0.0	65.4 64.9
	11	65.1	77.3	44.9	76.5	75.4	72.6	70.4	62.4	55.0	47.2	46.2 45.6	45.3 44.6	64.9 65.1	0.0	64.9
	12	65.2	77.4	44.0	76.8	75.6	72.5	70.3	63.9	54.9	46.5	45.5	44.4	65.2	0.0	65.2
Day	14	65.3	77.3	42.4	76.7	75.5	72.6	70.6	64.4	55.7	44.4	43.5	42.6	65.3	0.0	65.3
	15	67.4	81.0	43.9	79.9	78.3	74.6	72.1	64.7	57.0	46.3	45.0	44.1	67.4	0.0	67.4
	16	64.8	76.3	40.3	75.8	74.7	72.3	70.6	63.4	54.4	42.4	41.2	40.4	64.8	0.0	64.8
	17 18	65.0 64.0	75.9 75.4	41.6 39.6	75.4 74.9	74.5 74.0	72.3 71.5	70.6 69.6	64.6 62.8	56.3 54.8	44.0 42.5	42.9 40.9	41.8 39.9	65.0 64.0	0.0 0.0	65.0
	18 19	64.0 62.4	75.4 73.9	39.6 39.8	74.9	74.0	71.5	68.3	62.8 60.9	54.8 51.8	42.5 41.6	40.9 40.9	39.9 40.1	64.0 62.4	0.0 5.0	64.0 67.4
	20	64.0	77.1	41.0	76.5	75.3	70.0	68.7	60.3	51.0	41.8	41.4	41.2	64.0	5.0	69.0
	21	60.7	73.1	42.1	72.7	71.9	68.7	65.9	57.4	47.9	42.7	42.5	42.2	60.7	5.0	65.7
Night	22	59.4	71.3	47.7	70.9	70.2	67.2	64.3	56.7	50.6	48.3	48.1	47.8	59.4	10.0	69.4
Timeframe	23 Hour	57.1	69.8	48.3 L _{min}	69.3 L1%	68.3 L2%	64.7 L5%	61.5 L8%	52.3 L25%	49.8 L50%	48.8 L90%	48.6 L95%	48.4 L99%	57.1	10.0 L _{eg} (dBA)	67.1
	Min	L _{eq} 60.7	L _{max} 73.1	2 min 39.6	72.7	71.9	68.7	65.9	57.4	47.9	41.6	40.9	39.9	24-Hour	Daytime	Nighttime
Day	Max	70.9	81.9	53.3	81.3	80.3	78.1	76.4	70.2	63.2	54.8	54.0	53.4	CNEL	(7am-10pm)	(10pm-7am)
Energy	Average	66.0		rage:	76.7	75.6	72.8	70.8	63.6	55.2	45.6	44.6	43.8			
Night	Min	50.1	55.9	44.1	55.6	55.1	53.2	51.9	47.7	45.5	44.5	44.4	44.2	68.3	66.0	60.0
0	Max Average	66.1 60.0	78.8 Δνα	51.5 rage:	78.2 69.1	77.2 68.1	74.0 64.6	71.6	61.7 53.6	54.9 50.1	52.1 48.7	51.9 48.5	51.6 48.3			
chergy	Average	0.0	Ave	lage.	09.1	08.1	04.0	01./	53.0	50.1	48./	48.5	48.3			



						24-Ho	ur Noise Le	evel Meas	urement S	Summary						
	Thursday, I				Location	19 - Site S3-1	.03 - Friend C	hurch Overf	low Parking		Meter:	Piccolo II				15459
Project:	Yorba Linda	a Housing an	d General Pla	an	Source	: 0.000									Analyst:	A. Khan
							Hourly L _{eq} (dBA Readings	(unadjusted)						
85.0	0															
₹ ^{80.0}																
B 70.0	ğ —															
85.0 80.0 75.0 70.0 65.0 65.0																
<u>רא</u> 55.0 בר 50.0		<u>б</u>		0 0	ت	<mark>59.8</mark> 60.8	4		- <u> </u>	<mark>ი </mark>	- <u>0</u> - 1	N	N - N	∞	_	
λ <u>in 55.0</u> 50.0 45.0 Η 40.0	0 6	41.9		45.6 49.5	22.5			52.2		23.1	24°	49.5	5 <mark>.54</mark>	21.8	49.1 48.4	48.3
35.0	0 ++															+
	0	1 2	3	4 5	6	7 8	9 1	LO 11 Hour B	12 í 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	43.8	50.3	41.0	49.8	49.2	47.5	46.4	44.2	42.6	41.5	41.3	41.1	43.8	10.0	53.8
	1	41.9 41.6	45.9 46.2	40.4 40.0	45.6 45.8	45.3 45.4	44.2 44.3	43.6 43.6	42.1 41.8	41.4 40.9	40.8 40.3	40.6 40.2	40.5 40.1	41.9 41.6	10.0 10.0	51.9 51.6
Night	2	41.6	46.2	40.0	45.8	45.4	44.5	43.0	41.8	40.9	40.5	40.2	40.1	41.0	10.0	51.6
0	4	45.6	49.7	44.0	49.5	49.1	48.0	47.4	45.7	45.1	44.4	44.2	44.1	45.6	10.0	55.6
	5	49.5	55.8	46.8	55.4	54.8	53.0	52.0	49.7	48.5	47.4	47.2	46.9	49.5	10.0	59.5
	6 7	52.5 59.8	58.2 63.6	49.2 54.7	57.9 63.4	57.4 63.1	56.3 62.4	55.3 62.0	53.1 60.9	51.4 59.5	49.8 56.6	49.6 55.7	49.3 54.9	52.5 59.8	10.0 0.0	62.5 59.8
	8	60.8	84.8	65.4	84.4	83.8	82.9	82.2	77.5	75.1	68.4	66.8	65.7	60.8	0.0	60.8
	9	52.4	59.0	47.7	58.5	57.9	56.6	55.8	53.0	50.9	48.6	48.2	47.8	52.4	0.0	52.4
	10	54.1	63.8	45.9	63.4	63.0	61.4	58.2	53.7	50.1	47.1	46.6	46.1	54.1	0.0	54.1
	11 12	52.2 56.0	58.4 63.2	47.1 47.6	58.0 62.7	57.6 62.2	56.5 61.1	55.8 60.4	52.9 57.2	50.7 53.3	48.3 48.9	47.8 48.3	47.3 47.7	52.2 56.0	0.0 0.0	52.2 56.0
	12	51.9	60.4	46.2	59.4	58.4	56.6	55.5	52.4	50.3	47.4	47.0	46.4	51.9	0.0	51.9
Day	14	53.5	59.4	50.0	58.8	58.2	57.1	56.5	54.3	52.4	50.7	50.4	50.1	53.5	0.0	53.5
	15	54.0	61.6	48.4	61.2	60.8	59.6	58.6	54.0	51.6	49.5	49.0	48.5	54.0	0.0	54.0
	16 17	49.7 49.5	55.8 56.5	45.5 45.0	55.2 56.1	54.8 55.5	53.6 53.8	52.7 52.8	50.6 50.0	48.6 48.1	46.4 45.9	46.0 45.6	45.7 45.2	49.7 49.5	0.0 0.0	49.7 49.5
	18	54.7	64.0	46.9	63.7	63.2	61.4	59.6	52.2	50.5	43.5	47.7	47.1	54.7	0.0	54.7
	19	55.2	66.0	47.3	65.5	64.2	59.7	59.2	54.1	51.6	48.9	48.2	47.6	55.2	5.0	60.2
	20	51.8	59.7	46.5	59.0	58.2	56.1	54.7	52.2	50.6	47.9	47.4	46.8	51.8	5.0	56.8
	21 22	49.1 48.4	56.1 56.4	44.1	55.6 55.9	55.0 55.3	53.6 53.2	52.7 51.9	50.4 48.8	47.0 46.1	44.9 44.1	44.6 43.8	44.2 43.5	49.1 48.4	5.0 10.0	54.1 58.4
Night	23	48.3	54.6	44.1	54.2	53.6	52.4	51.8	49.1	46.5	44.5	44.4	44.2	48.3	10.0	58.3
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24.11.	L _{eq} (dBA)	A17-1-1-1-1
Day	Min Max	49.1 60.8	55.8 84.8	44.1 65.4	55.2 84.4	54.8 83.8	53.6 82.9	52.7 82.2	50.0 77.5	47.0 75.1	44.9 68.4	44.6 66.8	44.2 65.7	24-Hour CNEL	Daytime (7am-10pm)	Nighttime (10pm-7am)
Energy	Average	55.1		erage:	61.7	61.0	59.5	58.4	55.0	52.7	49.8	49.3	48.7			
Night	Min	41.6	45.9	40.0	45.6	45.3	44.2	43.6	41.8	40.9	40.3	40.2	40.1	56.7	55.1	47.6
	Max	52.5 47.6	58.2	49.2	57.9 51.1	57.4 50.6	56.3 49.3	55.3 48.4	53.1 46.4	51.4 45.0	49.8 43.8	49.6 43.6	49.3 43.4			
Energy /	Average	47.0	AVE	erage:	51.1	50.6	49.3	48.4	40.4	45.0	43.8	43.0	43.4			

						24-Ho	ur Noise Le	evel Meas	urement S	ummary						
Date:	Thursday, I	May 5, 2022			Location	110 - Site S4	-204A - 19045	Yorba Linda	Boulevard		Meter:	Piccolo II			JN:	15459
Project:	Yorba Linda	a Housing an	d General Pla	an	Source	:	20 // 100 13		Doulevalu						Analyst:	A. Khan
							Hourly L _{eq} d	BA Readings	(unadjusted)							
85 (n															
∂ 80.0	ğ —															
a 75.0 70.0	0															
85.0 80.0 75.0 70.0 65.0 P 65.0								_								
≥ 55.0				.0 58.2		<mark>. 4.</mark>	61.5	0.0	<mark>- 62.9</mark>	<mark>ຸ</mark> ດ	<u>и</u>					
A 55.0 J 55.0 S 50.0 O 45.0 H 40.0	47.2	47.1	47.6	50.0	54.3		- ⁹ '	56.4		20. 20. 20. 20. 20. 20. 20. 20. 20. 20.	57. 57.	53.7	<mark>52.7</mark> 53.8	51.4	50.1 49.5	49.2
40.0		4 4	4	_ U									- u - u -		0 4	4
	0	1 2	3	4 5	6	7 8	91	.0 11	12 1	3 14	15 16	5 17	18 19	20	21 22	23
									eginning							
Timeframe	Hour 0	L _{eq} 47.2	49.3	L _{min} 46.4	L1% 49.1	L2% 48.9	L5% 48.6	L8% 48.3	L25% 47.5	L50% 47.0	L90% 46.6	L95% 46.5	L99% 46.5	L _{eq} 47.2	Adj. 10.0	Adj. L _{eq} 57.2
	1	47.2	49.3	46.4	49.1	48.9	48.0 48.0	48.3	47.5	47.0	46.6	46.5	46.5	47.2	10.0	57.2
	2	47.2	49.1	46.5	48.9	48.8	48.3	48.0	47.4	47.0	46.6	46.6	46.5	47.2	10.0	57.2
Night	3	47.6	48.8	46.9	48.7	48.7	48.4	48.3	47.8	47.4	47.1	47.0	46.9	47.6	10.0	57.6
	4	50.0	56.8	48.2	56.3	55.3	53.6	51.7	49.6	49.1	48.5	48.4	48.3	50.0	10.0	60.0
	5	58.2 54.3	63.4 60.8	54.0 52.0	63.0 60.3	62.7 59.8	61.8 58.1	61.0 56.4	58.8 54.1	57.6 53.4	55.3 52.5	55.0 52.3	54.5 52.1	58.2 54.3	10.0 10.0	68.2 64.3
	7	58.4	65.3	54.3	64.5	64.0	62.3	61.3	58.8	57.3	55.3	54.9	54.5	58.4	0.0	58.4
	8	56.6	65.8	50.5	65.5	65.0	63.0	61.2	56.0	52.9	51.1	50.8	50.6	56.6	0.0	56.6
	9	61.5	70.1	53.9	69.1	68.4	66.2	65.0	62.1	59.7	56.1	55.3	54.3	61.5	0.0	61.5
	10 11	59.6 56.4	69.4 64.9	51.9 50.8	68.4 64.0	67.5 63.4	65.0 62.1	63.6 60.8	59.5 56.2	56.9 54.4	53.7 52.0	53.1 51.6	52.3 51.0	59.6 56.4	0.0 0.0	59.6 56.4
	12	62.9	71.0	55.0	70.2	69.4	68.2	67.2	63.5	61.0	57.3	56.5	55.4	62.9	0.0	62.9
	13	56.7	66.2	50.2	65.5	64.7	62.7	60.9	57.0	53.1	50.8	50.6	50.3	56.7	0.0	56.7
Day	14	59.9	73.0	51.9	71.7	69.9	65.2	62.3	58.7	55.5	52.8	52.5	52.1	59.9	0.0	59.9
	15 16	57.5 54.4	67.5 60.6	48.7 50.0	66.5 60.1	66.2 59.6	64.6 58.3	62.6 57.4	56.5 54.8	52.6 53.4	49.4 51.3	49.1 50.7	48.8 50.1	57.5 54.4	0.0 0.0	57.5 54.4
	16	54.4	59.4	50.0	58.9	59.6	58.3 57.1	57.4	54.8 54.2	53.4 52.8	51.3	50.7	50.1	54.4 53.7	0.0	54.4 53.7
	18	52.7	58.4	49.4	57.9	57.4	56.1	55.3	53.0	51.8	50.2	49.9	49.6	52.7	0.0	52.7
	19	53.8	62.4	48.3	62.1	61.8	60.4	58.8	53.1	50.7	49.1	48.8	48.5	53.8	5.0	58.8
	20	51.4	58.7	48.8	58.1	57.2	55.0	53.2	51.2	50.4	49.4	49.3	49.0	51.4	5.0	56.4
	21 22	50.1 49.5	55.5 54.5	47.7	55.2 54.3	54.9 54.0	53.4 53.0	52.3 52.2	50.5 49.4	49.3 48.6	48.1 47.8	47.9 47.7	47.8 47.6	50.1 49.5	5.0 10.0	55.1 59.5
Night	23	49.2	56.0	47.2	55.4	54.9	53.5	52.5	48.8	47.9	47.4	47.3	47.2	49.2	10.0	59.2
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min Max	50.1 62.9	55.5 73.0	47.7 55.0	55.2 71.7	54.9 69.9	53.4 68.2	52.3 67.2	50.5 63.5	49.3 61.0	48.1 57.3	47.9 56.5	47.8 55.4	24-Hour CNEL	Daytime (7am-10pm)	Nighttime (10pm-7am)
Energy	Average	57.8		erage:	63.8	63.2	61.3	59.9	56.3	54.1	57.3	50.5	55.4	CNEL	(70m-10pm)	(10pm-7am)
Night	Min	47.1	48.5	46.4	48.4	48.2	48.0	47.8	47.3	46.9	46.6	46.5	46.5	60.1	57.8	52.0
	Max	58.2	63.4	54.0	63.0	62.7	61.8	61.0	58.8	57.6	55.3	55.0	54.5			
Energy	Average	52.0	Ave	erage:	53.8	53.5	52.6	51.8	50.1	49.5	48.7	48.6	48.4			

APPENDIX 8.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS



This page intentionally left blank



	FHV	VA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MO	DEL			
Scenario Road Name Road Segmen		l Hwy.					Name: ` lumber: `		Linda Hou:	sing Ele	m
SITE S	PECIFIC IN	IPUT DATA				M	IOISE N	IODE	L INPUT	s	
Highway Data				Si	te Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily T Peak Hour F Peak Ho	, ,	14,417 vehicle 9.19% 1,325 vehicle) ucks (2 Å cks (3+ Å	/	15		
Veh	icle Speed:	50 mph		14	hicle	Mix					
Near/Far Lan	e Distance:	50 feet				nicleType		Dav	Evening	Niaht	Dailv
Site Data					VCI			77.5%	÷	9.6%	
	rier Height:	0.0 feet			м	edium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist		40.0 feet		No	oise Se	ource El	levations	s (in fe	eet)		
Centerline Dist. to		40.0 feet				Auto	s: 2.0	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 4.0	000			
Observer Height (A	,	5.0 feet			Hear	vy Truck	s: 8.0	006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet			no Fo	uivelen	t Distand	o (in	fa a tì		
	d Elevation: load Grade:	0.0 feet 0.0%		La	ille Eq	Auto			leel)		
ĸ	Left View:				Modiu	m Truck					
	Right View:	-90.0 degree 90.0 degree				vy Truck					
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atter
Autos:	70.20	-1.19		2.93		-1.20		-4.83		000	0.00
Medium Trucks:	81.00			2.96		-1.20		-5.08		000	0.00
Heavy Trucks:	85.38	-22.38		2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise						1	Allandad	-	1 da		
VehicleType I Autos:	Leq Peak Hou 70		69.2	eq Eve	ening 67.5		Night 61.4		Ldn 70.0		NEL 70
Medium Trucks:	70 64		63.2		56.8		55.3		63.7	-	64
Heavy Trucks:	64		63.7		54.6		55.9		64.2		64
Vehicle Noise:	72		71.1		68.0		63.2		71.8	-	72
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 dE	BA	65	dBA	e	0 dBA	55	5 dBA
			–								500
			Ldn:	53		1	13		244		526

	FHW#	-RD-77-108 HIC	GHWAY	NOISE PF	REDICTI	on Mo	DEL			
Scenario:	Existing							Linda Hou	sing Eler	n
Road Name:	Imperial Hwy.				Job Nu	imber:	15459			
Road Segment:	w/o Prospect	Av.								
	ECIFIC INP	UT DATA						L INPUT	S	
Highway Data				Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily Tra	affic (Adt): 42	,046 vehicles					Autos:	15		
Peak Hour Pe	rcentage:	9.19%		Me	dium Tru	cks (2 A	(xles	15		
Peak Hou	r Volume: 3	,864 vehicles		He	avy Truc	ks (3+ A	(xles	15		
Vehic	le Speed:	55 mph		Vehicle N	Nix					
Near/Far Lane	Distance:	74 feet		Vehi	cleType		Day	Evening	Night	Daily
Site Data					A	utos:	77.5%	12.9%	9.6%	97.42
Barrie	r Height:	0.0 feet		Me	edium Tri	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall,	•	0.0		F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist.		50.0 feet		Noise So	uree E'	votio	. (in f.	at)		
Centerline Dist. to	Observer:	50.0 feet		Noise So				et)		
Barrier Distance to	Observer:	0.0 feet			Autos n Trucks		000			
Observer Height (Ab	ove Pad):	5.0 feet					000 006	Grade Ad	livetment	
Pad	Elevation:	0.0 feet		Heav	y Trucks	: 8.	006	Grade Ad	jusiment	0.0
Road	Elevation:	0.0 feet		Lane Equ	uivalent	Distand	ce (in t	feet)		
Roa	ad Grade:	0.0%			Autos	: 33.	764			
1	Left View:	-90.0 degrees		Mediur	n Trucks	: 33.	645			
R	ight View:	90.0 degrees		Heav	y Trucks	33.	764			
FHWA Noise Model C	Calculations									
VehicleType	REMEL 7	raffic Flow D	Distance	Finite	Road	Fresn	el 🛛	Barrier Att	en Ber	m Atten
Autos:	71.78	3.05	2.4		-1.20		-4.84		000	0.00
Medium Trucks:	82.40	-14.19		48	-1.20		-5.04		000	0.00
Heavy Trucks:	86.40	-18.15	2.4	45	-1.20		-5.43	0.	000	0.00
Unmitigated Noise Le			1	,						
	q Peak Hour	Leq Day		vening	Leq N	•		Ldn		VEL
Autos:	76.1 69.5	74.6		72.8 62.0		66.7 60.4		75. 68		76 69
Medium Trucks:	69.5 69.5	68.4	-	62.0 59.4		60.4 60.7		68. 69.	-	69
Heavy Trucks: Vehicle Noise:	69.5 77.7									77
			3	73.3		68.4	•	77.	0	11
Centerline Distance t	o Noise Con	tour (in feet)	70	dBA	65 a	ID A	4	0 dBA	E E	dBA
		Ldn		46	31			679		ава 463
		Lun		40	31	5		015	- Ly	400

Thursday, April 11, 2024

Scenario: Exi	sting					Project N	lame: Y	′orba	Linda Hou:	sing Eler	n
Road Name: Imp	oerial Hw	v.				Job Nu				5	
Road Segment: e/o											
SITE SPEC	IFIC IN	PUT DATA								s	
Highway Data					Site Cond	ditions (H	lard = :	10, Sc	oft = 15)		
Average Daily Traffic	(Adt): 3	9,992 vehicles					A	utos:	15		
Peak Hour Perce	ntage:	9.19%			Med	dium Truc	:ks (2 A	xles):	15		
Peak Hour Vo	olume:	3,675 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehicle S	peed:	55 mph		- H	Vehicle N	liv					
Near/Far Lane Dis	tance:	74 feet				cleType		Day	Evening	Night	Daily
Site Data								77.5%	÷	9.6%	
Barrier H	oiaht [.]	0 0 feet			Me	dium Tru	cks: 1	34.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-L		0.0			h	leavy Tru	cks: I	86.5%	2.7%	10.8%	0.74
Centerline Dist. to E	arrier:	50.0 feet		5	Noise So	urce Ele	ations	(in fe	pet)		
Centerline Dist. to Obs	server:	50.0 feet		F		Autos:					
Barrier Distance to Obs	erver:	0.0 feet			Mediur	n Trucks:					
Observer Height (Above	Pad):	5.0 feet				v Trucks:			Grade Ad	iustment	0.0
Pad Ele	vation:	0.0 feet									
Road Elev		0.0 feet		4	Lane Equ				feet)		
Road 0		0.0%				Autos:	33.7				
	View:	-90.0 degrees				n Trucks:					
Right	View:	90.0 degree:	S		Heav	y Trucks:	33.7	'64			
FHWA Noise Model Calo	ulations										
VehicleType RE	MEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Att	en Bei	rm Atter
Autos:	71.78	2.83		2.4	5	-1.20		4.84	0.0	000	0.0
Medium Trucks:	82.40	-14.41		2.4	8	-1.20		5.04	0.0	000	0.00
Heavy Trucks:	86.40	-18.36		2.4	5	-1.20	-	5.43	0.0	000	0.0
Unmitigated Noise Leve	ls (witho	ut Topo and b	arrier	atten	uation)						
	eak Hour			Leq E	vening	Leq N	•		Ldn		NEL
Autos:	75.		4.3		72.6		66.5		75.1		75
Medium Trucks:	69.		8.1		61.8		60.2		68.7		68
Heavy Trucks:	69.		i8.2		59.2		60.4		68.8		68
Vehicle Noise:	77.	4 7	6.1		73.1		68.2		76.8	3	77
Centerline Distance to N	loise Co	ntour (in feet)									
					dBA	65 dl		6	60 dBA		dBA
		L	.dn:	14	41	305	5		657	1,	,415
			EL:		52	328			706		.522

	FHW	A-RD-77-108 H	IIGHWA	Y NOISE P	REDICT	ION MO	DEL			
	b: Existing e: Bastanchury t: w/o Imperial					Name: ` umber: `		Linda Hou	sing Eler	m
SITE S	PECIFIC IN	PUT DATA			N	IOISE N	IODE	L INPUT	S	
Highway Data				Site Cor	nditions	(Hard =	10, So	ft = 15)		
Average Daily	raffic (Adt): 1	5,308 vehicles					Autos:	15		
Peak Hour I	Percentage:	9.19%		Me	edium Tri	ucks (2 A	(xles):	15		
Peak He	our Volume:	1,407 vehicles		He	eavy Tru	cks (3+ A	(xles)	15		
Vel	icle Speed:	50 mph		Vehicle	Mix					
Near/Far Lar	e Distance:	50 feet			hicleType		Day	Evening	Night	Daily
Site Data				101			77.5%	•	9.6%	
Bar	rier Height:	0.0 feet		M	ledium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	40.0 feet		Noine C	ource El	ovetien	in to	ati		
Centerline Dist. t	o Observer:	40.0 feet		NUISE 3	Auto		000	eŋ		
Barrier Distance t	o Observer:	0.0 feet		Madii	m Truck		000			
Observer Height (/	Above Pad):	5.0 feet			vy Truck		000	Grade Ad	iustmon	
Pa	d Elevation:	0.0 feet		nea	vy muck	3. 0.0	000	Orade Au	Justinent	. 0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in f	'eet)		
F	oad Grade:	0.0%			Auto	s: 31.0	369			
	Left View:	-90.0 degrees		Mediu	ım Truck	s: 31.2	241			
	Right View:	90.0 degrees		Hea	vy Truck	s: 31.3	369			
FHWA Noise Mode	l Calculations									
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresn		Barrier Att	en Bei	rm Atten
Autos:	70.20	-0.93		2.93	-1.20		-4.83		000	0.000
Medium Trucks:	81.00	-18.16		2.96	-1.20		-5.08		000	0.000
Heavy Trucks:	85.38	-22.12		2.93	-1.20		-5.56	0.0	000	0.000
Unmitigated Noise										
	Leq Peak Houi			e Evening		Night		Ldn		NEL
Autos:	71.		9.5	67.7		61.7		70.3	-	70.9
Medium Trucks:	64.		3.5	57.1		55.5		64.0	-	64.2
Heavy Trucks:	65.	U 63	3.9	54.9		56.2		64.5		64.6
Vehicle Noise:										72.5
venicie Noise.	72.	7 7	1.3	68.3	3	63.5		72.0	0	12.0
Centerline Distanc	72.									
	72.	ntour (in feet)		70 dBA	65	dBA		0 dBA	55	dBA
	72.	ntour (in feet)	dn:		65 1				55	

Thursday, April 11, 2024

	FHW	/A-RD-77-108	HIG	HWAY	NOISE	PREDIC	TION MC	DEL				
Scenario: Exist Road Name: Bast Road Segment: e/o li	anchury						t Name: Number:		Linda Ho	busing	g Elem	1
SITE SPECI	FIC IN	PUT DATA							EL INPU	TS		
Highway Data					Site C	onditions	s (Hard =	10, S	oft = 15)			
Average Daily Traffic (Peak Hour Percent Peak Hour Volu	age:	8,846 vehicle 9.19% 1,732 vehicle				Medium T Heavy Tru	rucks (2		15			
Vehicle Sp	eed:	50 mph			Vehic	e Mix						
Near/Far Lane Dista	nce:	50 feet				ehicleTyp	e	Dav	Evening	a N	ight	Daily
Site Data							Autos:	77.5%			9.6%	97.429
Barrier He	iaht [.]	0.0 feet				Medium	Trucks:	84.8%	6 4.9%	61	0.3%	1.84%
Barrier Type (0-Wall, 1-Be		0.0				Heavy	Trucks:	86.5%	6 2.79	61	0.8%	0.74%
Centerline Dist. to Ba	rrier:	40.0 feet			Noise	Source E	levation	s (in f	eet)			
Centerline Dist. to Obse	rver:	40.0 feet				Auto		000	,			
Barrier Distance to Obse		0.0 feet			Med	lium Truc	ks: 4	000				
Observer Height (Above H		5.0 feet				avy Truc		006	Grade A	Adiust	ment:	0.0
Pad Eleva		0.0 feet										
Road Eleva		0.0 feet			Lane	Equivaler			feet)			
Road Gi		0.0%				Auto		369				
Left \ Right \		-90.0 degre 90.0 degre				lium Truc. avy Truci		241 369				
FHWA Noise Model Calcu	lations											
VehicleType REM		Traffic Flow	D	istance	Fin	ite Road	Fresi	nel	Barrier A	Atten	Berr	n Atten
Autos:	70.20	-0.02		2.		-1.20		-4.83		0.000		0.00
Medium Trucks:	81.00	-17.26		2.	96	-1.20		-5.08		0.000		0.00
Heavy Trucks:	85.38	-21.22		2.	93	-1.20		-5.56		0.000		0.00
Unmitigated Noise Levels	(witho	out Topo and	barr	ier atte	nuatior	1)						
VehicleType Leq Pe	ak Hou	r Leq Day	/	Leq E	Evening	Leq	Night		Ldn		CN	IEL
Autos:	71.	9	70.4		68	3.6	62.	6	7	1.2		71.8
Medium Trucks:	65.	5	64.4		58	8.0	56.	5	6-	4.9		65.
Heavy Trucks:	65.	9	64.8		55	5.8	57.	1	6	5.4		65.
Vehicle Noise:	73.	6	72.2		69	9.2	64.	4	7:	2.9		73.
Centerline Distance to No	ise Co	ntour (in feet)			1		1		1		
					dBA		i dBA	1	60 dBA			dBA
			Ldn:		63		135		292			29
		С	NEL:		68		146		314		6	75

		A-RD-77-108	mol								
Scenario: Exist									Linda Hou	sing Elen	n
Road Name: Impe						JOD I	Vumber:	15459			
Road Segment: n/o L	emon D	r.									
SITE SPECI	FIC INP	UT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =				
Average Daily Traffic (Adt): 35	5,798 vehicles	;					Autos:			
Peak Hour Percent	age:	9.19%					rucks (2				
Peak Hour Volu	ume: 3	3,290 vehicles	;		He	avy Tru	ıcks (3+	Axles)	15		
Vehicle Sp		55 mph			Vehicle I	Nix					
Near/Far Lane Dista	nce:	74 feet		F		cleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42
Barrier He	iaht:	0.0 feet			Me	edium 1	Trucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Be	•	0.0			ŀ	leavy 1	Trucks:	86.5%	5 2.7%	10.8%	0.74
Centerline Dist. to Ba		50.0 feet		H	Noise So		lovatio	ne (in f	not)		
Centerline Dist. to Obse	rver:	50.0 feet		ľ	voise So				een		
Barrier Distance to Obse	rver:	0.0 feet				Auto		.000			
Observer Height (Above F	Pad):	5.0 feet				n Truck		.000	Crada Aa		
Pad Eleva	tion:	0.0 feet			Heav	y Truck	KS: 8	.006	Grade Ad	Justinent	0.0
Road Eleva	tion:	0.0 feet		1	Lane Equ	uivalen	t Distar	nce (in	feet)		
Road Gr	ade:	0.0%				Auto	os: 33	.764			
Left \	liew:	-90.0 degree	s		Mediur	n Truck	ks: 33	.645			
Right \	/iew:	90.0 degree	s		Heav	y Trucł	ks: 33	.764			
FHWA Noise Model Calcu	lations										
VehicleType REM		Traffic Flow	Dis	stance	Finite		Fres		Barrier Att		m Atten
Autos:	71.78	2.35		2.4	5	-1.20		-4.84	0.	000	0.00
	82.40	-14.89		2.4	-	-1.20		-5.04		000	0.00
Heavy Trucks:	86.40	-18.84		2.4	5	-1.20		-5.43	0.	000	0.00
Unmitigated Noise Levels					/			-			
	ak Hour			Leq E	vening	Leq	Night		Ldn		VEL
Autos:	75.4		73.9		72.1		66.	-	74.		75
Medium Trucks:	68.8		67.7		61.3		59.		68.		68
Heavy Trucks:	68.8		67.8		58.7		60.	-	68.		68
Vehicle Noise:	77.0		75.6		72.6		67.	7	76.	3	76
Centerline Distance to No	ise Con	tour (in feet)	T	70	10.4	~~		T .	0 -0 4		-10.4
			l da:		IBA		dBA	1 1	60 dBA		dBA
			Ldn:		81		283		610		314
		CA	IEL:	14	1		305		656	- 1.	414

Thursday, April 11, 2024

Scenar	io: Existing					Project	Name: Yo	orba L	inda Hous	ing Elen	<u>ווו</u> ו
	e: Imperial Hw	v.					imber: 15				
	nt: s/o Lemon I										
SITE	SPECIFIC IN	PUT DATA				N	OISE M	ODEI			
Highway Data				S	Site Con	ditions (Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt): 3	3,408 vehicles					A	utos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Tru	cks (2 Ax	(les):	15		
Peak H	our Volume:	3,070 vehicles			Hea	avy Truc	ks (3+ Ax	(les):	15		
Ve	hicle Speed:	55 mph			/ehicle N	liv					
Near/Far La	ne Distance:	74 feet		-		cleType	D	av	Evening	Night	Daily
Site Data								7.5%	12.9%	9.6%	97.42%
Ba	rier Heiaht:	0.0 feet			Me	dium Tr	ucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			H	leavy Tr	ucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	50.0 feet			laiaa Ca	uree Ek	evations	lin fa	of)		
Centerline Dist.	to Observer:	50.0 feet		~	10158 30	Autos			el)		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks					
Observer Height (Above Pad):	5.0 feet				y Trucks			Grade Adju	istment	0.0
Pa	ad Elevation:	0.0 feet									0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distance		eet)		
I	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degrees				n Trucks					
	Right View:	90.0 degrees			Heav	y Trucks	: 33.76	54			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	I E	Barrier Atte	n Ben	m Atten
Autos:	71.78	2.05		2.45	5	-1.20	-4	1.84	0.0	00	0.000
Medium Trucks:	82.40	-15.19		2.48	3	-1.20	-{	5.04	0.0	00	0.000
Heavy Trucks:	86.40	-19.14		2.45	5	-1.20	-{	5.43	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier a	attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	L	eq Ev	rening	Leq I	Vight		Ldn	CI	VEL
Autos:	75	1 7	3.6		71.8		65.7		74.4		75.0
Medium Trucks:	68		7.4		61.0		59.4		67.9		68.
Heavy Trucks:	68	5 6	7.5		58.4		59.7		68.0		68.
Vehicle Noise:	76	7 7	5.3		72.3		67.4		76.0		76.
Centerline Distand	e to Noise Co	ntour (in feet)									
				70 d		65 0			0 dBA		dBA
		L	dn:	12 13	-	27	-		582 627	,	255 350

	FHV	VA-RD-77-108	HIGHWA	AY NO	ISE PR	EDICTI	ON MOI	DEL			
	rio: Existing ne: Lakeview A				1		Name: \ Imber: 1		Linda Hou:	sing Eler	n
	nt: n/o Buena					300 ML	inibel.	0409			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				Sit	te Cond	litions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,406 vehicles						Autos:	15		
Peak Hour	Percentage:	9.19%			Med	lium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,324 vehicles			Hea	vy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Vo	hicle M	iv					
Near/Far La	ne Distance:	52 feet		ve		leType		Day	Evening	Night	Daily
Site Data				-				77.5%	-		97.42%
Ba	rrier Height:	0.0 feet			Me	dium Tru	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			H	eavy Tru	ucks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	50.0 feet						(in \$	- 41		
Centerline Dist.	to Observer:	50.0 feet		NO	oise Sol	Irce Ele			et)		
Barrier Distance	to Observer:	0.0 feet				Autos		000			
Observer Height	(Above Pad):	5.0 feet				Trucks		000	0		
	ad Elevation:	0.0 feet			Heavy	Trucks	: 8.0	006	Grade Adj	usiment	. 0.0
Ro	ad Elevation:	0.0 feet		La	ne Equ	ivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos	: 42.8	314			
	Left View:	-90.0 degree	s		Medium	Trucks	: 42.7	720			
	Right View:	90.0 degrees	s		Heavy	/ Trucks	42.8	314			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan		Finite F		Fresn		Barrier Atte		m Atten
Autos:		-0.73		0.91		-1.20		-4.84		000	0.00
Medium Trucks:				0.92		-1.20		-5.04		000	0.000
Heavy Trucks:		-21.93		0.91		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois VehicleType	e Levels (with Leg Peak Hou		-	ttenua g Eve		Leg N	liaht		Ldn	G	NEL
Autos			5.9	9 - 10	64.1	2097	58.1		66.7		67.3
					53.7		52.2		60.6		60.
Medium Trucks:	61	.2 6	0.1								
			0.1 1.0		53.7 51.9		53.2		61.5	5	61.3
Medium Trucks:	62	.0 6							61.5 68.6		
Medium Trucks: Heavy Trucks:	62 69	.0 6	1.0 7.9		51.9 64.7		53.2 60.1		68.6	3	69.
Medium Trucks: Heavy Trucks: Vehicle Noise:	62 69	0 6 3 6 ontour (in feet)	i1.0 i7.9	70 dB	51.9 64.7	65 d	53.2 60.1 BA		68.6 60 dBA	55	69. dBA
Medium Trucks: Heavy Trucks: Vehicle Noise:	62 69	0 6 3 6 ontour (in feet)	1.0 7.9	70 dB 40 43	51.9 64.7	65 d 87 93	53.2 60.1 BA		68.6	55 4	61.3 69.7 dBA 404 433

Thursday, April 11, 2024

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DEL			
Road Nam	o: Existing e: Lakeview A						Name: ` lumber:		Linda Hou:	sing Ele	m
Road Segmer				1		_				_	
SITE S Highway Data	SPECIFIC IN	IPUT DATA			ito Cor		IOISE I (Hard =		L INPUT	S	
Average Daily Peak Hour	Traffic (Adt): Percentage: our Volume:	12,516 vehicle 9.19% 1.150 vehicle			Ме	edium Tr		Autos: Axles):	15 15		
	hicle Speed:	45 mph	5	V	ehicle		0.0 (0 - 7	10.03).	15		
Near/Far Lar	ne Distance:	52 feet		-		icleType		Dav	Evening	Niaht	Dailv
Site Data							, Autos:	77.5%	÷	9.6%	
Bar	rier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-W	•	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	st. to Barrier:	50.0 feet		N	oise So	ource El	levation	s (in fe	eet)		
Barrier Distance Observer Height (Pa	Centerline Dist. to Observer: Barrier Distance to Observer: Dbserver Height (Above Pad): Pad Elevation: Road Elevation: Road Grade:				Hear	Auto m Truck vy Truck uivalen	s: 4.	000 000 006	Grade Ad	iustmen	t: 0.0
		0.0 feet 0.0%		-	uno 24	Auto		814			
	Left View: Right View:	-90.0 degree 90.0 degree				m Truck vy Truck	s: 42.	720 814			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atter
Autos:	68.46			0.91		-1.20		-4.84		000	0.0
Medium Trucks: Heavy Trucks:	79.45 84.25			0.92		-1.20 -1.20		-5.04 -5.43		000 000	0.00
						-1.20		-0.40	0.0		0.00
Unmitigated Noise VehicleType	Levels (with			Leg Ev		100	Night	1	Ldn	0	NEL
Autos	Ley reak 1100 66		65.3	Ley LV	63.5	,	57.f	5	66.1		66
Medium Trucks:	60		59.4		53.1		51.5		60.0		60
Heavy Trucks:	61	.4	60.4		51.3		52.6	6	60.9	9	61
Vehicle Noise:	68	3.7	67.3		64.1		59.5	j.	68.0)	68
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 d	BA	65	dBA	6	60 dBA	55	i dBA
			Ldn:	37			79		171		368
		0	NEL	39			35		183		395

	FHW	/A-RD-77-108	HIG	HWAY N	IOISE PR	REDICT	ION MC	DEL			
Scenario: Existin	g					Project	t Name:	Yorba	Linda Hou	sing Elen	n
Road Name: Buena	Vista	Av.				Job N	lumber:	15459			
Road Segment: w/o La	kevie	w Av.									
SITE SPECIFI	C IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	= 10, So	oft = 15)		
Average Daily Traffic (Ad	tt):	7,627 vehicle	s					Autos:	15		
Peak Hour Percentag	ye:	9.19%			Med	dium Tr	ucks (2	Axles):	15		
Peak Hour Volun	ne:	701 vehicle	s		Hea	avy Tru	cks (3+	Axles):	15		
Vehicle Spee	ed:	45 mph		5	Vehicle N	<i>liv</i>					
Near/Far Lane Distant	ce:	36 feet		H		cleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%		9.6%	97.42
Barrier Heig	ht.	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-Berr		0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to Barri		40.0 feet		-							
Centerline Dist. to Observ		40.0 feet		-	Noise So				eet)		
Barrier Distance to Observ		0.0 feet				Auto		.000			
Observer Height (Above Pa		5.0 feet				n Truck		.000			
Pad Elevatio	·	0.0 feet			Heav	y Truck	:s: 8	.006	Grade Ad	justment.	0.0
Road Elevatio		0.0 feet		1	Lane Equ	iivalen	t Distan	ce (in	feet)		
Road Grad	de:	0.0%				Auto	s: 35	.847			
Left Vie	w:	-90.0 degree	es		Mediur	n Truck	s: 35	.735			
Right Vie	W:	90.0 degree			Heav	y Truck	s: 35	.847			
FHWA Noise Model Calcula	tions	1									
VehicleType REME		Traffic Flow		stance	Finite		Fres		Barrier Att		m Atten
	8.46	-3.49		2.0	-	-1.20		-4.83		000	0.00
	9.45	-20.73		2.0		-1.20		-5.08		000	0.00
Heavy Trucks: 8	4.25	-24.69		2.0	6	-1.20		-5.56	0.	000	0.00
Unmitigated Noise Levels (<u> </u>						
VehicleType Leq Peak				Leq E	vening	Leq	Night		Ldn		VEL
Autos:	65.	-	64.3		62.5		56.	-	65.		65.
Medium Trucks:	59.		58.5		52.1		50.		59.		59.
Heavy Trucks:	60.		59.4		50.3		51.	-	59.		60
Vehicle Noise:	67.	-	66.3		63.1		58.	5	67.	0	67
Centerline Distance to Nois	e Co	ntour (in feet)			-		1			
			I	70 0			dBA		60 dBA		dBA
			Ldn: NEL:	2			54 58		117		53
									126		71

Thursday, April 11, 2024

Road Segment.	Bastanchur w/o Plumos								Linda Hou:	J	
Road Segment. SITE Si Highway Data	w/o Plumos	Road Segment: w/o Plumosa Dr.				Job Nu	mber: 1	5459			
Highway Data	PECIFIC IN										
		PUT DATA							L INPUT	s	
Average Daily Tr					Site Con	ditions (l	Hard =	10, Se	oft = 15)		
	raffic (Adt): 1	5,449 vehicles					A	Autos:	15		
Peak Hour P	ercentage:	9.19%			Med	dium Truc	cks (2 A	xles).	15		
Peak Ho	ur Volume:	1,420 vehicles			Hea	avy Truck	(S (3+ A	xles).	15		
Vehi	cle Speed:	50 mph			Vehicle N	Aix					
Near/Far Lane	e Distance:	50 feet		F		cleType		Day	Evening	Night	Daily
Site Data				-		A	itos:	, 77.5%		9.6%	97.42
Barri	ier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	6 4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0			H	łeavy Tru	icks:	86.5%	6 2.7%	10.8%	0.749
Centerline Dist.	to Barrier:	40.0 feet		E	Noise So	urce Ele	vations	in f	eet)		
Centerline Dist. to	Observer:	40.0 feet		F		Autos:		000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks:		000			
Observer Height (A	bove Pad):	5.0 feet				y Trucks:		006	Grade Ad	iustment	0.0
Pad	Elevation:	0.0 feet									
	Elevation:	0.0 feet		2	Lane Equ				feet)		
Ro	oad Grade:	0.0%				Autos:					
	Left View:	-90.0 degrees				n Trucks:					
F	Right View:	90.0 degrees			Heav	y Trucks:	31.3	369			
FHWA Noise Model	Calculations	5									-
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresn		Barrier Att		rm Atten
Autos:	70.20	-0.89		2.9	-	-1.20		4.83		000	0.00
Medium Trucks:	81.00	-18.12		2.9		-1.20		-5.08		000	0.00
Heavy Trucks:	85.38	-22.08		2.9	93	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise L											
	eq Peak Hou			eq E	vening	Leq N			Ldn		NEL
Autos:	71		9.5		67.8		61.7		70.3		70.
Medium Trucks:	64		3.5		57.1		55.6		64.0		64.
Heavy Trucks:	65		4.0		54.9		56.2		64.5		64.
Vehicle Noise:	72	.7 7	1.4		68.3		63.5		72.1	1	72.
Centerline Distance	to Noise Co	ntour (in feet)									
				_	dBA	65 d			50 dBA		dBA
		L	dn:	-	55 59	119	-		256 275		551 592

		VA-RD-77-108									
Scena	rio: Existing					Project	Name:	Yorba	Linda Hou:	sing Elen	n
Road Nar	ne: Lakeview A	v.				Job N	umber:	15459		-	
Road Segme	ent: s/o Bastano	hury Rd.									
SITE	SPECIFIC IN	PUT DATA				Ν	IOISE	MODE		s	
Highway Data				•	Site Con	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	8,941 vehicle	s					Autos:	15		
Peak Hou	Percentage:	9.19%			Me	dium Tr	ucks (2	Axles):	15		
Peak I	lour Volume:	822 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	45 mph			Vehicle N	Nix					
Near/Far La	ane Distance:	36 feet		F		cleTvpe		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	•	97.429
D.	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V	•	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
	ist. to Barrier:	40.0 feet		H							
Centerline Dist.		40.0 feet		'	Noise So				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height		5.0 feet				n Truck		.000			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.006	Grade Ad	ustment:	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	iivalen	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 35	.847			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 35	.735			
	Right View:	90.0 degre			Heav	y Truck	s: 35	.847			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos.	68.46	-2.80		2.0	6	-1.20		-4.83	0.0	000	0.00
Medium Trucks	79.45	-20.04		2.0	8	-1.20		-5.08	0.0	000	0.00
		-24.00		2.06	6	-1.20		-5.56	0.0	000	0.00
Heavy Trucks	84.25	21.00									
Unmitigated Nois	e Levels (with	out Topo and									
Unmitigated Nois VehicleType	e Levels (with Leq Peak Hou	out Topo and Ir Leq Day	′ L		vening	Leq	Night		Ldn		VEL
Unmitigated Nois VehicleType Autos	e Levels (with Leq Peak Hou 66	out Topo and r Leq Day .5	/ L 65.0		vening 63.2	Leq	57.		65.8	3	66.
Unmitigated Nois VehicleType Autos. Medium Trucks.	e Levels (with Leq Peak Hou 66	out Topo and r Leq Day .5 .3	/ L 65.0 59.2		vening 63.2 52.8	Leq	57. 51.	2	65.8 59.7	3	66. 59.
Unmitigated Nois VehicleType Autos Medium Trucks. Heavy Trucks	e Levels (with Leq Peak Hou 60 60	out Topo and r Leq Day .5 .3	/ L 65.0		vening 63.2	Leq	57.	2	65.8	3	66. 59.
Unmitigated Nois VehicleType Autos. Medium Trucks.	e Levels (with Leq Peak Hou 60 60	Dut Topo and Ir Leq Day .5 .3 .1	/ L 65.0 59.2		vening 63.2 52.8	Leq	57. 51.	2 3	65.8 59.7	3 7 5	66. 59. 60.
Unmitigated Nois VehicleType Autos Medium Trucks. Heavy Trucks	e Levels (with Leg Peak Hou 66 60 61 68	Dut Topo and r Leq Day .5 .3 .1 .4	65.0 59.2 60.1 67.0	Leq Ev	vening 63.2 52.8 51.0 63.8		57. 51. 52. 59.	2 3 2	65.8 59.7 60.6 67.7	3 7 5 7	66. 59. 60. 68.
Unmitigated Nois VehicleType Autos. Medium Trucks. Heavy Trucks. Vehicle Noise	e Levels (with Leg Peak Hou 66 60 61 68	Dut Topo and r Leq Day .5 .3 .1 .4	/ L 65.0 59.2 60.1 67.0	Leq Ev	vening 63.2 52.8 51.0 63.8 dBA	65	57. 51. 52. 59.	2 3 2	65.8 59.7 60.6 67.7	3 7 5 7 55	66. 59. 60. 68. dBA
Unmitigated Nois VehicleType Autos. Medium Trucks. Heavy Trucks. Vehicle Noise	e Levels (with Leg Peak Hou 66 60 61 68	out Topo and r Leq Day 5. 3. 1. 4. Antour (in feet	65.0 59.2 60.1 67.0	Leq Ev	vening 63.2 52.8 51.0 63.8 dBA 8	65	57. 51. 52. 59.	2 3 2	65.8 59.7 60.6 67.7	3 7 5 7 55 2	66. 59. 60. 68.

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGH	NAY NO	DISE P	REDICT	ION MO	DEL			
Road Nam	io: Existing e: Bastanchur nt: w/o Lakevie						Name: ` lumber: `		Linda Hou	sing Ele	em
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Si	te Cor	nditions	(Hard =	10, Sc	oft = 15)		
	Traffic (Adt): ' Percentage: lour Volume:	15,504 vehicle 9.19% 1,425 vehicle) ucks (2 A cks (3+ A		15		
Ve	hicle Speed:	50 mph		14	ehicle	Misc					
Near/Far La	ne Distance:	50 feet		V		nicleType		Dav	Evening	Night	Daily
Site Data					Vei			77.5%	•	9.69	
	rier Heiaht:	0.0 feet			M	Iedium Ti		84.8%		10.39	
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.89	% 0.74%
Centerline Dis	st. to Barrier:	40.0 feet		N	oise S	ource El	levations	s (in fe	eet)		
Centerline Dist.	to Observer:	40.0 feet		_		Auto		000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 4.0	000			
Observer Height (,	5.0 feet				vy Truck		006	Grade Ac	ljustmer	nt: 0.0
	ad Elevation:	0.0 feet		_							
	ad Elevation:	0.0 feet		Lá	ane Eq		t Distand		teet)		
ŀ	Road Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degree 90.0 degree				ım Truck vy Truck					
FHWA Noise Mode	el Calculation	5									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier At	ten Be	erm Atten
Autos:	70.20	-0.87		2.93		-1.20		-4.83	0.	000	0.00
Medium Trucks:	81.00	-18.11		2.96		-1.20		-5.08	0.	000	0.00
Heavy Trucks:	85.38	-22.07		2.93		-1.20		-5.56	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve			Night		Ldn	_	CNEL
Autos:	71		69.5		67.8		61.7		70.	-	70.
Medium Trucks:	64		63.5		57.1		55.6		64.	-	64.
Heavy Trucks:	65		64.0		55.0		56.2		64.	-	64.
Vehicle Noise:	72		71.4		68.3	1	63.5		72.	1	72.
Centerline Distance	e to Noise Co	ntour (in feet)	70 dF	24	65	dBA	4	0 dBA	-	5 dBA
			Ldn:	70 dE 55	24		ава 19	1 0	256	5	5 0 BA
		0	Lan: NEL:	59			19 28		256		593
		C.	VCL.	59		1.	20		210		333

	FHW	A-RD-77-108	HIGI	HWAY	NOISE P	REDICI		ODEL			
Scenario: Existing	g					Projec	t Name:	Yorba	Linda Hou	sing Elen	n
Road Name: Bastan	chury	Rd.				Job I	Number:	15459			
Road Segment: e/o Lak	ceview	v Av.									
SITE SPECIFI	C INF	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard :	= 10, Se	oft = 15)		
Average Daily Traffic (Ad	<i>tt):</i> 18	8,676 vehicles	5					Autos:	15		
Peak Hour Percentag	ye:	9.19%			Me	edium Ti	rucks (2	Axles).	15		
Peak Hour Volum	ne: '	1,716 vehicles	5		He	eavy Tru	ıcks (3+	Axles)	: 15		
Vehicle Spee	ed:	50 mph		ŀ	Vehicle	Mix					
Near/Far Lane Distand	ce:	50 feet		-		nicleTyp	e	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%		9.6%	97.429
Barrier Heigi	ht.	0.0 feet			М	edium 1	rucks:	84.8%	6 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berr		0.0				Heavy 1	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dist. to Barri		40.0 feet		ŀ	Noise S		leveti-	no (in f	aati		
Centerline Dist. to Observ	er	40.0 feet		ŀ	Noise S			· ·	eet)		
Barrier Distance to Observ	er:	0.0 feet				Auto		2.000			
Observer Height (Above Pa	d):	5.0 feet				m Truck		1.000	0		
Pad Elevation	on:	0.0 feet			неа	vy Trucł	(S: E	8.006	Grade Ad	justment.	0.0
Road Elevation	on:	0.0 feet			Lane Eq	uivalen	t Distar	nce (in	feet)		
Road Grad	de:	0.0%		ſ		Auto	os: 31	1.369			
Left Vie	w:	-90.0 degree	s		Mediu	m Truck	ks: 31	1.241			
Right Vie	?W.'	90.0 degree	s		Hea	vy Truck	ks: 31	1.369			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	<u> </u>	Traffic Flow	Di	stance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos: 70	0.20	-0.06		2.9	13	-1.20		-4.83	0.	000	0.00
Medium Trucks: 8	1.00	-17.30		2.9		-1.20		-5.08		000	0.00
Heavy Trucks: 8	5.38	-21.26		2.9	13	-1.20		-5.56	0.	000	0.00
Unmitigated Noise Levels (-			
VehicleType Leq Peak		, ,		Leq E	vening		Night		Ldn		VEL
Autos:	71.9	-	70.3		68.6		62		71.		71.
Medium Trucks:	65.5		64.3		58.0		56		64.		65.
Heavy Trucks:	65.9		64.8		55.8		57	-	65.		65.
Vehicle Noise:	73.6		72.2		69.1		64	.4	72.	9	73.
Centerline Distance to Nois	e Cor	ntour (in feet)	1	70	-/04		-10.4		0.404		-10.4
			1		dBA 32		dBA 35		60 dBA 290		dBA 25
			Ldn:								
			VEL		57		45		312	6	71

Thursday, April 11, 2024

Scenario: Existing	a					Project N	ame: Yo	orba I	inda Hous	sing Flen	n
Road Name: Lakevi						Job Nur				sing Lion	
Road Segment: s/o Yor											
SITE SPECIFI	C INP	UT DATA								s	
Highway Data					Site Con	ditions (H					
Average Daily Traffic (Ad	·							utos:	15		
Peak Hour Percentag		9.19%				lium Truc	,		15		
Peak Hour Volun		,221 vehicles			Hea	avy Truck	s (3+ Ax	les):	15		
Vehicle Spee		45 mph			Vehicle N	lix					
Near/Far Lane Distand	ce:	52 feet			Vehi	cleType	D	ay	Evening	Night	Daily
Site Data						Au	tos: 7	7.5%	12.9%	9.6%	97.429
Barrier Heig	ht.	0.0 feet			Me	dium Tru	cks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berr		0.0			H	leavy Tru	cks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barri		50.0 feet			Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observ		50.0 feet				Autos:	2.00		.,		
Barrier Distance to Observ	er:	0.0 feet			Mediur	n Trucks:	4.00	0			
Observer Height (Above Pa	· /	5.0 feet			Heav	y Trucks:	8.00	6	Grade Adj	iustment.	: 0.0
Pad Elevation		0.0 feet		-		in a la má D		Gun	41		
Road Elevation		0.0 feet		4	Lane Equ	ivalent D			eet)		
Road Grad		0.0%				Autos:	42.81				
Left Vie Riaht Vie		-90.0 degrees 90.0 degrees				n Trucks: y Trucks:	42.72 42.81				
FHWA Noise Model Calcula	tiona	5									
VehicleType REMEL		Traffic Flow	Dista	nce	Finite	Road	Fresne		Barrier Atte	en Ber	m Atten
Autos: 6	8.46	-1.08		0.9	1	-1.20	-4	1.84	0.0	000	0.00
Medium Trucks: 7	9.45	-18.32		0.9	2	-1.20	-5	5.04	0.0	000	0.00
Heavy Trucks: 84	4.25	-22.28		0.9	1	-1.20	-5	5.43	0.0	000	0.00
Unmitigated Noise Levels (
	Hour	Leq Day	5.6	.eq E	vening 63.8	Leq Ni	gnt 57.7		Ldn 66.4		NEL 67.
VehicleType Leq Peak							51.8		60.3		60.
VehicleType Leq Peak Autos:	67.1	-					51.8				61.
VehicleType Leq Peak Autos: Medium Trucks:	67.1 60.8	5	9.7		53.3		FO 0				
VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks:	67.1 60.8 61.7	5	9.7 0.6		51.6		52.8		61.2	-	
VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67.1 60.8 61.7 68.9	6	9.7				52.8 59.7		61.2 68.3	-	
VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks:	67.1 60.8 61.7 68.9	6	9.7 0.6	70 -	51.6	65 dE	59.7	6	68.3	3	
VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67.1 60.8 61.7 68.9	5 6 tour (in feet)	9.7 0.6		51.6 64.4	65 dE 82	59.7	6	÷	55	68.

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PR	REDICTI	ON MOD	EL			
Road Nar	rio: Existing ne: Yorba Linda ent: w/o Lakevie						Name: Y umber: 1		Linda Hou:	sing Eler	n
SITE	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data				S	Site Con	ditions	(Hard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	28,182 vehicle	s				А	utos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Tru	icks (2 A	xles):	15		
Peak I	-lour Volume:	2,590 vehicle	s		Hea	avy Truc	cks (3+ A	xles):	15		
Ve	ehicle Speed:	50 mph			/ehicle N	Aiy.					
Near/Far La	ane Distance:	74 feet		Ľ		cleType	1	Dav	Evening	Night	Daily
Site Data				-	VCIII			7.5%	•	9.6%	
					Me	r dium Tr		34.8%		10.3%	
	rrier Height:	0.0 feet 0.0				leavy Tr		36.5%		10.8%	
Barrier Type (0-V	. ,	0.0 50.0 feet								10.070	0.147
Centerline Dist.	ist. to Barrier:	50.0 feet		۸	loise So	urce El	evations	(in fe	et)		
Barrier Distance		0.0 feet				Autos		00			
Observer Height		5.0 feet			Mediun	n Truck:	s: 4.0	00			
-	(Above Pad): Pad Elevation:	0.0 feet			Heav	y Trucks	s: 8.0	06	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		7	ane Fai	ivalent	Distanc	e (in t	feet)		
	Road Grade:	0.0%		F	une Equ	Auto			000		
	Left View:	-90.0 degree			Mediur	n Truck					
	Right View:	90.0 degree				y Trucks					
FHWA Noise Mod	lel Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos	70.20	1.72		2.45	5	-1.20	-	4.84	0.0	00	0.000
Medium Trucks:	81.00	-15.51		2.48	3	-1.20	-	5.04	0.0	00	0.00
Heavy Trucks:	85.38	-19.47		2.45	5	-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq Ev	•	Leq	Night		Ldn 72.5		NEL
Autos: Medium Trucks:			71.7 65.6		69.9 59.3		63.8		72.5		73. ⁻ 66.4
			65.6 66.1		59.3 57.1		57.7 58.3		66.7		
Heavy Trucks:											66.8
Vehicle Noise:		-	73.5		70.4		65.7		74.2	:	74.1
Centerline Distan	ce to Noise Co	ontour (in feet)	70 d	ID A	65 (4	0 dBA	FF	dBA
			L					c	443		ава 155
			Ldn: NEL:	95 10			06 21		443 476		026

Thursday, April 11, 2024

Site Data Autos: 77.5% 12.9% 9.6% 9 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% Barrier Dist. Io Barrier: 0.0 feet Meavy Trucks: 86.5% 2.7% 10.3% Centerline Dist. to Observer: 40.0 feet Noise Source Elevations (in feet) Autos: 2.000 Deserver Height (Abov Pad): 5.0 feet Autos: 2.000 Medium Trucks: 8.006 Grade Adjustment: 0 Pad Elevation: 0.0 feet Autos: 2.000 Medium Trucks: 8.006 Grade Adjustment: 0 Road Grade: 0.0% Left View: -90.0 degrees Autos: 35.847 FHWA Noise Model Calculations 90.0 degrees Heavy Trucks: 35.847		FH\	WA-RD-77-108	HIGH	NAY NC	DISE P	REDICT	ION MO	DEL			
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 12,309 vehicles Autos: 15 Peak Hour Porcentage: 9.19% Medium Trucks (2 Avles): 15 Peak Hour Volume: 1,131 vehicles Heavy Trucks (3+ Avles): 15 Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Type Day Evening Night 10 Site Data Tr.5% 12.9% 9.6% 9 Medium Trucks: 84.8% 4.9% 10.3% Barrier Height: 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 10.3% Centerline Dist. to Dserver: 40.0 feet Autos: 2.000 Medium Trucks: 8.006 Grade Adjustment: 0. Pad Elevation: 0.0 feet Autos: 2.000 Heavy Trucks: 8.006 Grade Adjustment: 0. Road Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 35.735 FHWA Noise Model Calculations Traffic Flow Distance	Road Nam	e: Gypsum C								Linda Hou:	sing Ele	m
Average Daily Traffic (Adt): 12,309 vehicles Autos: 15 Peak Hour Percentage: 9,19% Medium Trucks (2 Axles): 15 Peak Hour Percentage: 9,19% Medium Trucks (2 Axles): 15 Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet Vehicle Type Day Evening Night 1 Site Data Autos: 77.5% 12.9% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% 9.6% <th></th> <th>SPECIFIC IN</th> <th>NPUT DATA</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>S</th> <th></th>		SPECIFIC IN	NPUT DATA								S	
Peak Hour Percentage: 9.19% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,131 vehicles Heavy Trucks (3* Axles): 15 Vehicle Speed: 45 mph Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet Vehicle Speed: 45 mph Site Data Autos: 77.5% 12.9% 9.6% 9 Barrier Type (Owall, 1-Berm): 0.0 feet Autos: 77.5% 12.9% 9.6% 9 Barrier Type (Owall, 1-Berm): 0.0 feet Autos: 86.5% 2.7% 10.8% Barrier Type (Owall, 1-Berm): 0.0 feet Autos: 2.000 Medium Trucks: 80.06 Grade Adjustment: 0 Observer Height (Above Pad): 5.0 feet Autos: 3.0.00 Medium Trucks: 8.0.06 Grade Adjustment: 0 Road Cirade: 0.0% Left View: -90.0 degrees Heavy Trucks: 35.847 Heavy Trucks: 73.45 -18.65 2.06 -1.20 -5.08 0.000 Heavy Trucks: 84.25 -22.61 <th>Highway Data</th> <th></th> <th></th> <th></th> <th>Si</th> <th>te Cor</th> <th>nditions</th> <th>(Hard =</th> <th>10, Sc</th> <th>oft = 15)</th> <th></th> <th></th>	Highway Data				Si	te Cor	nditions	(Hard =	10, Sc	oft = 15)		
Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Mix Vehicle Mix Site Data Autos: 77.5% 12.9% 9.6% 9 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% Barrier Height: 0.0 feet Medium Trucks: 86.5% 2.7% 10.8% Centerline Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) 0.0% Centerline Dist. to Observer: 0.0 feet Meavy Trucks: 8.006 Grade Adjustment: 0. Observer Height (Above Pad): 5.0 feet Meavy Trucks: 8.006 Grade Adjustment: 0. Road Grade: 0.0 feet Medium Trucks: 35.735 Heavy Trucks: 35.847 FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bermir Vehicle Type REMEL Traffic Flow Distance 1.20 -5.68 0.000 Medium Trucks: 79.45 -18.65 2.06 -1.20 -5.68	Peak Hour	Percentage:	9.19%					ucks (2 A	(xles)	15		
Near/Far Lane Distance: 36 feet Site Data VehicleType Day Evening Night L Site Data Autos: 77.5% 12.9% 9.6% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 10.8% 10.8% 10.8% 10.8% 10.3% 10.8% 10.3% 10.8% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3% 10.3%	Ve	hicle Speed:	45 mph		Ve	hicle	Mix					
Site Data Autos: 77.5% 12.9% 9.6% 9 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% Centerine Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) 0.0% Diserver Height (Above Pad): 5.0 feet Autos: 2.000 Medium Trucks: 4.000 Road Elevation: 0.0 feet Autos: 2.000 Medium Trucks: 4.000 Road Elevation: 0.0 feet Autos: 35.847 Medium Trucks: 35.735 FHWA Noise Model Calculations Vehicle Type Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Autos: 68.46 -1.42 2.06 -1.20 -5.66 0.000 Medium Trucks: 79.9 66.4 64.6 55.6 0.000 Medium Trucks: 61.7 60.5 54.2 60.5 62.0 Vehicle Type	Near/Far La	ne Distance:	36 feet		<u> </u>			•	Dav	Evenina	Niaht	Daily
Barrier Type (IV-Wall, 1-Barry): 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% Centerline Dist. to Dbserver: 40.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Barrier Type (IV-Wall, 1-Barry): 0.0 feet Autos: 2.000 Barrier Type (IV-Wall, 1-Barry): 0.0 feet Autos: 3.006 Grade Adjustment: Road Elevation: 0.0 feet Autos: 3.5.847 Heavy Trucks: 36.847 Road Grade: 0.0% Autos: 35.847 Heavy Trucks: 35.847 FHWA Noise Model Calculations VenicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier VehicleType Leg Davi Leg Davi 2.06 -1.20 -5.06 0.000 Medium Trucks: 84.25 -22.61 2.06 -1.20 -5.06 0.000 Unmitigated Noise Levels (without Topo and barrier attenuat	Site Data											,
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% Centerline Dist. to Distrer: 40.0 feet Noise Source Elevations (in feet) Autos: 2.00 Barrier Distance to Observer: 0.0 feet Autos: 2.00 Medium Trucks: 4.00 Pad Elevation: 0.0 feet Autos: 2.00 Medium Trucks: 4.00 Road Grade: 0.0 feet Medium Trucks: 4.000 Heavy Trucks: 8.006 Grade Adjustment: 0. Pad Elevation: 0.0 feet Left View: 90.0 degrees Autos: 35.847 WeiliceType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm ////////////////////////////////////	Bai	rrier Height	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	6 1.84%
Noise Source Elevations (in feet) Autos: 2.000 Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees VehicleType REMEL Traffic Flow Distance Autos: 68.46 -1.42 2.06 -1.20 -5.08 0.000 Heavy Trucks: 84.25 -22.61 2.06 -1.20 -5.68 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Evening Leq Night Autos: 61.7 60.5 54.2 Autos: 61.7 60.5 54.2 52.6 Autos:							Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.74%
Barrier Distance to Observer: 0.0 feet Autos: 2.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 4.000 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0. Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Autos: 35.847 Road Grade: 0.0% Autos: 35.847 Medium Trucks: 35.847 FHWA Noise Model Calculations 90.0 degrees Heavy Trucks: 35.847 Medium Trucks: 35.847 FHWA Noise Model Calculations VenicleType RRMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berring Atten Wedium Trucks: 79.45 -18.65 2.08 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.68 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehice/Pype Leq Davi Leq Davi Chei Vehice Noise: 62.5 61.5 52.4 53.7 62.	Centerline Dis	st. to Barrier:	40.0 feet		N	oise Se	ource El	levations	s (in fe	eet)		
Observer Height (Above Pad): 5.0 feet Medium Trucks: 4.000 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0. Road Elevation: 0.0 feet Left View: -90.0 degrees Autos: 35.847 Left View: -90.0 degrees Heavy Trucks: 35.735 Heavy Trucks: 35.847 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bermi Autos: 79.45 -18.65 2.06 -1.20 -4.83 0.000 Medium Trucks: 84.25 -22.61 2.06 -1.20 -5.56 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Ueq Evening Leq Night Ldn CNE VehicleType Leg Peak Hour Leg Qay Leg Evening Leg Night Ldn CNE Medium Trucks: 61.7 60.5 52.4 53.7 62.0 CHI VehicleType Leg Peak Hour Leg Day <td>Centerline Dist.</td> <td>to Observer:</td> <td>40.0 feet</td> <td></td> <td></td> <td></td> <td>Auto</td> <td>s: 2.0</td> <td>000</td> <td>,</td> <td></td> <td></td>	Centerline Dist.	to Observer:	40.0 feet				Auto	s: 2.0	000	,		
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Autos: 0.0 degrees VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern/ Autos: 68.46 -1.42 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.66 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Deay Leq Evening Leq Night Ldn CNE Autos: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 61.7 60.5 54.2 62.6 61.1 Heavy Trucks: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) Conterline D						Mediu	m Truck	s: 4.0	000			
Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 35.847 Autos: 35.03 Medium Trucks: 35.735 Heavy Trucks: 35.047 Medium Trucks: 35.735 FHWA Noise Model Calculations Earlier Now Distance Finite Road Fresnel Barrier Atten Berm VehicleType REMEL Traffic Flow Distance 1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.06 -1.20 -4.63 0.000 Medium Trucks: 84.25 -22.61 2.06 -1.20 -5.66 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) UehicleType Leq Peak Hour Leq Qay Leq Seconing Leq Night Ldn CNEI Autos: 67.9 66.4 64.6 58.6 67.2 61.1 Heavy Trucks: 61.7 60.5 52.4 53.7 62.0 62.0 Vehicle Noise: 69.7 68.4 65.2<	• •	,				Hea	vv Truck	s: 8.0	006	Grade Ad	iustmen	t: 0.0
Road Grade: 0.0% Autos: 35.847 Left View: -90.0 degrees Medium Trucks: 35.735 Heavy Trucks: 35.847 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berniz VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berniz Medium Trucks: 79.45 -18.65 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.06 -1.20 -5.66 0.000 Umnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Avening Leg Night Ldn CNE Autos: 67.9 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 52.4 53.7 62.0 Vehicle Type Leg Neak Hour Leg Se.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicl					-		·					
Left View: -90.0 degrees Medium Trucks: 35.735 Right View: 90.0 degrees Heavy Trucks: 35.735 FHWA Noise Model Calculations Emitte Road Fresnel Barrier Atten Berri VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berri Autos: 68.46 -1.42 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.66 0.000 Heavy Trucks: 84.25 -22.61 2.06 -1.20 -5.56 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Evening Leq Night Ldn CNE Autos: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA					Lá	ne Eq				teet)		
Right View: 90.0 degrees Heavy Trucks: 35.847 FHWA Noise Model Calculations Heavy Trucks: 35.847 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Medium Trucks: 68.46 -1.42 2.06 -1.20 -5.08 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.08 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Deak Hour Leg Day Leg Rewing Leg Night Ldn CNE VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNE VehicleNoise: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (In feet) Tod BA 65 dBA 60 dBA	1											
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern / Autos: 68.46 -1.42 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.08 0.000 Heavy Trucks: 84.25 -2.261 2.06 -1.20 -5.56 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEI Medium Trucks: 61.7 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (In feet)												
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern / Autos: 68.46 -1.42 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.08 0.000 Heavy Trucks: 84.25 -2.261 2.06 -1.20 -5.56 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEI Medium Trucks: 61.7 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (In feet)	EHWA Noise Mode	- A Calculation										
Autos: 68.46 -1.42 2.06 -1.20 -4.83 0.000 Medium Trucks: 79.45 -18.65 2.08 -1.20 -5.08 0.000 Heavy Trucks: 84.25 -22.61 2.06 -1.20 -5.56 0.000 Umitigate Moise Levels (without Top can barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEi Autos: 67.9 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (In feet)				Dista	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Heavy Trucks: 84.25 -22.61 2.06 -1.20 -5.56 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Ueng Night Leq Night Ldn ONE VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn ONE Medium Trucks: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) TO dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348												0.00
VehicleType Leq Peak Hour Leq Day Leq VehicleType Leq Peak Hour Leq Day Leq Vehicle Type Leq Night Ldn CNEi Autos: 67.9 66.4 64.6 58.6 67.2 Medium Tucks: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	Medium Trucks:	79.45	-18.65		2.08		-1.20		-5.08	0.0	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEi Autos: 67.9 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (In feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 35 75 161 348	Heavy Trucks:	84.25	-22.61		2.06		-1.20		-5.56	0.0	000	0.00
Autos: 67.9 66.4 64.6 58.6 67.2 Medium Trucks: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	Unmitigated Noise	Levels (with	out Topo and	barrier	attenua	ation)						
Medium Trucks: 61.7 60.5 54.2 52.6 61.1 Heavy Trucks: 62.5 61.5 52.4 63.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) TO dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Eve	ning	Leq	Night		Ldn	0	NEL
Heavy Trucks: 62.5 61.5 52.4 53.7 62.0 Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 35 75 161 348	Autos:	67	7.9	66.4		64.6		58.6	;	67.2	2	67.
Vehicle Noise: 69.7 68.4 65.2 60.5 69.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	Medium Trucks:	61	1.7	60.5		54.2		52.6		61.1	1	61.
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	Heavy Trucks:	62	2.5	61.5		52.4	_	53.7		62.0)	62.
T0 dBA 65 dBA 60 dBA 55 dB Ldn: 35 75 161 348	Vehicle Noise:	69	9.7	68.4		65.2		60.5		69.1	1	69.
Ldn: 35 75 161 348	Centerline Distance	ce to Noise Co	ontour (in feet)	70.17				I -		-	
				L		\$A			6			
CINEL: 37 80 173 373								-				
			С	NEL:	37		ξ	30		173		373

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PE	REDICTI	ON MOD	EL			
Scenari	o: Existing					Project	Vame: Y	orba I	inda Hou	sing Elen	n
Road Nam	e: La Palma A	v.				Job Ni	mber: 1	5459			
Road Segmer	nt: e/o Gypsum	n Canyon Rd.									
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				5	Site Con	ditions (Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	8,746 vehicles	5				A	utos:	15		
Peak Hour	Percentage:	9.19%			Me	dium Tru	cks (2 A	(les):	15		
Peak H	our Volume:	804 vehicles	5		He	avy Truc	ks (3+ A	kles):	15		
Vei	hicle Speed:	50 mph			ehicle l	Miv					
Near/Far Lai	ne Distance:	50 feet				icleType	1	Dav	Evening	Night	Daily
Site Data					VCIII			7.5%		9.6%	
	vior Hoight	0.0 feet			Me	edium Tr		4.8%		10.3%	1.84
ваг Barrier Type (0-W	rier Height:	0.0 reet			ŀ	leavy Tr	ucks: P	6.5%	2.7%	10.8%	
Centerline Dis		0.0 40.0 feet									
Centerline Dist.		40.0 feet 40.0 feet		Λ	loise So	ource Ele			et)		
Barrier Distance		0.0 feet				Autos					
Observer Height (5.0 feet				m Trucks					
÷ (d Elevation:	0.0 feet			Heav	y Trucks	: 8.0	06	Grade Adj	ustment:	0.0
	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree	20		Mediur	m Trucks	: 31.2	41			
	Right View:	90.0 degree			Heav	y Trucks	31.3	69			
FHWA Noise Mode	al Calculation	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten
Autos:	70.20	-3.36		2.93	3	-1.20	-	4.83	0.0	000	0.00
Medium Trucks:	81.00	-20.60		2.96	5	-1.20	-	5.08	0.0	000	0.00
Heavy Trucks:	85.38	-24.55		2.93	3	-1.20	-	5.56	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			Leq Ev		Leq N			Ldn		VEL
Autos:	68		67.0		65.3		59.2		67.8		68.
Medium Trucks:	62		61.0		54.7		53.1		61.6		61.
Heavy Trucks:	62		61.5		52.5		53.7		62.1		62
Vehicle Noise:	70		68.9		65.8		61.1		69.6	3	70
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 -	0.4	<u> </u>	0.4		0 -10 4		-0.4
			L	70 d		65 a		6	0 dBA		dBA
			Ldn: VEL:	38		8			175 188		77 05
				40		8					

Thursday,	April	11,	2024	
murauay,	April	,	2024	

Scenar	io: E+P					Project N	lame: Yoi	ba Linda Ho	ousing E	Elem	
Road Nan	ne: Rose Dr.						mber: 154		0		
Road Segme	nt: s/o Imperia	I Hwy.									
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INPU	тs		
Highway Data				S	ite Cond	ditions (H	lard = 10	, Soft = 15)			
Average Daily	Traffic (Adt):	15,183 vehicles	5				Au	tos: 15			
Peak Hour	Percentage:	9.19%			Med	dium Truc	cks (2 Axle	es): 15			
Peak H	lour Volume:	1,395 vehicles	6		Hea	avy Truck	s (3+ Axle	es): 15			
Ve	hicle Speed:	50 mph			ehicle N	liv					
Near/Far La	ne Distance:	50 feet				cleType	Da	y Evening	Nigi	ht [Dailv
Site Data							itos: 77	.5% 12.99			7.429
Ba	rrier Height:	0.0 feet			Me	dium Tru	cks: 84	.8% 4.9%	6 10.	3%	1.849
Barrier Type (0-V		0.0			H	leavy Tru	cks: 86	.5% 2.7%	6 10.	8%	0.749
Centerline Di	ist. to Barrier:	40.0 feet			loise So	urce Ele	vations (i	n feet)			
Centerline Dist.	to Observer:	40.0 feet		Ê	0.00 00	Autos:		,			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:					
Observer Height	(Above Pad):	5.0 feet				v Trucks:			diustm	ent: 0	0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ		Distance	· /			
	Road Grade:	0.0%				Autos:		-			
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	es		Heav	y Trucks:	31.369	9			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite		Fresnel	Barrier A	tten	Berm	Atten
Autos:		-0.96		2.93		-1.20	-4.		0.000		0.00
Medium Trucks:		-18.20		2.96		-1.20	-5.		0.000		0.00
Heavy Trucks:	85.38	-22.16		2.93	5	-1.20	-5.	56 (0.000		0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			eq Ev	ening	Leq N	•	Ldn		CNE	
Autos:			69.4		67.7		61.6		0.2		70.
Medium Trucks:			63.4		57.1		55.5	-	4.0		64.
Heavy Trucks:		-	63.9		54.9		56.1		4.5		64.
Vehicle Noise:	72	7	71.3		68.2		63.5	7:	2.0		72.
Centerline Distan	ce to Noise Co	ontour (in feet,	1								
			1	70 d	BA	65 dI	BA	60 dBA		55 dB	3A
			Ldn: VEL:	54 58		117		253 271		544 585	

a : 5 a										
Scenario: E+P								inda Hou	sing Eler	n
Road Name: Imperial H					Job Nur	nber: 1	6459			
Road Segment: w/o Prosp	ect AV.									
SITE SPECIFIC I	NPUT DATA							. INPUT	S	
Highway Data			Si	te Cond	itions (H	ard = 1	0, So	ft = 15)		
Average Daily Traffic (Adt):	42,679 vehicle	5				A	utos:	15		
Peak Hour Percentage:	9.19%			Med	ium Truc	ks (2 Ax	(les):	15		
Peak Hour Volume:	3,922 vehicle	6		Hea	vy Truck	s (3+ Ax	des):	15		
Vehicle Speed:	55 mph		Ve	hicle M	ix					
Near/Far Lane Distance:	74 feet		-		leType	D	av	Evening	Night	Daily
Site Data						tos: 7	7.5%	12.9%	9.6%	
Barrier Height:	0.0 feet			Med	dium Truc	cks: 8	4.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Berm):	0.0			He	eavy Truc	cks: 8	6.5%	2.7%	10.8%	0.74
Centerline Dist. to Barrier:	50.0 feet		N	oise Sou	rce Elev	ations	(in fe	et)		-
Centerline Dist. to Observer:	50.0 feet				Autos:	2.00		.,		
Barrier Distance to Observer:	0.0 feet			Medium	Trucks:	4.00				
Observer Height (Above Pad):	5.0 feet			Heavv	Trucks:	8.00		Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet		Lá	ne Equi	ivalent D			eet)		
Road Grade:	0.0%				Autos:	33.7				
Left View:	-90.0 degree				Trucks:	33.64				
Right View:	90.0 degree	es		Heavy	Trucks:	33.70	04			
FHWA Noise Model Calculation VehicleType REMEL	ns Traffic Flow	Distar	100	Finite F	Road	Fresne	, ,	Barrier Att	on Roy	rm Atter
Autos: 71.7		Distai	2.45		-1.20		1.84		000	0.00
Medium Trucks: 82.4			2.48		-1.20		5.04		000	0.00
Heavy Trucks: 86.4			2.45		-1.20		5.43		000	0.00
Unmitigated Noise Levels (with	nout Topo and	barrier a	attenu	ation)						-
VehicleType Leq Peak Ho			eq Eve	•	Leq Ni			Ldn		NEL
		74.6		72.8		66.8		75.4		76
		68.4		62.1		60.5		69.0	-	69
		68.5		59.5		60.7		69.1		69
Vehicle Noise: 7		76.3		73.4		68.5		77.1	1	77
	ontour (in foot									
Centerline Distance to Noise C	ontour (in leet		70 45	24	65 25			0 4 8 4	E 5	dDA
Centerline Distance to Noise C		Ldn:	70 dE		65 dB 318			0 dBA 686		dBA .478

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGH	NAY NC	ISE P	REDIC	TION MO	DEL			
Scenari Road Nam Road Segmer	e: Imperial Hv						t Name: ` Number: `		Linda Hou	sing El	em
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Si	te Cor	nditions	(Hard =	10, Se	oft = 15)		
	Traffic (Adt): Percentage: our Volume:	40,595 vehicle 9.19% 3,731 vehicle					rucks (2 Å Icks (3+ Å	/	15		
Vei	hicle Speed:	55 mph		Ve	hicle	Mix					
Near/Far Lar	ne Distance:	74 feet		- F		nicleTyp	•	Dav	Evening	Night	Daily
Site Data							Autos:	77.5%	÷	9.6	
Por	rier Height:	0.0 feet			Μ	ledium 1	rucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks:	86.5%	2.7%	10.8	% 0.74%
Centerline Dis		50.0 feet		No	oise S	ource E	levation	s (in f	eet)		
Centerline Dist.		50.0 feet				Auto	os: 2.	000			
Barrier Distance		0.0 feet			Mediu	m Truci	(s: 4.	000			
Observer Height (,	5.0 feet			Hea	vy Truck	(s: 8.	006	Grade Ad	ljustme	nt: 0.0
	d Elevation:	0.0 feet				·		,,			
	d Elevation:	0.0 feet		La	ne Eq		t Distand		teet)		
F	Road Grade:	0.0%				Auto		764			
	Left View: Right View:	-90.0 degree 90.0 degree				ım Truci vy Truci		645 764			
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	71.78	2.90		2.45		-1.20		-4.84	0.	000	0.00
Medium Trucks:	82.40	-14.34		2.48		-1.20		-5.04	•.	000	0.00
Heavy Trucks:	86.40	-18.30		2.45		-1.20		-5.43	0.	000	0.00
Unmitigated Noise											
	Leq Peak Hou			Leq Eve			Night		Ldn		CNEL
Autos:	75		74.4		72.6		66.6		75.	-	75. 69.
Medium Trucks:	69		68.2		61.8		60.3		68.	-	
Heavy Trucks: Vehicle Noise:	69 77		68.3 76.1		59.3 73.2		60.5 68.3		68. 76.	-	69. 77.
Centerline Distanc	e to Noise Co	ntour (in feet)								
Contentine Distance		intoan (in reet	, 	70 dE	A	65	dBA	(60 dBA	1	55 dBA
			Ldn:	143		3	808		663		1,429
		C	NEL:	154		3	331		714		1,537

F	HWA-RD-77-10	8 HIGI	HWAY NO	OISE PR	EDICT	ION MO	DEL			
Scenario: E+P								Linda Hou:	sing Elen	1
Road Name: Bastancl	nury Rd.				Job N	lumber:	15459			
Road Segment: w/o Impe	erial Hwy.									
SITE SPECIFIC	INPUT DATA							L INPUT	S	
Highway Data			S	ite Conc	litions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt)	: 15,780 vehicl	es					Autos:	15		
Peak Hour Percentage	9.19%			Med	lium Tr	ucks (2)	Axles):	15		
Peak Hour Volume	: 1,450 vehicl	es		Hea	avy Tru	cks (3+)	Axles):	15		
Vehicle Speed	: 50 mph		V	ehicle M	liv					
Near/Far Lane Distance	50 feet				cleType		Day	Evening	Night	Daily
Site Data				VCIIIC		Autos:	77.5%		9.6%	
	: 0.0 feet			Me	dium T		84.8%		10.3%	
Barrier Height Barrier Type (0-Wall, 1-Berm)						rucks:	86.5%		10.8%	
Centerline Dist. to Barrier					•				10.070	0.717
Centerline Dist. to Observer			N	loise So	urce E	levation	s (in fe	eet)		
Barrier Distance to Observer					Auto		000			
Observer Height (Above Pad)				Mediun	n Truck	s: 4.	000			
Pad Elevation				Heavy	y Truck	s: 8.	006	Grade Ad	justment:	0.0
Road Elevation			1	ane Equ	ivalon	t Dietan	co (in i	foot)		
Road Grade	0.01000		-	une Equ	Auto		369	000		
Left View	0.070			Mediun			241			
Right View					v Truck		369			
rugin view	. 30.0 degi	663		, loar,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0. 01.	000			
FHWA Noise Model Calculati										
VehicleType REMEL	Traffic Flow	_	stance	Finite F		Fresr		Barrier Att		m Atten
Autos: 70.		-	2.93		-1.20		-4.83		000	0.00
Medium Trucks: 81.			2.96		-1.20		-5.08		000	0.00
Heavy Trucks: 85.	38 -21.9	9	2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels (wi										
VehicleType Leq Peak H			Leq Eve	•	Leq	Night		Ldn		VEL
Autos:	71.1	69.6		67.8		61.8		70.4		71.
	64.7	63.6		57.2		55.7		64.1		64.
	65.1	64.1		55.0		56.3	· ·	64.6	-	64.
Vehicle Noise:	72.8	71.5		68.4		63.6	3	72.2	2	72.
Centerline Distance to Noise	Contour (in fee	et)								
			70 di			dBA	6	60 dBA		dBA
		Ldn:	56			20		259	-	59
		CNEL	60			29		279		00

Thursday, April 11, 2024

	io: E+P					Proiect N	ame	Yorba	Linda Hou	ısina Eler	n
Road Nam	e: Bastanchur	v Rd.				Job Nur					
Road Segme	nt: e/o Imperia	Í Hwy.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Si	ite Cond	ditions (H	lard =	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	19,231 vehicles						Autos:	15		
Peak Hour	Percentage:	9.19%				lium Truc		,			
Peak H	lour Volume:	1,767 vehicles			Hea	avy Truck	s (3+	Axles).	: 15		
	hicle Speed:	50 mph		Ve	ehicle N	lix					
Near/Far La	ne Distance:	50 feet		-		cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	6 12.9%	9.6%	97.429
Ra	rrier Heiaht:	0.0 feet			Ме	dium Tru	cks:	84.8%	6 4.9%	10.3%	1.849
Barrier Type (0-W		0.0			H	leavy Tru	cks:	86.5%	6 2.7%	10.8%	0.749
Centerline Di	st. to Barrier:	40.0 feet		N	oise So	urce Elev	atior	ns (in f	eet)		
Centerline Dist.	to Observer:	40.0 feet		-		Autos:		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	4	.000			
Observer Height (,	5.0 feet			Heav	v Trucks:	8	.006	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 feet							64		
	ad Elevation:	0.0 feet		Lä	ane Equ	ivalent D			reet)		
	Road Grade:	0.0%				Autos:		.369			
	Left View: Right View:	-90.0 degrees 90.0 degrees				n Trucks: y Trucks:		.241 .369			
	•										
FHWA Noise Mod VehicleType	REMEL	Traffic Flow	Distance	e	Finite I	Road	Fres	nel	Barrier At	ten Ber	m Atten
		Traffic Flow 0.06		e 2.93		Road -1.20	Fres	nel -4.83		ten Ber 000	
VehicleType	REMEL		2				Fres	-	0.		0.00
VehicleType Autos:	REMEL 70.20	0.06	2	2.93		-1.20	Fres	-4.83	0. 0.	000	0.00
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise	REMEL 70.20 81.00 85.38 2 Levels (with	0.06 -17.17 -21.13 out Topo and b	2 2 2 arrier atte	2.93 2.96 2.93 enu	ation)	-1.20 -1.20 -1.20		-4.83 -5.08	0. 0. 0.	000 000 000	0.00
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	REMEL 70.20 81.00 85.38 2 Levels (with Leq Peak Hou	0.06 -17.17 -21.13 Dut Topo and b rr Leq Day	2 2 2 arrier atto Leq	2.93 2.96 2.93 enu	ation) ening	-1.20 -1.20	ght	-4.83 -5.08 -5.56	0. 0. 0. <i>Ldn</i>	000 000 000 <i>CI</i>	0.00 0.00 0.00
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	REMEL 70.20 81.00 85.38 Levels (with Leq Peak Hou 72	0.06 -17.17 -21.13 Dut Topo and b r Leq Day .0 7	2 2 arrier atte Leq 0.5	2.93 2.96 2.93 enu	ation) ening 68.7	-1.20 -1.20 -1.20	ght 62.	-4.83 -5.08 -5.56 6	0. 0. 0. <u>Ldn</u> 71.	000 000 000 <i>C/</i> 3	0.00 0.00 0.00 VEL 71.
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	REMEL 70.20 81.00 85.38 Levels (with Leq Peak Hou 72 65	0.06 -17.17 -21.13 Dut Topo and b <i>rr</i> Leq Day .0 7 .6 6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2.93 2.96 2.93 enu	ation) ening 68.7 58.1	-1.20 -1.20 -1.20	ght 62. 56.	-4.83 -5.08 -5.56 6 5	0. 0. 0. <u>Ldn</u> 71. 65.	000 000 000 <i>C/</i> 3 0	0.00 0.00 0.00 <u>VEL</u> 71. 65.
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 70.20 81.00 85.38 Levels (with Leq Peak Hou 72 65 66	0.06 -17.17 -21.13 Dut Topo and b <i>Ir</i> Leq Day .0 7 .6 6 .0 6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2.93 2.96 2.93 enu	ation) ening 68.7 58.1 55.9	-1.20 -1.20 -1.20	ght 62. 56. 57.	-4.83 -5.08 -5.56 6 5 1	0. 0. 0. <i>Ldn</i> 71. 65. 65.	000 000 000 200 200 200 200 200 200 200	0.00 0.00 0.00 VEL 71. 65. 65.
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 70.20 81.00 85.38 2 Levels (with Leq Peak Hou 72 65 66 73	0.06 -17.17 -21.13 Dut Topo and b rr Leq Day .0 7 .6 6 0 6 .0 6 .7 7	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2.93 2.96 2.93 enu	ation) ening 68.7 58.1	-1.20 -1.20 -1.20	ght 62. 56.	-4.83 -5.08 -5.56 6 5 1	0. 0. 0. <u>Ldn</u> 71. 65.	000 000 000 200 200 200 200 200 200 200	0.00 0.00 0.00 VEL 71. 65. 65.
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 70.20 81.00 85.38 2 Levels (with Leq Peak Hou 72 65 66 73	0.06 -17.17 -21.13 Dut Topo and b rr Leq Day .0 7 .6 6 0 6 .0 6 .7 7	2 2 2 arrier atti Leg 0.5 4.4 4.9 2.3	2.93 2.96 2.93 enu Eve	ation) ening 68.7 58.1 55.9 69.3	-1.20 -1.20 -1.20 <i>Leq Ni</i>	ght 62. 56. 57. 64.	-4.83 -5.08 -5.56 6 5 1 5	0. 0. 0. <i>Ldn</i> 71. 65. 65. 73.	000 000 000 3 0 5 0	0.00 0.00 0.00 <u>NEL</u> 71. 65. 65. 73.
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 70.20 81.00 85.38 2 Levels (with Leq Peak Hou 72 65 66 73	0.06 -17.17 -21.13 <i>ir</i> Leq Day 0.7 6.6 6.6 0.0 6.0 7 7 7 7 7 0 ntour (in feet)	2 2 2 arrier atti Leg 0.5 4.4 4.9 2.3	2.93 2.96 2.93 enu	ation) ening 68.7 58.1 55.9 69.3 3A	-1.20 -1.20 -1.20	ght 62. 56. 57. 64.	-4.83 -5.08 -5.56 6 5 1 5	0. 0. 0. <i>Ldn</i> 71. 65. 65.	000 000 000 3 0 5 0 0 55 0	m Atten 0.00 0.00 0.00 VEL 71. 65. 65. 73. dBA 37

		WA-RD-77-100	HIGHW	AY N	OISE PR	EDICI		DEL			
Road Nan	rio: E+P ne: Imperial Hv ent: n/o Lemon						Name: N umber: 1		Linda Hou:	sing Eler	n
SITE	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data				S	Site Cond	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	36,338 vehicle	s					Autos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Tr	ucks (2 A	xles).	15		
Peak F	Hour Volume:	3,339 vehicle	s		Hea	avy Tru	cks (3+ A	xles).	15		
Ve	ehicle Speed:	55 mph			/ehicle N						
Near/Far La	ane Distance:	74 feet		v		nx cleTvpe		Dav	Evening	Night	Daily
Site Data					Vering			77.5%	•	•	97.42%
					140	ر dium T		77.57 84.89		9.0%	
	rrier Height:	0.0 feet				leavy T		04.07 86.59		10.3%	
Barrier Type (0-V		0.0			п	leavy I	ucks.	00.37	D 2.170	10.0%	0.749
	ist. to Barrier:	50.0 feet		N	loise So	urce E	evations	; (in f	eet)		
Centerline Dist.		50.0 feet				Auto	s: 2.0	000			
Barrier Distance		0.0 feet			Mediun	n Truck	s: 4.0	000			
Observer Height	, ,	5.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	iustment	: 0.0
	ad Elevation:	0.0 feet		1	ane Equ	ivalon	Dictor	o (in	foot)		
	ad Elevation:	0.0 feet		-	ane Lyu	Auto			ieelj		
	Road Grade:	0.0%			Mediun						
	Left View:	-90.0 degre				n Truck v Truck					
	Right View:	90.0 degree	25		neav	y muck	5. 33.1	04			
FHWA Noise Mod	el Calculation	s									
VehicleType			0.1							1	
	REMEL	Traffic Flow	Dista	nce	Finite I	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:		Traffic Flow 2.41	Dista	nce 2.45		Road -1.20		e/ -4.84		en Ber 000	
	71.78	2.41			5				0.0		0.00
Autos:	71.78 82.40	2.41 -14.82		2.45	5	-1.20		4.84	0.0	000	0.00
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	2.41 -14.82 -18.78		2.45 2.48 2.45	5 3 5	-1.20 -1.20		-4.84 -5.04	0.0	000	0.00
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	2.41 -14.82 -18.78 out Topo and	barrier	2.45 2.48 2.45	5 3 5 uation)	-1.20 -1.20 -1.20		-4.84 -5.04	0.0	000 000 000	0.00
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	71.78 82.40 86.40 e Levels (with Leq Peak Hou	2.41 -14.82 -18.78 out Topo and Ir Leq Day	barrier	2.45 2.48 2.45 attenu	5 3 5 uation)	-1.20 -1.20 -1.20		-4.84 -5.04 -5.43	0.0 0.0 0.0	000 000 000 Ci	0.000 0.000 0.000 NEL
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois e VehicleType	71.78 82.40 86.40 e Levels (with Leq Peak Hou 75	2.41 -14.82 -18.78 out Topo and <i>Ir</i> Leq Day 5.4	barrier (2.45 2.48 2.45 attenu	5 3 5 uation) vening	-1.20 -1.20 -1.20	Night	-4.84 -5.04 -5.43	0.0 0.0 0.0	000 000 000 C/	0.00 0.00 0.00 NEL 75.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	71.78 82.40 86.40 e Levels (with Leg Peak Hou 75 68	2.41 -14.82 -18.78 out Topo and ir Leq Day 5.4 8.9	barrier a	2.45 2.48 2.45 attenu	5 3 5 vening 72.2	-1.20 -1.20 -1.20	Night 66.1	-4.84 -5.04 -5.43	0.0 0.0 0.0 <i>Ldn</i> 74.7	000 000 000 C/	0.000 0.000 0.000 NEL 75.3 68.9
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	71.78 82.40 86.40 e Levels (with Leq Peak Hou 75 68 68	2.41 -14.82 -18.78 out Topo and <i>Ir</i> Leq Day 6.4 8.9 8.9	barrier (/ L 73.9 67.7	2.45 2.48 2.45 attenu	5 3 5 7 7 2.2 6 1.4	-1.20 -1.20 -1.20	Night 66.1 59.8	-4.84 -5.04 -5.43	0.0 0.0 0.0 <i>Ldn</i> 74.7 68.3	000 000 000 C/	0.000 0.000 0.000 NEL 75.: 68.: 68.:
Autos: Medium Trucks: Heavy Trucks: VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	71.78 82.40 86.40 e Levels (with Leg Peak Hou 75 68 68 77	2.41 -14.82 -18.78 out Topo and <i>Ir</i> Leq Day 6.4 9.9 1.9	barrier 1 73.9 67.7 67.8 75.6	2.45 2.48 2.45 <u>attenu</u> .eq Ev	23 35 72.2 61.4 58.8 72.7	-1.20 -1.20 -1.20 <i>Leq</i>	Night 66.1 59.8 60.0 67.8	-4.84 -5.04 -5.43	0.0 0.0 0.0 74.7 68.3 68.4 76.4	000 000 000 7 3 4	0.000 0.000 0.000 NEL 75.3 68.3 68.3 68.3 76.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40 e Levels (with Leg Peak Hou 75 68 68 77	2.41 -14.82 -18.78 out Topo and <i>Ir</i> Leq Day 6.4 9.9 1.9	barrier (73.9 67.7 67.8 75.6	2.45 2.48 2.45 <u>attenu</u> .eq Ev	23 25 27 22 2 61.4 58.8 72.7 18 A	-1.20 -1.20 -1.20 Leq 65	Night 66.1 59.8 60.0 67.8 dBA	-4.84 -5.04 -5.43	0.0 0.0 0.0 74.7 68.3 68.4 76.4 76.4	000 000 000 7 3 4 4 55	0.000 0.000 0.000 NEL 75.3 68.5 68.5 76.8 76.8
Autos: Medium Trucks: Heavy Trucks: VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	71.78 82.40 86.40 e Levels (with Leg Peak Hou 75 68 68 77	2.41 -14.82 -18.78 out Topo and <i>Ir</i> Leq Day 3.4 1.9 .0 Dontour (in feet	barrier 1 73.9 67.7 67.8 75.6	2.45 2.48 2.45 <u>attenu</u> .eq Ev	200 200 200 200 200 200 200 200	-1.20 -1.20 -1.20 <i>Leq</i> 65	Night 66.1 59.8 60.0 67.8	-4.84 -5.04 -5.43	0.0 0.0 0.0 74.7 68.3 68.4 76.4	000 000 000 7 3 4 4 55 1,	0.000 0.000 0.000 NEL 75.3 68.4 68.4 76.8

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DEL			
Scenario Road Name Road Segmen	e: Imperial Hw						! Name: ` lumber: `		Linda Hou	sing El	em
	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Co	nditions	(Hard =	10, So	oft = 15)		
Average Daily T Peak Hour F Peak Ho	()	33,912 vehicle 9.19% 3,116 vehicle					ucks (2 A cks (3+ A		15 15 15		
Veh	icle Speed:	55 mph			ehicle	Mix					
Near/Far Lan	e Distance:	74 feet		P		nicleType		Dav	Evening	Night	Daily
Site Data					10.			77.5%	•	9.6	
Bar	rier Heiaht:	0.0 feet			N	ledium T	rucks:	84.8%	4.9%	10.3	% 1.849
Barrier Type (0-Wa		0.0				Heavy T	rucks:	86.5%	2.7%	10.8	% 0.74%
Centerline Dist	t. to Barrier:	50.0 feet			loise S	ource E	levations	s (in fe	et)		
Centerline Dist. to	o Observer:	50.0 feet				Auto	s: 2.0	000	,		
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Truck	s: 4.0	000			
Observer Height (A	,	5.0 feet				vy Truck		006	Grade Ad	justme	nt: 0.0
	d Elevation:	0.0 feet		L						·	
	d Elevation:	0.0 feet		L	ane Eq		t Distand		feet)		
R	oad Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degree 90.0 degree				ım Truck vy Truck					
FHWA Noise Mode	- I Calculation	° .				-					
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	71.78	2.11		2.45		-1.20		-4.84		000	0.00
Medium Trucks:	82.40	-15.12		2.48	3	-1.20		-5.04	0.	000	0.00
Heavy Trucks:	86.40	-19.08		2.45	5	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	1	Leq Ev	ening	Leq	Night		Ldn		CNEL
Autos:	75		73.6		71.9		65.8		74.		75.
Medium Trucks:	68		67.4		61.1		59.5		68.	-	68.
Heavy Trucks:	68	.6	67.5		58.5	i	59.7		68.	1	68.
Vehicle Noise:	76		75.3		72.4		67.5	;	76.	1	76.
Centerline Distance	e to Noise Co	ntour (in feet	9								
				70 d			dBA	6	0 dBA	-	55 dBA
		~	Ldn:	12		-	73		588		1,268
		C	NEL:	13	o	2	94		633		1,364

	FHW	A-RD-77-108	HIG	HWAY N	IOISE PR	REDICT	ION MO	DEL			
Scenario: E+P									Linda Hou	sing Eler	n
Road Name: Lakevi	ew Av	Ι.				Job N	lumber:	15459			
Road Segment: n/o Bu	ena V	ïsta Av.									
SITE SPECIFI	C IN	PUT DATA							L INPUT	S	
Highway Data				3	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	<i>tt):</i> 1	4,926 vehicle	s					Autos:	15		
Peak Hour Percentag	ye:	9.19%			Med	dium Tr	ucks (2)	Axles):	15		
Peak Hour Volun	ne:	1,372 vehicle	s		Hea	avy Tru	icks (3+ .	Axles):	15		
Vehicle Spee	ed:	45 mph		1	Vehicle N	liv					
Near/Far Lane Distant	ce:	52 feet		-		cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	9.6%	
Barrier Heig	ht.	0.0 feet			Me	dium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-Berr		0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to Barri		50.0 feet		L							
Centerline Dist. to Observ		50.0 feet		'	Voise So				et)		
Barrier Distance to Observ		0.0 feet				Auto		000			
Observer Height (Above Pa		5.0 feet			Mediur			000			
Pad Elevatio	·	0.0 feet			Heav	y Truck	(s: 8.	006	Grade Ad	justment.	0.0
Road Elevation		0.0 feet		1	Lane Equ	iivalen	t Distan	ce (in i	feet)		
Road Grad	de:	0.0%				Auto	s: 42	.814			
Left Vie	w:	-90.0 degree	es		Mediur	n Truck	(s: 42	720			
Right Vie	W:	90.0 degree	es		Heav	y Truck	(s: 42	.814			
FHWA Noise Model Calcula	tions			I							
VehicleType REME	<u> </u>	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos: 6	8.46	-0.58		0.9	1	-1.20		-4.84	0.0	000	0.00
Medium Trucks: 7	9.45	-17.82		0.9	2	-1.20		-5.04	0.0	000	0.00
Heavy Trucks: 8	4.25	-21.77		0.9	1	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels (witho	ut Topo and	barri								
VehicleType Leq Peak				Leg Ev		Leq	Night		Ldn		VEL
Autos:	67.		66.1		64.3		58.3		66.9		67
Medium Trucks:	61.		60.2		53.9		52.		60.		61
Heavy Trucks:	62.		61.1		52.1		53.3	-	61.		61
Vehicle Noise:	69.		68.1		64.9		60.3	2	68.	В	69
Centerline Distance to Nois	e Co	ntour (in feet)					1			
			[70 c			dBA	6	0 dBA		dBA
			Ldn: NEL:	4			89 96		192 206		14
											44

Thursday, April 11, 2024

	o: E+P					Project N	ame: \	orba	Linda Hou	sina Flen	n
	e: Lakeview A	W.				Job Nur			ennad Hibu	oing Elon	
Road Segmer						000 110		0.00			
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	Site Cond	ditions (H	ard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	13,058 vehicles						Autos:	15		
Peak Hour	Percentage:	9.19%			Med	lium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,200 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		L.	/ehicle N	liv					
Near/Far Lar	ne Distance:	52 feet		-		cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	, 77.5%	12.9%	9.6%	97.429
Rar	rier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	50.0 feet			voise So	urce Elev	ations	in fe	et)		
Centerline Dist. t	to Observer:	50.0 feet		Ē		Autos:		000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediun	n Trucks:	4.0	000			
Observer Height (/	,	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	justment.	0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		L	.ane Equ	ivalent D			reet)		
F	Road Grade:	0.0%				Autos:	42.8				
	Left View: Right View:	-90.0 degree: 90.0 degree:				n Trucks: y Trucks:	42.1 42.8				
	J	, i i i i i i i i i i i i i i i i i i i	·			,					
FHWA Noise Mode	REMEL	s Traffic Flow	Distan	се	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
venicie i vpe								4.84	0.0	000	0.00
VehicleType Autos:	68.46	-1.16		0.91	1	-1.20					
	68.46 79.45			0.91		-1.20 -1.20		-5.04	0.0	000	0.00
Autos:		-18.40			2					000	
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise	79.45 84.25 Levels (with	-18.40 -22.35 out Topo and b	arrier at	0.92 0.91	1 uation)	-1.20 -1.20		5.04	0.0	000	0.00
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	79.45 84.25 Levels (with Leq Peak Hou	-18.40 -22.35 out Topo and b ur Leq Day	arrier at	0.92 0.91	2 1 uation) vening	-1.20	ght	-5.04 -5.43	0.0 Ldn	000 <i>CI</i>	0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	79.45 84.25 Levels (with Leq Peak Hou	-18.40 -22.35 out Topo and b ur Leq Day '.0 6	arrier at Le	0.92 0.91	2 1 vening 63.7	-1.20 -1.20	ght 57.7	-5.04 -5.43	0.0 Ldn 66.5	000 C/	0.000 VEL 66.9
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	79.45 84.25 Levels (with Leq Peak Hou 67 60	-18.40 -22.35 out Topo and b ur Leq Day 7.0 6 0.8 5	arrier at Le 5.5 9.6	0.92 0.91	2 1 <i>vening</i> 63.7 53.3	-1.20 -1.20	ght 57.7 51.7	-5.04 -5.43	0.0 Ldn 66.3 60.3	2000	0.00 VEL 66.' 60.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	79.45 84.25 Levels (with Leq Peak Hou 67 60 61	-18.40 -22.35 out Topo and b ur Leq Day 7.0 6 0.8 5 1.6 6	arrier at Le 5.5 9.6 0.6	0.92 0.91	2 1 <i>vening</i> 63.7 53.3 51.5	-1.20 -1.20	ght 57.7 51.7 52.8	-5.04 -5.43	0.0 Ldn 66.3 60.2 61.	000 C <i>I</i> 3 2	0.000 NEL 66.1 60.4 61.1
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	79.45 84.25 Levels (with Leq Peak Hou 67 60 61	-18.40 -22.35 out Topo and b ur Leq Day 7.0 6 0.8 5 1.6 6	arrier at Le 5.5 9.6	0.92 0.91	2 1 <i>vening</i> 63.7 53.3	-1.20 -1.20	ght 57.7 51.7	-5.04 -5.43	0.0 Ldn 66.3 60.3	000 C <i>I</i> 3 2	0.000 NEL 66.1 60.4 61.1
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	79.45 84.25 Levels (with Leg Peak Hou 67 60 61 68	-18.40 -22.35 out Topo and b ur Leq Day 0.0 6 0.8 5 1.6 6 8.8 6	arrier at Le 5.5 9.6 0.6 7.5	0.92 0.91 ttenu q Ev	uation) vening 63.7 53.3 51.5 64.3	-1.20 -1.20 Leq Ni	ght 57.7 51.7 52.8 59.6	-5.04 -5.43	0.0 Ldn 66.3 60.3 61.3 68.3	2000 C <i>I</i> 3 2 1 2	0.000 NEL 66.1 60.4 61.2 68.1
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	79.45 84.25 Levels (with Leg Peak Hou 67 60 61 68	-18.40 -22.35 out Topo and b rr Leq Day 0.0 6 0.8 5 0.6 6 0.8 6 0.0 6 0.8 7 0.8 6 0.8 6 0.	arrier at Le 5.5 9.6 0.6 7.5	0.92 0.91	uation) vening 63.7 53.3 51.5 64.3	-1.20 -1.20	ght 57.7 51.7 52.8 59.6	-5.04 -5.43	0.0 Ldn 66.3 60.2 61.	CI CI CI CI CI CI CI CI CI CI	0.000 0.000 VEL 66.9 60.4 61.2 68.0 dBA 78

	FH\	WA-RD-77-108	HIGHV	VAY N	IOISE PR	REDICT	ION MO	DEL					
	rio: E+P				Project Name: Yorba Linda Housing Elem Job Number: 15459								
	ne: Buena Vist ent: w/o Lakevie					Job N	umber:	15459					
SITE	SPECIFIC IN	IPUT DATA								5			
Highway Data				S	Site Conc	ditions	(Hard =	10, So	oft = 15)				
Average Daily	Traffic (Adt):	8,317 vehicle	s					Autos:	15				
Peak Hou	Percentage:	9.19%			Med	dium Tr	ucks (2 A	(xles	15				
Peak I	Hour Volume:	764 vehicle	s		Hea	avy Tru	cks (3+ A	(xles	15				
Ve	ehicle Speed:	45 mph		L	/ehicle M	lix							
Near/Far La	ane Distance:	36 feet		Ē		cleType		Day	Evening	Night	Daily		
Site Data								77.5%		•	97.429		
Ba	rrier Height:	0.0 feet			Me	dium T	rucks:	84.8%	4.9%	10.3%	1.849		
Barrier Type (0-V		0.0			н	leavy T	rucks:	86.5%	5 2.7%	10.8%	0.749		
	ist. to Barrier:	40.0 feet			Voise So	uree El	ovetion	n /im f	oof)				
Centerline Dist.	to Observer:	40.0 feet		,	voise soi	Auto		200	eel)				
Barrier Distance	to Observer:	0.0 feet			Mediun			000					
Observer Height	(Above Pad):	5.0 feet				y Truck		000 006	Grade Ad	iustmont			
F	ad Elevation:	0.0 feet			neav	y muck	s. o.u	000	Grade Au	usuneni	. 0.0		
Ro	ad Elevation:	0.0 feet		L	.ane Equ	iivalent	Distanc	ce (in	feet)				
	Road Grade:	0.0%				Auto	s: 35.8	847					
	Left View:	-90.0 degre	es		Mediun	n Truck	s: 35.	735					
	Right View:	90.0 degree	es		Heavy	y Truck	s: 35.8	847					
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista		Finite F		Fresn	-	Barrier Att		m Atten		
Autos:		-3.12		2.06	-	-1.20		-4.83		000	0.00		
Medium Trucks:				2.08	-	-1.20		-5.08		000	0.00		
Heavy Trucks:				2.06		-1.20		-5.56	0.0	000	0.00		
Unmitigated Nois VehicleType	e Levels (with Leq Peak Hou			atteni Leg Ev		Lea	Night		Ldn	CI	NEL		
Autos:			64.7		62.9		56.9)	65.5	-	66.		
Medium Trucks:	60	0.0	58.8		52.5		50.9)	59.4	Ļ	59.		
Heavy Trucks:	60	.8	59.7		50.7		52.0)	60.3	3	60.		
Vehicle Noise	68	8.0	66.7		63.5		58.8	1	67.4	ļ	67.		
			1										
Centerline Distan	ce to Noise Co	ontour (in feet	/										
	ce to Noise Co	ontour (in feet		70 d			dBA		60 dBA		dBA		
	ce to Noise Co		Ldn:	70 d 21 29	7	5	dBA 58 52		50 dBA 124 133	2	<i>dBA</i> 888 87		

Thursday, April 11, 2024

	FH\	WA-RD-77-108	HIGI	HWAY N	IOISE F	REDICT	ION MC	DEL			
	io: E+P e: Bastanchu nt: w/o Plumos						t Name: lumber:		Linda Hou	sing El	em
	SPECIFIC IN	IPUT DATA							EL INPUT	S	
Highway Data				4	Site Co	nditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	15,682 vehicle	s					Autos.			
Peak Hour	Percentage:	9.19%				edium Tr		/			
Peak H	our Volume:	1,441 vehicle	s		н	eavy Tru	cks (3+	Axles)	: 15		
	hicle Speed:	50 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	50 feet		_	Ve	nicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6	% 97.42
Bai	rier Height:	0.0 feet			٨	ledium T	rucks:	84.8%	6 4.9%	10.3	% 1.84
Barrier Type (0-W	•	0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8	% 0.74
Centerline Dis	st. to Barrier:	40.0 feet		7	Voise S	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	40.0 feet		-		Auto	s: 2	.000	,		
Barrier Distance		0.0 feet			Mediu	ım Truck	(s: 4	.000			
Observer Height (,	5.0 feet				vy Truck		.006	Grade Ac	ljustme	nt: 0.0
	ad Elevation:	0.0 feet		-						·	
	ad Elevation:	0.0 feet		4	ane Ec	uivalen			teet)		
1	Road Grade:	0.0%				Auto		.369			
	Left View: Right View:	-90.0 degree 90.0 degree				ım Truck vy Truck		.241 .369			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier At	ten B	erm Atter
Autos:	70.20	-0.82		2.9	3	-1.20		-4.83		000	0.00
Medium Trucks:	81.00	-18.06		2.9	6	-1.20		-5.08	0.	000	0.00
Heavy Trucks:	85.38	-22.02		2.9	3	-1.20		-5.56	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	<i>'</i>	Leq E	/ening	Leq	Night		Ldn		CNEL
Autos:		.1	69.6		67.8		61.	-	70.		71
Medium Trucks:	-		63.6		57.2	-	55.		64.		64
Heavy Trucks:	65	5.1	64.0		55.0)	56.	3	64.	6	64
Vehicle Noise:		2.8	71.4		68.4	ļ	63.	6	72.	1	72
Centerline Distanc	ce to Noise Co	ontour (in feet)	70 (67	dBA	-	60 dBA		5 dBA
			Ldn:	70 0			20	'	258		556 556
		0	Lan: NEL	5			20		258		556 598
		C	VEL:	6	U	1	29		211		598

	FHW	A-RD-77-108	HIG	HWAY N	IOISE PF	REDICT	ION MC	DEL			
Scenario: E+	P					Project	Name:	Yorba	Linda Hou	sing Eler	n
Road Name: Lak	eview Av	r.				Job N	umber:	15459			
Road Segment: s/o	Bastanch	nury Rd.									
SITE SPEC	IFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily Traffic	(Adt):	9,713 vehicles	5					Autos:	15		
Peak Hour Perce	ntage:	9.19%			Me	dium Tr	ucks (2	Axles):	15		
Peak Hour Vo	olume:	893 vehicles	5		He	avy Tru	cks (3+	Axles):	15		
Vehicle S	Speed:	45 mph		5	Vehicle N	<i>liv</i>					
Near/Far Lane Dis	tance:	36 feet		H		cleType		Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%		9.6%	97.42
Barrier H	oight.	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-I		0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to E		40.0 feet		H	Noise So	·		- () *			
Centerline Dist. to Obs		40.0 feet		-	voise So				eet)		
Barrier Distance to Obs	erver:	0.0 feet				Auto		.000			
Observer Height (Above	Pad);	5.0 feet				n Truck		.000			
Pad Ele		0.0 feet			Heav	y Truck	s: 8	.006	Grade Ad	justment.	0.0
Road Ele	vation:	0.0 feet		1	Lane Equ	iivalen	Distan	ce (in i	feet)		
Road (Grade:	0.0%				Auto	s: 35	.847			
Left	View:	-90.0 degree	es		Mediur	n Truck	s: 35	.735			
Right	View:	90.0 degree	es		Heav	y Truck	s: 35	.847			
FHWA Noise Model Cald	ulations										
VehicleType RE	MEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-2.44		2.0	6	-1.20		-4.83	0.	000	0.00
Medium Trucks:	79.45	-19.68		2.0		-1.20		-5.08		000	0.00
Heavy Trucks:	84.25	-23.64		2.0	6	-1.20		-5.56	0.	000	0.00
Unmitigated Noise Leve			barri	er atten	uation)						
	eak Hour			Leq E		Leq	Night		Ldn		VEL
Autos:	66.	-	65.3		63.6		57.		66.	-	66.
Medium Trucks:	60.		59.5		53.1		51.		60.		60.
Heavy Trucks:	61.		60.4		51.4		52.	-	61.		61.
Vehicle Noise:	68.		67.3		64.2		59.	5	68.	1	68
Centerline Distance to N	loise Col	ntour (in feet))								
			L	70 0			dBA	6	60 dBA		dBA
			Ldn:	3			64		138		97
			VEL	3			i9		148		18

Thursday, April 11, 2024

	io: E+P					Project N	ama: V	(orba l	Linda Hou	sing Elor	
	10: E+P 1e: Bastanchur	v Rd				Job Nur				siriy ⊏ier	
	nt: w/o Lakevie					300 1101		0408			
	SPECIFIC IN					NC	ISE M	ODE	L INPUT	s	
Highway Data				5	Site Cond	ditions (H	lard = :	10, So	ft = 15)		
Average Daily	Traffic (Adt):	16,867 vehicles	6				A	utos:	15		
Peak Hour	Percentage:	9.19%			Med	lium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	1,550 vehicles	3		Hea	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		1	Vehicle N	lix					
Near/Far La	ne Distance:	50 feet		F		cleType	1	Day	Evening	Night	Daily
Site Data						Au	tos:	, 77.5%	12.9%	9.6%	97.42
Ba	rrier Height:	0.0 feet			Me	dium Tru	cks: I	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0			h	leavy Tru	cks: I	86.5%	2.7%	10.8%	0.74
Centerline Di	ist. to Barrier:	40.0 feet		,	Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist.	to Observer:	40.0 feet		Ē		Autos:	2.0				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	4.0				
Observer Height	· ,	5.0 feet				y Trucks:	8.0		Grade Ad	justment	0.0
-	ad Elevation:	0.0 feet						- 6- 4	41		
	ad Elevation:	0.0 feet		1	Lane Equ	ivalent D			eet)		
	Road Grade:	0.0%				Autos:	31.3				
	Left View: Right View:	-90.0 degree				n Trucks: y Trucks:	31.2 31.3				
	Right view:	90.0 degree	es.		neav	y TTUCKS.	31.3	09			
FHWA Noise Mod					Т						
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresne		Barrier Att		m Atten
	70.20	-0.51		2.93	-	-1.20		4.83		000	0.00
Autos:				2.96		-1.20		-5.08 -5.56		000	0.00
Medium Trucks:		-17.74			-	4.00				000	0.00
Medium Trucks: Heavy Trucks:	85.38	-21.70		2.93	3	-1.20		0.00	0.0		
Medium Trucks: Heavy Trucks: Unmitigated Nois	85.38 e Levels (with	-21.70 out Topo and		2.93	3 uation)			0.00			
Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	85.38 e Levels (with Leq Peak Hou	-21.70 out Topo and Ir Leq Day	Le	2.93	3 uation) vening	-1.20 Leq Ni	ght	0.00	Ldn		VEL
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	85.38 e Levels (with Leq Peak Hou 71	-21.70 out Topo and r Leq Day .4	69.9	2.93	3 uation) vening 68.1		ght 62.1		Ldn 70.7	7	71.
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	85.38 e Levels (with Leq Peak Hou 71 65	-21.70 out Topo and ir Leq Day .4	69.9 63.9	2.93	3 uation) vening 68.1 57.5		ght 62.1 56.0		Ldn 70.7 64.4	7 4	71. 64.
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	85.38 e Levels (with Leq Peak Hou 71 65 65	-21.70 out Topo and Ir Leq Day .4 .0	Le 69.9 63.9 64.4	2.93	3 vening 68.1 57.5 55.3		ght 62.1 56.0 56.6		Ldn 70.7 64.4 64.9	7 4 9	71 64 65
Medium Trucks: Heavy Trucks: Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38 e Levels (with Leq Peak Hou 71 65 65 73	-21.70 out Topo and ir Leq Day .4 .0 .4	Le 69.9 63.9 64.4 71.7	2.93	3 uation) vening 68.1 57.5		ght 62.1 56.0		Ldn 70.7 64.4	7 4 9	71 64 65
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	85.38 e Levels (with Leq Peak Hou 71 65 65 73	-21.70 out Topo and ir Leq Day .4 .0 .4	Le 69.9 63.9 64.4 71.7	2.90 atten eq E	3 <i>uation)</i> <i>vening</i> 68.1 57.5 55.3 68.7	Leq Ni	ght 62.1 56.0 56.6 63.9		Ldn 70.7 64.4 64.9 72.8	7 4 9 5	71. 64. 65. 72.
Medium Trucks: Heavy Trucks: Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38 e Levels (with Leq Peak Hou 71 65 65 73	-21.70 out Topo and ir Leq Day 4 .0 .4 .1 ontour (in feet)	Le 69.9 63.9 64.4 71.7	2.93	3 uation) vening 68.1 57.5 55.3 68.7 dBA		ght 62.1 56.0 56.6 63.9		Ldn 70.7 64.4 64.9	7 4 5 55	VEL 71. 64. 65. 72. dBA 84

	FHV	VA-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MOI	DEL			
Scenario Road Name Road Segmen	Bastanchur					t Name: `\ Number: `1		Linda Hous	sing Elen	n
SITE S	PECIFIC IN	PUT DATA				NOISE N	ODE	L INPUT	5	
Highway Data				Site C	onditions	(Hard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	18.698 vehicles				A	Autos:	15		
Peak Hour F	. ,	9.19%		1	Aedium Tr	rucks (2 A	xles):	15		
Peak Ho	ur Volume:	1,718 vehicles		1	leavy Tru	icks (3+ A	xles):	15		
Veh	icle Speed:	50 mph		Vehicl	o Mix					
Near/Far Lan	e Distance:	50 feet			e iviix ehicleType	•	Day	Evening	Niaht	Daily
Site Data							77.5%	•	9.6%	
Barr	ier Height:	0.0 feet			Medium T		84.8%		10.3%	
Barrier Type (0-Wa		0.0			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist	. ,	40.0 feet								
Centerline Dist. to		40.0 feet		Noise		levations		et)		
Barrier Distance to	Observer:	0.0 feet			Auto		000			
Observer Height (A	bove Pad):	5.0 feet			lium Truck		000	0		
• •	d Elevation:	0.0 feet		He	avy Truck	(S: 8.0	006	Grade Adj	ustment.	0.0
Road	d Elevation:	0.0 feet		Lane E	quivalen	t Distanc	e (in f	eet)		
R	oad Grade:	0.0%			Auto	os: 31.3	369			
	Left View:	-90.0 degree	s	Mea	lium Truck	ks: 31.2	241			
	Right View:	90.0 degree	S	He	avy Truck	ks: 31.3	369			
FHWA Noise Model	Calculation	S								
VehicleType	REMEL	Traffic Flow	Distan	ce Fini	te Road	Fresne	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	-0.06		2.93	-1.20		-4.83	0.0	000	0.000
Medium Trucks:	81.00	-17.30		2.96	-1.20		-5.08	0.0	000	0.000
Heavy Trucks:	85.38	-21.25		2.93	-1.20		-5.56	0.0	000	0.000
Unmitigated Noise										
	.eq Peak Hou			q Evening		Night		Ldn		NEL
Autos:	71		0.3	68		62.5		71.1		71.8
Medium Trucks:	65		4.3	58		56.4		64.9		65.1
Heavy Trucks:	65		4.8	55	-	57.0		65.4		65.5
Vehicle Noise:	73		2.2	69	.1	64.4		72.9	9	73.4
Centerline Distance	e to Noise Co	ontour (in feet)	-	70 - 10 4		-/0.4		0 -10 4		-04
				70 dBA		dBA	6	0 dBA		dBA
			.dn: IEL:	63		35		290		25
				67		45		312		72

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGHW	AY NC	ISE P	REDICT	TION MO	DEL			
	e: Lakeview A						t Name: Number:		Linda Hou:	sing Ele	m
Road Segmer	it: s/o Yorba L	.inda Bl.									
	SPECIFIC IN	IPUT DATA		_					L INPUT	S	
Highway Data				SI	te Con	aitions	(Hard =		,		
Average Daily	, ,		5					Autos:			
	Percentage:	9.19%					rucks (2 /				
	our Volume:	1,265 vehicle	5		He	avy Iru	icks (3+)	axies):	15		
	nicle Speed:	45 mph		Ve	hicle l	Mix					
Near/Far Lar	ne Distance:	52 feet			Veh	icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	5 12.9%	9.6%	97.42
Bar	rier Height:	0.0 feet				edium 1		84.8%	4.9%	10.3%	1.84
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	t. to Barrier:	50.0 feet		No	oise Sr	ource F	levation	s (in fi	eef)		
Centerline Dist. t	o Observer:	50.0 feet				Auto		000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		000			
Observer Height (/	,	5.0 feet				vy Truck		006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		La	ne Eq		t Distan		feet)		
F	Road Grade:	0.0%				Auto		814			
	Left View:	-90.0 degree				m Truck		720			
	Right View:	90.0 degree	es		Heav	vy Truck	(S. 42.	814			
FHWA Noise Mode		-								1	
VehicleType	REMEL	Traffic Flow	Distan		Finite	Road	Fresr	-	Barrier Att		rm Atter
Autos:	68.46	-0.93		0.91		-1.20		-4.84		000	0.00
Medium Trucks:	79.45	-18.17		0.92		-1.20		-5.04		000	0.00
Heavy Trucks:	84.25			0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou		-	ttenua eq Eve		100	Night	1	Ldn		NEL
Autos	Ley Feak Hol 67		65.7	eq Eve	63.9		57.9		Lun 66.5		NEL 67
Medium Trucks:	61		59.9		53.5		52.0		60.4		60
Heavy Trucks:	61		60.8		51.7		53.0	-	61.3		61
Vehicle Noise:	69	-	67.7		64.5		59.9		68.4		68
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dB	A	65	dBA	6	60 dBA	55	i dBA
			Ldn:	39			84		182		392
			VEL	42			91		195		120

		/A-RD-77-108									
Scenario: E+P									Linda Hou	sing Elen	n
Road Name: Yorba						Job N	lumber:	15459			
Road Segment: w/o L	akevie	w Av.									
SITE SPECIF	IC IN	PUT DATA							L INPUT	s	
Highway Data				5	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (A	dt): 2	8,536 vehicle	s					Autos:	15		
Peak Hour Percenta	ige:	9.19%			Med	dium Tr	ucks (2)	4 <i>xl</i> es):	15		
Peak Hour Volu	me:	2,623 vehicle	s		Hea	avy Tru	icks (3+ .	Axles):	15		
Vehicle Spe	ed:	50 mph		1	ehicle N	liv					
Near/Far Lane Distar	ice:	74 feet		-		cleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	•	97.429
Barrier Heig	wht.	0.0 feet			Ме	dium T	rucks:	84.8%		10.3%	
Barrier Type (0-Wall, 1-Be		0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Bar		50.0 feet		_							
Centerline Dist. to Obser		50.0 feet		N	loise So				et)		
Barrier Distance to Obser		0.0 feet				Auto		000			
Observer Height (Above P		5.0 feet			Mediur			000			
Pad Elevat		0.0 feet			Heav	y Truck	(s: 8.	006	Grade Ad	justment.	0.0
Road Elevat		0.0 feet		L	ane Equ	iivalen	t Distan	ce (in i	feet)		
Road Gra	de:	0.0%				Auto	s: 33.	764			
Left V	ew:	-90.0 degre	es		Mediun	n Truck	(s: 33	645			
Right Vi	ew:	90.0 degre			Heav	y Truck	(s: 33	764			
FHWA Noise Model Calcul	ations	3									
VehicleType REME		Traffic Flow		stance	Finite		Fresi		Barrier Att		m Atten
	70.20	1.78		2.45		-1.20		-4.84		000	0.00
	31.00	-15.46		2.48		-1.20		-5.04		000	0.00
Heavy Trucks:	35.38	-19.42		2.45	5	-1.20		-5.43	0.	000	0.00
Unmitigated Noise Levels	(witho	out Topo and	barri								
VehicleType Leq Pea				Leq Ev		Leq	Night		Ldn		VEL
Autos:	73.		71.7		69.9		63.		72.		73.
Medium Trucks:	66.		65.7		59.3		57.		66.		66.
Heavy Trucks:	67.		66.2		57.1		58.4		66.		66.
Vehicle Noise:	74.	9	73.5		70.5		65.	7	74.	3	74
Centerline Distance to Noi	se Co	ntour (in feet)								
				70 d			dBA	6	60 dBA		dBA
			Ldn:	96			207		447		63
			NEL	10			23		480		034

Thursday, April 11, 2024

		/A-RD-77-108	monw								
Scenari									Linda Hous	sing Eler	n
	e: Gypsum Ca					Job Nur	nber: 1	5459			
Road Segmer	nt: s/o La Palm	a Av.									
SITE	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				S	Site Con	ditions (H	ard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	3,238 vehicles					A	utos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,217 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		V	/ehicle N	Aiv					
Near/Far Lar	ne Distance:	36 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data								77.5%	•	9.6%	
Par	rier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	
Barrier Type (0-W		0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	t. to Barrier:	40.0 feet			loise So	urce Elev	ations	(in fe	ef)		
Centerline Dist.	to Observer:	40.0 feet		-		Autos:	2.0				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	4.0				
Observer Height (J	Above Pad):	5.0 feet				y Trucks:	8.0		Grade Ad	ustment	0.0
Pa	d Elevation:	0.0 feet				·					
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent D			eet)		
F	Road Grade:	0.0%				Autos:	35.8				
	Left View:	-90.0 degree				n Trucks:	35.7				
	Right View:	90.0 degree	s		Heav	y Trucks:	35.8	347			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresne		Barrier Atte		m Atter
Autos:	68.46	-1.10		2.06		-1.20		4.83	0.0		0.00
Medium Trucks:	79.45	-18.34		2.08		-1.20		5.08		000	0.00
Heavy Trucks:	84.25	-22.29		2.06	6	-1.20	-	5.56	0.0	000	0.00
Unmitigated Noise									Ldn		NEL
VehicleType	Leq Peak Hour 68.		6.7	eq Ev	ening 64.9	Leq Ni	58.9		Lan 67.5		VEL 68
A			60.7 60.9		64.9 54.5		52.9		61.4		61
Autos:			0.9		54.5 52.7		52.9 54.0		62.3		62
Medium Trucks:	62.		4.0						02.3	>	
Medium Trucks: Heavy Trucks:	62.	8 6	61.8		0.2.1.		00.0		00.4		00
Medium Trucks: Heavy Trucks: Vehicle Noise:	62. 70.	8 6	61.8 68.7		65.5		60.9		69.4	ļ	69
Medium Trucks: Heavy Trucks:	62. 70.	8 6		70 4	65.5	65 1					
Medium Trucks: Heavy Trucks: Vehicle Noise:	62. 70.	8 6 1 6 ntour (in feet)		70 d	65.5 BA	65 dE 79			69.4 0 dBA 169	55	69. dBA

	FH\	WA-RD-77-108	HIGHV	VAY N	OISE PR	EDICTIC	ON MOD	DEL			
	rio: E+P								Linda Hous	sing Eler	n
	ne: La Palma A ent: e/o Gypsur					JOD NU	mber: 1	5459			
-	,	,								-	
	SPECIFIC IN	IPUT DATA		_	ite Cond					5	
Highway Data				3	nte Cond	itions (i					
Average Daily		9,563 vehicle	s					Autos:			
	Percentage:	9.19%				lium True					
Peak F	Hour Volume:	879 vehicle	s		Hea	vy Truck	ks (3+ A	xles):	15		
Ve	ehicle Speed:	50 mph		v	ehicle M	ix					
Near/Far La	ane Distance:	50 feet		-		leType	1	Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.429
Ba	rrier Height:	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			н	eavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	40.0 feet			loise Sou	urco Elo	vations	(in f	nof)		
Centerline Dist.	to Observer:	40.0 feet		~	10/36 301	Autos		000	el)		
Barrier Distance	to Observer:	0.0 feet			Madium	Trucks		00			
Observer Height	(Above Pad):	5.0 feet				Trucks.		00 106	Grade Ad	iuctmont	
P	ad Elevation:	0.0 feet			neavy	TTUCKS.	0.0	00	Graue Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	31.3	869			
	Left View:	-90.0 degre	es		Medium	Trucks	31.2	241			
	Right View:	90.0 degree	es		Heavy	Trucks:	31.3	869			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite F	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	-2.97		2.93				4.83	0.0	000	0.00
					5	-1.20		4.83	0.0	000	
Medium Trucks:	81.00	-20.21		2.96		-1.20 -1.20		-4.83 -5.08		000	
Medium Trucks: Heavy Trucks:				2.96 2.93	5				0.0		0.00
Heavy Trucks: Unmitigated Nois	85.38 e Levels (with	-24.16 out Topo and	barrier	2.93	5	-1.20		5.08	0.0	000	0.00
Heavy Trucks: Unmitigated Nois VehicleType	85.38 e Levels (with Leq Peak Hou	-24.16 out Topo and Ir Leq Day	barrier	2.93	ation)	-1.20	light	5.08	0.0 0.0 Ldn	000 000 Ci	0.00 0.00
Heavy Trucks: Unmitigated Nois VehicleType Autos:	85.38 e Levels (with Leq Peak Hou 69	-24.16 out Topo and ur Leq Day 0.0	barrier / L 67.4	2.93 attenu	vation) rening 65.7	-1.20 -1.20	light 59.6	-5.08 -5.56	0.0 0.0 <i>Ldn</i> 68.2	000 000 C/	0.000 0.000 NEL 68.8
Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	85.38 e Levels (with Leq Peak Hou 69 62	-24.16 out Topo and ur Leq Day 0.0 2.6	barrier / L 67.4 61.4	2.93 attenu	s s rening 65.7 55.1	-1.20 -1.20	light 59.6 53.5	-5.08 -5.56	0.0 0.0 <i>Ldn</i> 68.2 62.0	000 000 C/	0.000 0.000 NEL 68.4 62.2
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	85.38 e Levels (with Leg Peak Hou 69 62 62	-24.16 out Topo and r Leq Day 0.0 2.6 2.9	barrier / L 67.4 61.4 61.9	2.93 attenu	<i>uation)</i> rening 65.7 55.1 52.9	-1.20 -1.20	light 59.6 53.5 54.1	-5.08 -5.56	0.0 0.0 <i>Ldn</i> 68.2 62.0 62.5	000 000 2 0 5	0.000 0.000 NEL 68.1 62.1 62.1
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38 e Levels (with Leq Peak Hou 69 62 62 70	-24.16 out Topo and ir Leq Day 0.0 2.6 2.9 0.7	barrier / L 67.4 61.4 61.9 69.3	2.93 attenu	s s rening 65.7 55.1	-1.20 -1.20	light 59.6 53.5	-5.08 -5.56	0.0 0.0 <i>Ldn</i> 68.2 62.0	000 000 2 0 5	0.000 0.000 NEL 68.1 62.1 62.1
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38 e Levels (with Leq Peak Hou 69 62 62 70	-24.16 out Topo and ir Leq Day 0.0 2.6 2.9 0.7	barrier / L 67.4 61.4 61.9 69.3	2.93 attenu Leq Ev	<i>vation)</i> rening 65.7 55.1 52.9 66.2	-1.20 -1.20 Leq N	light 59.6 53.5 54.1 61.5	-5.08 -5.56	0.0 0.0 68.2 62.0 62.5 70.0	000 000 2 5 0	0.000 0.000 NEL 68.4 62.3 62.4 70.3
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	85.38 e Levels (with Leq Peak Hou 69 62 62 70	-24.16 out Topo and ir Leq Day 0.0 2.6 2.9 0.7	barrier 67.4 61.4 61.9 69.3	2.93 attenu Leq Evi 70 d	ation) rening 65.7 55.1 52.9 66.2 BA	-1.20 -1.20 Leq N	light 59.6 53.5 54.1 61.5 BA	-5.08 -5.56	0.0 0.0 <u>Ldn</u> 68.2 62.0 62.5 70.0	000 000 2 0 5 0 555	0.000 0.000 NEL 68.8 62.2 62.6 70.8
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38 e Levels (with Leq Peak Hou 69 62 62 70	-24.16 out Topo and Ir Leq Day 0.0 2.9 0.7 ontour (in feet	barrier / L 67.4 61.4 61.9 69.3	2.93 attenu Leq Ev	Justion) rening 65.7 55.1 52.9 66.2 66.2	-1.20 -1.20 Leq N	light 59.6 53.5 54.1 61.5 BA	-5.08 -5.56	0.0 0.0 68.2 62.0 62.5 70.0	000 000 2 0 5 5 5 5 4	0.000 0.000 NEL 68.8 62.2 62.6 70.8

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGHW	AY NC	DISE P	REDICT	ION MO	DEL			
Scenario: Road Name: Road Segment:		Hwy.					Name: ` lumber:		Linda Hou:	sing Ele	m
SITE SF	PECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUT	S	
Highway Data				Si	te Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily Tr Peak Hour Pe Peak Hou	()	17,381 vehicle 9.19% 1,597 vehicle					ucks (2 A cks (3+ A	/	15		
Vehic	cle Speed:	50 mph		16	hicle	Mise					
Near/Far Lane	Distance:	50 feet		Ve		iviix hicleType		Dav	Evening	Niaht	Dailv
Site Data					VCA		Autos:	77.5%	÷	9.6%	
	er Height:	0.0 feet			м	Iedium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wali	l, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist.		40.0 feet		No	oise Se	ource El	levation	s (in f	eet)		
Centerline Dist. to		40.0 feet				Auto	s: 2.	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 4.	000			
Observer Height (At	,	5.0 feet			Hear	vy Truck	s: 8.	006	Grade Ad	justmen	t: 0.0
	Elevation:	0.0 feet						,,			
	Elevation:	0.0 feet		Lá	ne Eq		t Distand		reet)		
	ad Grade:	0.0%				Auto		369			
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck vy Truck		241 369			
FHWA Noise Model	Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresh	el	Barrier Att	en Be	rm Atter
Autos:	70.20	-0.37		2.93		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	81.00	-17.61		2.96		-1.20		-5.08	0.0	000	0.00
Heavy Trucks:	85.38	-21.57		2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise L											
	eq Peak Hou			eq Eve		,	Night		Ldn		NEL
Autos:	71		70.0		68.3		62.2	-	70.8	-	71
Medium Trucks:	65		64.0		57.6		56.1		64.6	-	64
Heavy Trucks:	65		64.5		55.5		56.7		65.1		65
Vehicle Noise:	73		71.9		68.8		64.0)	72.6	ö	73
Centerline Distance	to Noise Co	ontour (in feet)	70 dF			dBA		0 dBA		5 dBA
						65					
			Ldn:	70 UE 60	3A		ава 28		277		596

		A-RD-77-108	HIGI	HWAY N	IOISE PI						
Scenario: HY									Linda Hou	sing Elen	n
Road Name: Im						Job N	lumber:	15459			
Road Segment: w/o	Prospec	t Av.									
SITE SPEC	IFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	= 10, So	oft = 15)		
Average Daily Traffic	: (Adt): 4	7,022 vehicles						Autos:	15		
Peak Hour Perce	ntage:	9.19%			Me	dium Ti	ucks (2	Axles):	15		
Peak Hour V	olume:	4,321 vehicles			He	avy Tru	cks (3+	Axles):	15		
Vehicle S	Speed:	55 mph		1	Vehicle I	Mix					
Near/Far Lane Dis	tance:	74 feet		F		icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Barrier H	leiaht [.]	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-		0.0			I	Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to E		50.0 feet		H	Noise So	uraa E	lovatio	o (in f	nof)		
Centerline Dist. to Ob	server:	50.0 feet			voise so				eet)		
Barrier Distance to Ob	server:	0.0 feet				Auto		.000			
Observer Height (Above	e Pad):	5.0 feet				m Truck		.000	Grade Ad		
Pad Ele	vation:	0.0 feet			Heav	y Truck	S. 8	.006	Grade Ad	Justinent	0.0
Road Ele	vation:	0.0 feet		1	Lane Eq	uivalen	t Distar	ce (in i	feet)		
Road	Grade:	0.0%				Auto	s: 33	.764			
Lef	t View:	-90.0 degree	s		Mediu	m Truck	s: 33	.645			
Righ	t View:	90.0 degree	s		Heav	y Truck	s: 33	.764			
FHWA Noise Model Cal	culations										
VehicleType RE	MEL	Traffic Flow	Dis	stance		Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	3.53		2.4	5	-1.20		-4.84	0.0	000	0.00
Medium Trucks:	82.40	-13.70		2.4	-	-1.20		-5.04		000	0.00
Heavy Trucks:	86.40	-17.66		2.4	5	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Leve			-								
	Peak Houi			Leq E			Night		Ldn		VEL
Autos:	76.		75.0		73.3		67.		75.	-	76.
Medium Trucks:	70.		8.8		62.5		60.		69.4		69
Heavy Trucks:	70.		58.9		59.9		61.		69.		69
Vehicle Noise:	78.		76.8		73.8		68.	9	77.	5	78
Centerline Distance to I	Voise Co	ntour (in feet)									
			. L	70 0			dBA	6	50 dBA		dBA
			_dn:	15			40		732		576
		C1	IEL	17			65		787	1	696

Thursday, April 11, 2024

Scenario	o: HY (2045)					Project	Name	Yorha	Linda Hous	sing Elen	n
	e: Imperial Hv	N/					umber: ·				
Road Segmen						000 140	annocr.	10400			
SITE S	SPECIFIC IN	IPUT DATA				N	OISE N	IODE		3	
Highway Data					Site Con	ditions ('Hard =	10, Sc	oft = 15)		
Average Daily 1	Traffic (Adt):	44,725 vehicles						Autos:	15		
Peak Hour I	Percentage:	9.19%			Me	dium Tru	icks (2 A	(xles	15		
Peak Ho	our Volume:	4,110 vehicles			He	avy Truc	ks (3+ A	(xles)	15		
Vet	nicle Speed:	55 mph		-	Vehicle I	<i>liv</i>					
Near/Far Lar	ne Distance:	74 feet				cleType		Dav	Evening	Night	Daily
Site Data				-				77.5%	•	9.6%	
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	50.0 feet		H	Noise So	urco Ek	wation	in f	not)		
Centerline Dist. t	o Observer:	50.0 feet		Ľ	NUISE SU	Autos		200	eel)		
Barrier Distance t	o Observer:	0.0 feet			Madiu	n Trucks		000			
Observer Height (/	Above Pad):	5.0 feet				y Trucks		000 006	Grade Adj	ustment	0.0
Pa	d Elevation:	0.0 feet								usument.	0.0
Roa	d Elevation:	0.0 feet		1	Lane Equ	ıivalent	Distand	e (in i	feet)		
F	Road Grade:	0.0%				Autos	: 33.	764			
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 33.	645			
	Right View:	90.0 degree	s		Heav	y Trucks	33.	764			
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	-	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.32		2.4	-	-1.20		-4.84	0.0		0.00
Medium Trucks:	82.40	-13.92		2.4	-	-1.20		-5.04	0.0		0.00
Heavy Trucks:	86.40	-17.88		2.4	5	-1.20		-5.43	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and L	arrier	atten	uation)						
	Leq Peak Hou			Leq E	vening	Leq I			Ldn		VEL
Autos:	76		4.8		73.1		67.0		75.6		76.
Medium Trucks:	69		6.8		62.3		60.7		69.2		69.
Heavy Trucks:	69		68.7		59.7		60.9	_	69.3		69.
Vehicle Noise:	77	.9 7	6.5		73.6		68.7		77.3		77.
Centerline Distanc	e to Noise Co	ontour (in feet)									
					dBA	65 0		6	60 dBA		dBA
		1	.dn:	15	52	32	28		708	1,	524
			EL		54	35			761		640

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PF	REDICTI	ON MOI	DEL					
Road Nam	io: HY (2045) ne: Bastanchur nt: w/o Imperia				Project Name: Yorba Linda Housing Elem Job Number: 15459								
SITE	SPECIFIC IN	PUT DATA							L INPUT	5			
Highway Data				S	Site Con	ditions	Hard =	10, So	oft = 15)				
Average Daily	Traffic (Adt): 1	17,120 vehicle	s					Autos:	15				
• •	Percentage:	9.19%			Me	dium Tru	icks (2 A	(xles):	15				
Peak H	lour Volume:	1,573 vehicle	s		He	avy Truc	ks (3+ A	xles):	15				
Ve	hicle Speed:	50 mph			(- h :- l - A			-					
Near/Far La	ne Distance:	50 feet			/ehicle N	leType		Day	Evening	Night	Daily		
Site Data					veni			77.5%	•	9.6%			
					14	ء dium Tr		77.5% 84.8%		9.6%			
	rrier Height:	0.0 feet				leavy Tr		04.0% 86.5%		10.3%			
Barrier Type (0-W	. ,	0.0			, r	leavy II	UCKS.	00.3%	2.170	10.0%	0.74%		
Centerline Di		40.0 feet		^	loise So	urce El	evations	s (in f	eet)				
Centerline Dist.		40.0 feet				Autos	s: 2.0	000					
Barrier Distance		0.0 feet			Mediur	n Truck:	s: 4.0	000					
Observer Height		5.0 feet			Heav	y Trucks	s: 8.0	006	Grade Adj	iustment	: 0.0		
	ad Elevation:	0.0 feet			ana Eau	uive le nt	Distanc	in (in	fact)				
	ad Elevation:	0.0 feet		-	ane Equ				leel)				
	Road Grade:	0.0%				Autos							
	Left View:	-90.0 degree				n Truck							
	Right View:	90.0 degree	es		Heav	y Trucks	5: 31.3	309					
FHWA Noise Mod	el Calculation:	S											
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten		
Autos:	70.20	-0.44		2.93	3	-1.20		-4.83	0.0	000	0.000		
Medium Trucks:	81.00	-17.68		2.96	3	-1.20		-5.08	0.0	000	0.000		
Heavy Trucks:	85.38	-21.63		2.93	3	-1.20		-5.56	0.0	000	0.00		
Unmitigated Noise								1		-			
	Leq Peak Hou			Leq Ev	•	Leq	Vight		Ldn		NEL		
Autos:	71		70.0		68.2		62.1		70.8	-	71.4		
Medium Trucks:	65		63.9		57.6		56.0		64.5		64.7		
Heavy Trucks:			64.4		55.4		56.6		65.0		65.1		
Vehicle Noise:			71.8		68.8		64.0		72.5	Ď	73.0		
Centerline Distan	ce to Noise Co	ontour (in feet)	70 d	ID A	67			0 484	50	d D A		
						65 0			50 dBA		dBA		
Ldn:			59 127 274 590			990							
			NEL:	63		10			294		334		

Thursday, April 11, 2024

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	ION MC	DEL			
Road Nan	io: HY (2045) ne: Bastanchur nt: e/o Imperia						! Name: lumber:		Linda Hou	sing Ele	em
	SPECIFIC IN	IPUT DATA								S	
Highway Data				Si	te Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	22,406 vehicle	s					Autos:	15		
Peak Hour	Percentage:	9.19%				edium Tr		,			
Peak F	lour Volume:	2,059 vehicle	s		He	eavy Tru	cks (3+ .	Axles):	15		
	hicle Speed:	50 mph		Ve	ehicle	Mix					
Near/Far La	ne Distance:	50 feet			Veł	nicleType	÷	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.69	6 97.42
Ba	rrier Height:	0.0 feet			Μ	ledium T	rucks:	84.8%	4.9%	10.3	6 1.84
Barrier Type (0-V	/all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.89	6 0.74
Centerline Di		40.0 feet		N	oise S	ource E	levation	s (in f	eet)		
Centerline Dist.		40.0 feet				Auto	s: 2.	000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 4.	000			
Observer Height	· ,	5.0 feet			Hea	vy Truck	s: 8	006	Grade Ad	ljustmer	nt: 0.0
	ad Elevation:	0.0 feet				uivalen	t Diatan	aa (in	faat)		
	ad Elevation: Road Grade:	0.0 feet 0.0%		Le	ille Eq	Auto		369	leel)		
	Left View:				Modiu	m Truck		.369 241			
	Right View:	-90.0 degree 90.0 degree				vy Truck		369			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atter
Autos:	70.20	0.73		2.93		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	81.00	-16.51		2.96		-1.20		-5.08	0.0	000	0.00
Heavy Trucks:	85.38	-20.47		2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Nois				r attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve			Night		Ldn		CNEL
Autos:	72		71.1		69.4		63.		71.9	-	72
Medium Trucks:	66		65.1		58.7		57.	-	65.		65
Heavy Trucks:	66		65.6		56.6		57.	-	66.2		66
Vehicle Noise:			73.0		69.9		65.	1	73.	(74
Centerline Distan	ce to Noise Co	ontour (in feet)	70 dE	84	65	dBA		50 dBA	5	5 dBA
			Ldn:	70 02	~ 1		52	- '	328	1 3	706
		C	NEL:	76			63		352		758
		C	NEL:	76		1	63		352		758

Road Name: In	Y (2045)													
	Scenario: HY (2045)						Project Name: Yorba Linda Housing Elem Job Number: 15459							
						Job N	lumber:	15459						
Road Segment: n/	o Lemon D	Dr.												
	CIFIC IN	PUT DATA							L INPUT	S				
Highway Data					Site Con	ditions	(Hard =	= 10, So	oft = 15)					
Average Daily Traff	ic (Adt): 4	0,035 vehicles	3					Autos:	15					
Peak Hour Perc	entage:	9.19%			Me	dium Tı	ucks (2	Axles):	15					
Peak Hour \	/olume:	3,679 vehicles	6		He	avy Tru	icks (3+	Axles):	15					
Vehicle	Speed:	55 mph			Vehicle I	Nix								
Near/Far Lane D	istance:	74 feet		F		cleType	9	Day	Evening	Night	Daily			
Site Data							Autos:	77.5%		9.6%				
Barrier	Heiaht [.]	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849			
Barrier Type (0-Wall, 1	•	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.749			
Centerline Dist. to		50.0 feet		-	Noise So	uree E	lovatio	o (in f	nof)					
Centerline Dist. to O		50.0 feet		Ľ	voise So				eel)					
Barrier Distance to Ol	bserver:	0.0 feet			Mad	Auto		.000						
Observer Height (Abov	e Pad):	5.0 feet				n Truck		.000	0					
Pad El	evation:	0.0 feet			Heav	y Truck	(S: 8	.006	Grade Ad	Justinent	0.0			
Road El	evation:	0.0 feet		1	Lane Equ	uivalen	t Distar	ce (in i	feet)					
Road	Grade:	0.0%				Auto	os: 33	.764						
Le	ft View:	-90.0 degree	s		Mediur	n Truck	(s: 33	.645						
Rig	ht View:	90.0 degree	s		Heav	y Truck	(s: 33	.764						
FHWA Noise Model Ca	Iculations													
VehicleType R	EMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten			
Autos:	71.78	2.84		2.4	5	-1.20		-4.84	0.0	000	0.00			
Medium Trucks:	82.40	-14.40		2.4	-	-1.20		-5.04		000	0.00			
Heavy Trucks:	86.40	-18.36		2.4	5	-1.20		-5.43	0.0	000	0.00			
Unmitigated Noise Lev			-		/					Т				
	Peak Hou			Leq E	•	Leq	Night	1	Ldn		VEL			
Autos:	75.		74.3		72.6		66.	-	75.		75			
Medium Trucks:	69.		68.1		61.8		60.		68.		68			
Heavy Trucks:	69.		68.2		59.2		60.	-	68.		68			
Vehicle Noise:	77.		76.1		73.1		68.	2	76.	5	77			
Centerline Distance to	Noise Co	ntour (in feet)	1	70 (65	dBA	4	60 dBA	FF	dBA			
			Ldn:		18A 12		05 05	1 0	657		ава 416			
			VEL:	14			105 128		657 707		416 523			

Thursday, April 11, 2024

Cooner	io: HY (2045)					Drainat	Mamai	Varha	Linda Hous	ing Eler	-
	10: HY (2045) 1e: Imperial Hy						ivame: umber:			sing Eler	n
	nt: s/o Lemon					J00 M	uniber.	15459			
				-						_	
SITE Highway Data	SPECIFIC IN	IPUT DATA			ite Con					3	
				3	ne con	unions		Autos:	,		
• •	, ,	37,362 vehicles 9.19%			140	dium Tru					
	Percentage: lour Volume:	3.434 vehicles				avy Truc					
	hicle Speed:	55 mph			110	avy nuc	va (2+ 1	-1,103).	15		
	ne Distance:	55 mpn 74 feet		v	ehicle l						
Near/Far La	ne Distance:	74 ieet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						-	utos:	77.5%		9.6%	
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	/all, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	5 2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	50.0 feet		N	loise So	urce El	vation	s (in fi	eef)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck		000			
Observer Height	(Above Pad):	5.0 feet				y Trucks		006	Grade Ad	ustment	0.0
P	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ				feet)		
	Road Grade:	0.0%				Autos		764			
	Left View:	-90.0 degree				n Trucks		645			
	Right View:	90.0 degree	s		Heav	y Trucks	5: 33.	764			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.53		2.45	;	-1.20		-4.84	0.0	00	0.00
Medium Trucks:	82.40	-14.70		2.48	5	-1.20		-5.04	0.0	00	0.00
Heavy Trucks:	86.40	-18.66		2.45	i	-1.20		-5.43	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and L	arrier a	attenu	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	L	eq Ev	ening	Leq	Vight		Ldn	CI	NEL
Autos:	75		'4.0		72.3		66.3	-	74.8		75.
Medium Trucks:			67.8		61.5		59.9	-	68.4		68.
Heavy Trucks:	69	9.0 6	67.9		58.9		60.3	2	68.5	i	68.
Vehicle Noise:	77	.2 7	75.8		72.8		67.9	9	76.5		77.0
	ce to Noise Co	ontour (in feet)									
Centerline Distan				70 d	DA	65 (1BA	6	50 dBA	55	dBA
Centerline Distan				70 0	DA						
Centerline Distan		1	.dn:	13		29	91	-	628	1,	352

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTI				
Road Nam	io: HY (2045) e: Lakeview A nt: n/o Buena V					Name: York Imber: 1545	a Linda Hou: i9	sing Elen	1
SITE	SPECIFIC IN	IPUT DATA			N	OISE MOD	EL INPUT	s	
Highway Data				Site Con		Hard = 10,		-	
Average Daily	Traffic (Adt):	17,586 vehicles				Auto			
Peak Hour	Percentage:	9.19%				cks (2 Axle			
Peak H	our Volume:	1,616 vehicles		He	eavy Truc	ks (3+ Axle:	s): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	52 feet			icleType	Day	Evening	Night	Daily
Site Data					A	utos: 77.5	5% 12.9%	9.6%	97.42%
Bai	rier Height:	0.0 feet		М	edium Tri	ucks: 84.8	3% 4.9%	10.3%	1.84%
Barrier Type (0-W		0.0		1	Heavy Tr	ucks: 86.5	5% 2.7%	10.8%	0.74%
Centerline Dis		50.0 feet		Noise Se	ource Ele	vations (in	feet)		
Centerline Dist.		50.0 feet			Autos	: 2.000	,		
Barrier Distance		0.0 feet		Mediu	m Trucks	4.000			
Observer Height (,	5.0 feet		Hear	vy Trucks	8.006	Grade Ad	justment:	0.0
	ad Elevation:	0.0 feet							
	ad Elevation:	0.0 feet		Lane Eq		Distance (i	n feet)		
1	Road Grade:	0.0%			Autos				
	Left View:	-90.0 degree			m Trucks				
	Right View:	90.0 degree	S	Hear	/y Trucks	42.814			
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan		Road	Fresnel	Barrier Att		m Atten
Autos:	68.46	0.13		0.91	-1.20	-4.8		000	0.00
Medium Trucks:	79.45	-17.10		0.92	-1.20	-5.0		000	0.00
Heavy Trucks:	84.25	-21.06		0.91	-1.20	-5.4	3 0.0	000	0.00
Unmitigated Noise									
	Leq Peak Hou			q Evening	Leq N	•	Ldn		IEL
Autos:	68		6.8	65.0		58.9	67.6		68.
Medium Trucks:	62		0.9	54.6		53.0	61.5	-	61.
Heavy Trucks:	62		i1.8	52.8		54.1	62.4		62.
Vehicle Noise:	70	.1 6	8.8	65.6		60.9	69.5	5	69.9
Centerline Distand	e to Noise Co	ontour (in feet)			r				
				70 dBA	65 a		60 dBA		dBA
			.dn: IEL:	70 dBA 46 49	65 d 99	Э	60 dBA 214 230	4	<i>aba</i> 61 95

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGHW	AY NC	ISE P	REDICT	'ION MO	DEL			
Scenario: Road Name: Road Segment:	Lakeview A						Name: ` lumber:		Linda Hou	sing Ele	m
÷		PUT DATA							L INPUT	6	
Highway Data				Si	te Cor		(Hard =			•	
Average Daily Tra Peak Hour Pe Peak Hour	rcentage:	14,418 vehicle 9.19% 1,325 vehicle					ucks (2 A cks (3+ A	,	15		
Vehicl	e Speed:	45 mph		Ve	hicle	Mix					
Near/Far Lane	Distance:	52 feet				nicleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	77.5%	•	9.6%	
Parrio	r Height:	0.0 feet			Μ	ledium T	rucks:	84.8%	4.9%	10.3%	6 1.84
Barrier Type (0-Wall,	1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.74
Centerline Dist. t		50.0 feet		No	oise S	ource E	levation	s (in fe	eet)		
Centerline Dist. to (50.0 feet				Auto	s: 2.	000			
Barrier Distance to (0.0 feet			Mediu	m Truck	s: 4.	000			
Observer Height (Ab	,	5.0 feet			Hea	vy Truck	s: 8.	006	Grade Ad	justmen	t: 0.0
	Elevation:	0.0 feet		1.0	no Fo	wiwelen	t Distand	o (in)	fa a ti		
	Elevation:	0.0 feet		La	ne Eq	Auto			leel)		
	d Grade: .eft View:	0.0%			Madie	m Truck		B14 720			
-	ght View:	-90.0 degree 90.0 degree				vy Truck		720 814			
FHWA Noise Model C	alculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atter
Autos:	68.46	-0.73		0.91		-1.20		-4.84	0.0	000	0.0
Medium Trucks:	79.45	-17.97		0.92		-1.20		-5.04		000	0.00
Heavy Trucks:	84.25	-21.92		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Le										-	
	q Peak Hou			.eq Eve			Night		Ldn		NEL
Autos: Medium Trucks:	67. 61		65.9 60.1		64.1 53.7		58.1 52.2		66. 60.6		67 60
										-	
Heavy Trucks: Vehicle Noise:	62		61.0 67.9		51.9 64.8		53.2 60.1		61.0	-	61 69
Centerline Distance t	o Noise Co	ntour (in foot	4		-						
Semenine Distance l	0 110/36 00	intour (in leel	,	70 dB	A	65	dBA	6	0 dBA	55	5 dBA
			Ldn:	40		8	37		188		404

		A-RD-77-108									
Scenario: HY (Linda Hou	sing Eler	n
Road Name: Buer						JOD I	lumber:	15459			
Road Segment: w/o	Lakevie	NAV.									
SITE SPECI	FIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cond	litions	(Hard =	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	8,390 vehicle	s					Autos:	15		
Peak Hour Percen	tage:	9.19%			Med	lium Tr	rucks (2	Axles):	15		
Peak Hour Vol	ume:	771 vehicle	s		Hea	avy Tru	icks (3+	Axles):	15		
Vehicle Sp	eed:	45 mph		V	ehicle N	liv					
Near/Far Lane Dista	ance:	36 feet		-		cleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	9.6%	
Barrier He	iaht:	0.0 feet			Me		rucks:	84.8%		10.3%	
Barrier Type (0-Wall, 1-B	•	0.0			н	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Ba		40.0 feet									
Centerline Dist. to Obse		40.0 feet		^	loise So	urce E			eet)		
Barrier Distance to Obse		0.0 feet				Auto		.000			
Observer Height (Above I		5.0 feet			Mediun	n Truck	(s: 4	.000			
Pad Eleva		0.0 feet			Heav	y Truck	(s: 8	.006	Grade Ad	justment.	0.0
Road Eleva		0.0 feet		1	ane Equ	ivalen	t Distan	ce (in :	feet)		
Road G		0.0%		F	uno Equ	Auto		.847			
	View:	-90.0 degree			Mediun			.735			
Right		90.0 degree				v Truck		.847			
rught		50.0 degree	.5			,					
FHWA Noise Model Calcu											
VehicleType REM	1EL	Traffic Flow	Dis	stance	Finite I	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-3.08		2.06	i	-1.20		-4.83	0.	000	0.00
Medium Trucks:	79.45	-20.32		2.08		-1.20		-5.08	0.	000	0.00
Heavy Trucks:	84.25	-24.27		2.06		-1.20		-5.56	0.	000	0.00
Unmitigated Noise Levels	s (witho	ut Topo and	barri	er attenu	uation)						
VehicleType Leq Pe	ak Hour	· Leq Day	r	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	66.	2	64.7		62.9		56.	9	65.	5	66.
Medium Trucks:	60.	D	58.9		52.5		51.	0	59.	4	59.
Heavy Trucks:	60.	В	59.8		50.8		52.	0	60.	4	60.
Vehicle Noise:	68.	1	66.7		63.6		58.	9	67.	4	67.
Centerline Distance to No	oise Col	ntour (in feet)								
			1	70 d	BA	65	dBA	e	60 dBA	55	dBA
			Ldn:	27	,	1	58		125	2	69

Thursday, April 11, 2024

Scenar	io: HY (2045)					Project N	lame: Y	orba l	inda Hous	sing Eler	n
	e: Bastanchur	y Rd.				Job Nui				<u> </u>	
	nt: w/o Plumos										
	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data				5	Site Cond	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	17,278 vehicles						utos:	15		
Peak Hour	Percentage:	9.19%			Med	lium Truc	:ks (2 A)	des):	15		
Peak H	lour Volume:	1,588 vehicles			Hea	avy Truck	s (3+ A)	des):	15		
Ve	hicle Speed:	50 mph		1	/ehicle N	lix					
Near/Far La	ne Distance:	50 feet		F		cleType	Ľ	Day	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	97.42
Ba	rrier Height:	0 0 feet			Me	dium Tru	cks: 8	4.8%	4.9%	10.3%	1.84
Barrier Type (0-W		0.0			h	leavy Tru	cks: 8	6.5%	2.7%	10.8%	0.74
Centerline Di	st. to Barrier:	40.0 feet			loise So	urce Elev	ations	(in fe	ef)		
Centerline Dist.	to Observer:	40.0 feet		Ē		Autos:					
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:					
Observer Height (Above Pad):	5.0 feet				v Trucks:			Grade Adj	ustment	0.0
Pi	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		1	ane Equ	ivalent L			eet)		
	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	s		Heav	y Trucks:	31.3	69			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atter
Autos:	70.20	-0.40		2.93	3	-1.20	-	4.83	0.0	000	0.00
Medium Trucks:	81.00	-17.64		2.96	3	-1.20	-	5.08	0.0	000	0.00
Heavy Trucks:	85.38	-21.59		2.93	3	-1.20	-	5.56	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and I	oarrier a	atten	uation)						
VehicleType	Leq Peak Hou			eq Ev	rening	Leq N	•		Ldn	-	NEL
Autos:	71		70.0		68.2		62.2		70.8		71
Medium Trucks:	65		64.0		57.6		56.1		64.5		64
Heavy Trucks:	65		64.5		55.4		56.7		65.0		65
Vehicle Noise:	73	.2 7	71.8		68.8		64.0		72.6	3	73
Centerline Distand	ce to Noise Co	ontour (in feet)									
				70 d		65 dE		6	0 dBA		dBA
		1	.dn:	59	9	128	3		275	5	93
			IEL	64		137			296		37

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PF	REDICTI		DEL			
	nio: HY (2045) ne: Lakeview A	V.					Name: Y mber: 1		Linda Hous	sing Eler	n
	nt: s/o Bastand					000 / 10		0100			
SITE	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data				5	Site Con	ditions (Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	9,836 vehicles	5				A	utos:	15		
Peak Hour	Percentage:	9.19%			Me	dium Tru	cks (2 A.	xles):	15		
Peak H	lour Volume:	904 vehicles	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		1	Vehicle N	<i>liv</i>					
Near/Far La	ne Distance:	36 feet		F		cleType	[Day	Evening	Night	Daily
Site Data				-				77.5%	•		97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tri	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			F	leavy Tri	ucks: 8	36.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	40.0 feet		-	Noise So	uree Ele	votiono	lin fa	a fi		
Centerline Dist.	to Observer:	40.0 feet		'	voise 30	Autos			el)		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks					
Observer Height	(Above Pad):	5.0 feet				v Trucks			Grade Ad	iustment	. 0 0
P	ad Elevation:	0.0 feet			neav	y mucks	. 0.0	00	Grade Auj	usument	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	iivalent	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos	: 35.8	47			
	Left View:	-90.0 degree	es		Mediur	n Trucks	: 35.7	35			
	Right View:	90.0 degree	es		Heav	y Trucks	35.8	47			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	el i	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.39		2.06	6	-1.20	-	4.83	0.0	000	0.00
Medium Trucks:		-19.63		2.0		-1.20		5.08		000	0.00
Heavy Trucks:	84.25	-23.58		2.06	6	-1.20	-	5.56	0.0	000	0.00
Unmitigated Nois											
VehicleType Autos:	Leq Peak Hou		65.4	Leq E	ening 63.6	Leq N	•		Ldn 66.2		NEL
Autos: Medium Trucks:			65.4 59.6		63.6 53.2		57.6 51.7		66.2	-	66.4 60.4
Heavy Trucks:			59.6 60.5		53.2 51.4		52.7		61.0		61.3
Vehicle Noise:		-	67.4		64.2		52.7		68.1		68.0
		-			04.2		59.6		υð.		08.
Centerline Distan	ce to Noise Co	ontour (in feet,	,	70 c	IRA	65 a	BA	6	0 dBA	55	dBA
			Ldn:	3		64			139		99
			VEL:	3	-	69			149	-	21
		0,		0.	-						

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGHW	AY NC	ISE PI	REDICT	ION MO	DEL			
Scenario: Road Name: Road Segment:							Name: ` lumber: `		Linda Hou:	sing Ele	m
SITE SP	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Si	te Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tra Peak Hour Pe Peak Hou	. ,	8,510 vehicle 9.19% 1,701 vehicle) ucks (2 A cks (3+ A	,	15		
Vehic	le Speed:	50 mph		Ve	hicle l	Miy					
Near/Far Lane	Distance:	50 feet		Ve		icleType		Dav	Evening	Niaht	Dailv
Site Data					VCh			77.5%	÷	9.6%	
	er Height:	0.0 feet		_	M	edium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall	, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist.		40.0 feet		No	oise Sc	ource El	levations	s (in fe	eet)		
Centerline Dist. to		40.0 feet				Auto	s: 2.0	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 4.0	000			
Observer Height (Ab	,	5.0 feet			Heav	/y Truck	s: 8.0	006	Grade Ad	iustmen	t: 0.0
	Elevation:	0.0 feet		-							
	Elevation:	0.0 feet		La	ne Eq		t Distand		reet)		
	ad Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degree 90.0 degree				m Truck /y Truck					
FHWA Noise Model (Calculation	6									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atter
Autos:	70.20	-0.10		2.93		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	81.00	-17.34		2.96		-1.20		-5.08		000	0.00
Heavy Trucks:	85.38	-21.30		2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise L			-							-	
	eq Peak Hou			eq Eve			Night		Ldn	-	NEL
Autos:	71. 65	-	70.3 64.3		68.5		62.5		71.1	-	71 65
Medium Trucks:					57.9		56.4		64.8	-	
Heavy Trucks: Vehicle Noise:	65	-	64.8 72.1		55.7 69.1		57.0 64.3		65.3		65 73
Centerline Distance		-			00.1		04.0		12.3		73
	to NUISE CO	mour (m reet,	<u> </u>			-				r.	
Centenine Distance				70 dB	A	65	dBA	6	60 dBA	55	i dBA
Centernine Distance			Ldn:	70 dB 62	A		dBA 34	6	288		6 dBA 621

	HY (2045)										
	Scenario: HY (2045) Road Name: Bastanchury Rd. Road Segment: e/o Lakeview Av.						t Name: Number:		Linda Hou	sing Elen	1
SITE SP	ECIFIC IN	PUT DATA				1	NOISE	MODE	L INPUT	s	
Highway Data					Site Co	nditions	(Hard :	= 10, So	oft = 15)		
Average Daily Tra	affic (Adt): 2	1.229 vehicles						Autos:	15		
Peak Hour Pe	. ,	9.19%			М	edium T	rucks (2	Axles):	15		
Peak Hou	r Volume:	1,951 vehicles			н	eavy Tru	icks (3+	Axles)	15		
Vehic	le Speed:	50 mph		-	Vehicle	Mix					
Near/Far Lane	Distance:	50 feet		-		hicleTyp	•	Day	Evening	Night	Daily
Site Data					101		Autos:	77.5%	•	9.6%	
		0.0 feet			٨	1edium T		84.8%		10.3%	
Barrier Type (0-Wall,	er Height:	0.0 reet				Heavy	Trucks:			10.8%	
Centerline Dist.		40.0 feet									
Centerline Dist. to		40.0 feet		2	Noise S		levatio		eet)		
Barrier Distance to		40.0 feet				Auto		.000			
Observer Height (Ab		5.0 feet				ım Truci		.000			
• •	Elevation:	0.0 feet			Hea	vy Truci	ks: 8	.006	Grade Ad	justment.	0.0
	Elevation:	0.0 feet		5	Lane Ed	uivaler	t Distar	nce (in	feet)		
Ro	ad Grade:	0.0%		Ē		Auto	os: 31	.369			
	Left View:	-90.0 degree	s		Media	ım Truci	ks: 31	.241			
R	ight View:	90.0 degree	s		Hea	vy Truci	ks: 31	.369			
FHWA Noise Model (Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	e Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.49		2.9		-1.20		-4.83		000	0.00
Medium Trucks:	81.00	-16.74		2.9		-1.20		-5.08		000	0.00
Heavy Trucks:	85.38	-20.70		2.9	-	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise L			-					-			
	eq Peak Hou			Leq E	vening		Night		Ldn		VEL
Autos:	72.		70.9		69.1		63		71.3		72.
Medium Trucks:	66. 66.		64.9 65.4		58.5		57		65.4 65.9		65.
Heavy Trucks:					56.3		57	-		-	66.
Vehicle Noise:	74.		72.7		69.1	(64	.9	73.	5	73.
Centerline Distance	to Noise Co	ntour (in feet)		70	dBA	65	dBA	1	60 dBA	55	dBA
		,	Ldn:		18 18		147		316		и <i>в</i> я 81
		1	IEL:		3		147		339		31

			D-77-108	nigi	HWAT NO	JISE PI						
	io: HY (2045)									Linda Hou	sing Eler	n
	e: Lakeview						Job Nu	mber:	15459			
Road Segme	nt: s/o Yorba	Linda I	BI.									
	SPECIFIC I	NPUT	DATA							L INPUT	S	
Highway Data					S	ite Con	ditions (l	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	16,13	7 vehicles						Autos:	15		
Peak Hour	Percentage:	9.1	9%			Me	dium Truc	cks (2)	Axles):	15		
Peak H	our Volume:	1,48	3 vehicles			He	avy Truck	(S (3+)	Axles):	15		
Ve	hicle Speed:	4	5 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	5	2 feet		-		icleType	T	Dav	Evening	Niaht	Dailv
Site Data								itos:	77.5%	-	.	97.429
			.0 feet			Me	edium Tru		84.8%		10.3%	
ва Barrier Type (0-W	rrier Height:	-	.0 teet				leavy Tru				10.8%	
Centerline Di		-	1.0 1.0 feet									
Centerline Dist			0 feet		N	oise So	ource Ele			eet)		
Barrier Distance			1.0 feet				Autos:		.000			
Observer Height (0 feet				m Trucks:		.000			
• •	ad Elevation:	-	0 feet			Heav	y Trucks:	8.	.006	Grade Ad	iustment	: 0.0
	ad Elevation:	-	0 feet		L	ane Eq	uivalent l	Distan	ce (in t	feet)		
	Road Grade:	-	0.0%				Autos	42	814	,		
	Left View:	-	.0 degree	\$		Mediu	m Trucks	42	720			
	Right View:		0.0 degree			Heav	v Trucks:	42	.814			
				-					-			
FHWA Noise Mode												
VehicleType	REMEL		fic Flow	Di	stance	Finite	Road	Fresr		Barrier Att		m Atten
Autos:	68.40	-	-0.24		0.91		-1.20		-4.84		000	0.00
Medium Trucks:	79.4	-	-17.48		0.92		-1.20		-5.04		000	0.00
Heavy Trucks:	84.2	5	-21.43		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	hout T	opo and b	arri	er attenu	ation)						
VehicleType	Leq Peak Ho	our	Leq Day		Leg Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	6	7.9	6	6.4		64.6		58.0	6	67.2	2	67.
Medium Trucks:	6	1.7	e	6.0		54.2		52.0	6	61.1	1	61.
Heavy Trucks:	6	2.5	e	61.5		52.4		53.	7	62.0)	62.:
Vehicle Noise:	6	9.8	6	68.4		65.2		60.0	6	69.	1	69.
Centerline Distand	e to Noise C	contou	r (in feet)									
					70 dl	BA	65 d	BA	6	0 dBA	55	dBA
			L	.dn:	44		94			202	4	-36

	FHW.	A-RD-77-108 HIG	HWAY I	NOISE P	REDICT		DEL			
Road Nam	io: HY (2045) ie: Yorba Linda nt: w/o Lakeviev					Name: Y lumber: 1		inda Hous	ing Eler	n
	SPECIFIC INF	PUT DATA							3	
Highway Data				Site Cor	ditions	(Hard = 1				
• •	Traffic (Adt): 24						utos:	15		
	Percentage:	9.19%				ucks (2 A	,	15		
		2,252 vehicles		He	avy Iru	cks (3+ A	xies):	15		
	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	74 feet		Veh	icleType	e [Day	Evening	Night	Daily
Site Data						Autos: 7	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet		М	edium T		34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy T	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	50.0 feet	-	Noise Si	ource Fl	levations	(in fe	ef)		
Centerline Dist.	to Observer:	50.0 feet	-		Auto					
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck					
Observer Height (Above Pad):	5.0 feet			vy Truck		06	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet	_							
	ad Elevation:	0.0 feet	2	Lane Eq		t Distanc		eet)		
1	Road Grade:	0.0%			Auto					
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck vy Truck					
FHWA Noise Mode	- al Calculations				-					
VehicleType		Traffic Flow D	istance	Finite	Road	Fresne	e/ L	Barrier Atte	en Ber	m Atten
Autos:	70.20	1.12	2.4	5	-1.20	-	4.84	0.0	00	0.00
Medium Trucks:	81.00	-16.12	2.4	-	-1.20		5.04	0.0		0.00
Heavy Trucks:	85.38	-20.08	2.4	5	-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise										
VehicleType Autos:	Leq Peak Hour			vening 69.3		Night 63.2		Ldn 71.8		VEL 72 -
Autos: Medium Trucks:	72.6			69.3 58.7		63.2 57.1		71.8		72. 65.
Heavy Trucks:	66.6			56.5		57.1		66.1		66. 66
Vehicle Noise:	74.3			69.8		65.1		73.6		74.
Centerline Distance				00.0		00.1		73.0		74.
Sentenine Distant	e to Noise Con	nour (in reet)	70	dBA	65	dBA	6	0 dBA	55	dBA
		Ldn:	. 8	37	1	87		404	8	70
		CNEL:	: 9	93	2	01		434	g	34
					-				-	

Thursday, April 11, 2024

	FHV	VA-RD-77-108	HIGHW	AY NOI	SE PI	REDICT	ION MO	DEL			
	: HY (2045) : Gypsum Ca : s/o La Palm						! Name: ` lumber: `		Linda Hou	sing Ele	em
	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Site	e Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily T Peak Hour P Peak Ho	. ,	13,540 vehicle 9.19% 1.244 vehicle					ucks (2 A cks (3+ A	/	15		
Vehi	icle Speed:	45 mph		14-1	hicle I						
Near/Far Lane	Distance:	36 feet		vei		icleType		Dav	Evening	Niaht	Dailv
Site Data					ven			77.5%	•	9.6%	
	in a Halasha	0.0 feet			М	edium T		84.8%		10.39	
Barrier Type (0-Wa		0.0			I	Heavy T	rucks:	86.5%	2.7%	10.89	
Centerline Dist.		40.0 feet		No	ise So	ource E	levations	s (in fe	eet)		
Centerline Dist. to		40.0 feet				Auto	s: 2.0	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 4.0	000			
Observer Height (A	,	5.0 feet			Heav	/y Truck	s: 8.0	006	Grade Ad	ljustmer	nt: 0.0
	Elevation:	0.0 feet		-							
	Elevation:	0.0 feet		Lai	ie Eq		t Distand		reet)		
Re	oad Grade:	0.0%				Auto					
I	Left View: Right View:	-90.0 degre 90.0 degre				m Truck /y Truck					
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atter
Autos:	68.46	-1.00		2.06		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	79.45	-18.24		2.08		-1.20		-5.08	0.0	000	0.00
Heavy Trucks:	84.25	-22.20		2.06		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise										1	
	eq Peak Hou			eq Ever			Night		Ldn		CNEL
Autos:	68		66.8		65.0		59.0		67.6	-	68
Medium Trucks:	62		61.0		54.6		53.0		61.	-	61
Heavy Trucks:	62		61.9		52.8		54.1		62.4		62
Vehicle Noise:	70	-	68.8		65.6		61.0)	69.	5	70
Centerline Distance	to Noise Co	ontour (in feet)	70 dB/			dBA		0 dBA	-	5 dBA
				70 aB/	A 1	65	aba			1 3	
			Ldn:	70 ab/ 37	4		ава 30		172	-	370 370

Cooperie: 1	IV (2045)					Droja of A	lomo: N	(orbo l	indo Hou	aing Elon	
Scenario: I Road Name: I						Job Nur			inda Hou	sing Elen	า
Road Name: 1 Road Segment: 6						JOD INUI	mber: 1	5459			
Road Seyment.	e/o Gypsull	Callyon Ru.									
	ECIFIC IN	PUT DATA								S	
Highway Data				5	Site Con	ditions (H	lard = 1	10, So	ft = 15)		
Average Daily Tra	ffic (Adt):	9,621 vehicle	s				A	utos:	15		
Peak Hour Per	centage:	9.19%			Me	dium Truc	:ks (2 A	xles):	15		
Peak Hour	Volume:	884 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Vehicl	e Speed:	50 mph		1	/ehicle I	<i>liy</i>					
Near/Far Lane I	Distance:	50 feet		F		cleTvpe	1	Dav	Evening	Night	Dailv
Site Data					10/1			77.5%		9.6%	
	r Height:	0.0 feet			Me	edium Tru		34.8%		10.3%	
Barrier Type (0-Wall,	•	0.0 reet				leavy Tru		36.5%		10.8%	
Centerline Dist. to		40.0 feet									
Centerline Dist. to C		40.0 feet		^	Voise So	urce Elev	vations	(in fe	et)		
Barrier Distance to C		40.0 feet				Autos:	2.0	00			
Observer Height (Abo		5.0 feet			Mediur	n Trucks:	4.0	00			
	levation:	0.0 feet			Heav	y Trucks:	8.0	06	Grade Ad	justment:	0.0
	levation:	0.0 feet			ano Fai	uivalent D	Dietanc	o (in f	oot)		
	d Grade:	0.0 feet		F	une Ly	Autos:			000		
	eft View:	-90.0 degree			Mediu	n Trucks:					
=	aht View:	90.0 degree				v Trucks:					
14	gint view.	90.0 degree	:5		neav	y macks.	01.0	00			
FHWA Noise Model C	alculations	;									
VehicleType H	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	el i	Barrier Att	en Ber	m Atten
Autos:	70.20	-2.94		2.93	3	-1.20	-	4.83	0.0	000	0.00
Medium Trucks:	81.00	-20.18		2.96	6	-1.20	-	5.08	0.0	000	0.00
Heavy Trucks:	85.38	-24.14		2.93	3	-1.20	-	5.56	0.0	000	0.00
Unmitigated Noise Le	vels (witho	out Topo and	barri	er atten	uation)						
VehicleType Lea	Peak Hou	r Leq Day	<i>'</i>	Leg Ev	/ening	Leq N	ight		Ldn	CI	VEL
Autos:	69.	0	67.5		65.7		59.6		68.3	3	68.
Medium Trucks:	62.	6	61.4		55.1		53.5		62.0)	62
Heavy Trucks:	63.	.0	61.9		52.9		54.1		62.5	5	62
Vehicle Noise:	70.	7	69.3		66.3		61.5		70.0)	70
Centerline Distance to	o Noise Co	ntour (in feet)								
			1	70 a	IBA	65 dE	BA	6	0 dBA	55	dBA
			Ldn:	4(0	87			186	. 4	02

Thursday, April 11, 2024

Scenari	o: HY+P (204	5)				Project N	<i>lame:</i> Yo	rba Lind	la Housi	ng Elem	1
	e: Rose Dr.	-,					mber: 15				
Road Segmer	nt: s/o Imperial	Hwy.									
	SPECIFIC IN	PUT DATA					DISE MO				
Highway Data				S	ite Con	ditions (l	lard = 10), Soft =	: 15)		
Average Daily	Traffic (Adt):	18,147 vehicles					Au	tos:	15		
Peak Hour	Percentage:	9.19%			Mee	dium Truc	ks (2 Axi	es): ·	15		
Peak H	our Volume:	1,668 vehicles			Hea	avy Truck	is (3+ Axi	es): ·	15		
Vei	hicle Speed:	50 mph		V	ehicle N	Aiv					
Near/Far Lar	ne Distance:	50 feet		-		cleType	Da	v Ev	ening	Night	Daily
Site Data				-					12.9%	9.6%	97.42
Bas	rier Height:	0.0 feet			Me	dium Tru	cks: 84	.8%	4.9%	10.3%	1.84
Barrier Type (0-W		0.0			F	leavy Tru	cks: 86	6.5%	2.7%	10.8%	0.74
Centerline Dis		40.0 feet									
Centerline Dist.		40.0 feet		N	loise So	urce Ele					
Barrier Distance	to Observer:	0.0 feet				Autos:					
Observer Height (Above Pad):	5.0 feet				n Trucks:			a da A div		
• •	d Elevation:	0.0 feet			Heav	y Trucks:	8.00	6 Gra	ade Adju	siment:	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent l	Distance	(in feet,)		
F	Road Grade:	0.0%				Autos:	31.36	9			
	Left View:	-90.0 degrees	5		Mediur	n Trucks:	31.24	1			
	Right View:	90.0 degrees	6		Heav	y Trucks:	31.36	9			
FHWA Noise Mode	Calculation:	S		_							
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fresnel	Bar	rier Attei	n Berr	n Atter
Autos:	70.20	-0.19	:	2.93		-1.20	-4	.83	0.00	0	0.00
Medium Trucks:	81.00	-17.43	:	2.96		-1.20	-5	.08	0.00	00	0.00
Heavy Trucks:	85.38	-21.38	1	2.93		-1.20	-5	.56	0.00	00	0.00
Unmitigated Noise											
	Leq Peak Hou			l Ev	ening	Leq N		Ldi		CN	IEL
Autos:	71		0.2		68.5		62.4		71.0		71
Medium Trucks:	65		4.2		57.8		56.3		64.7		65
Heavy Trucks:	65		4.7		55.6		56.9		65.2		65.
	73	.4 7	2.1		69.0		64.2		72.8		73
Vehicle Noise:											
	e to Noise Co	ontour (in feet)							.		10.4
Vehicle Noise:	e to Noise Co		dn:	70 di 61		65 di 13		60 di 28			dBA 13

	FHV	VA-RD-77-108	HIGHW	/AY N	NOISE PR	REDICT	ION MOD	EL			
Road Nan	rio: HY+P (204 ne: Imperial Hw nt: w/o Prospe	iy.					Name: Y umber: 1		Linda Hous	ing Eler	n
SITE	SPECIFIC IN	PUT DATA				N	IOISE M	ODE	L INPUTS	3	
Highway Data				5	Site Con	ditions	(Hard = 1	0, Sc	ft = 15)		
Average Daily	Traffic (Adt):	17,655 vehicles	6				A	utos:	15		
Peak Hour	Percentage:	9.19%			Me	dium Tr	ucks (2 A)	(les):	15		
Peak H	our Volume:	4,379 vehicles	5		He	avy Tru	cks (3+ A)	des):	15		
Ve	hicle Speed:	55 mph			Vehicle I	Aise .					
Near/Far La	ne Distance:	74 feet		1		ilx cleType		ay	Evening	Night	Daily
Site Data					veni			7.5%		9.6%	
				_		ر edium T		7.5% 4.8%		9.6%	
	rrier Height:	0.0 feet				leavy T		4.8% 6.5%		10.3%	
Barrier Type (0-V	. ,	0.0			r	leavy I	ucks. d	0.5%	2.170	10.0%	0.74%
Centerline D		50.0 feet		1	Noise So	urce El	evations	(in fe	et)		
Centerline Dist.		50.0 feet				Auto	s: 2.0	00			
Barrier Distance		0.0 feet			Mediur	n Truck	s: 4.0	00			
Observer Height	. ,	5.0 feet			Heav	y Truck	s: 8.0	06	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		-							
	ad Elevation:	0.0 feet		1	Lane Equ		Distance		eet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				n Truck					
	Right View:	90.0 degree	s		Heav	y Truck	s: 33.7	64			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.59		2.4	5	-1.20	-1	4.84	0.0	00	0.000
Medium Trucks:	82.40	-13.65		2.48	8	-1.20		5.04	0.0	00	0.000
Heavy Trucks:	86.40	-17.60		2.4	5	-1.20		5.43	0.0	00	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			.eq E	vening	Leq	Night		Ldn		NEL
Autos:			75.1		73.3		67.3		75.9		76.5
	70	.0	68.9		62.5		61.0		69.4		69.7
Medium Trucks:							61.2		69.6		69.7
Heavy Trucks:	70		69.0		60.0						
Heavy Trucks: Vehicle Noise:	70 78	.2	76.8		60.0 73.9		69.0		77.5		78.0
Heavy Trucks: Vehicle Noise:	70 78	.2	76.8	70	73.9	07	69.0				
Heavy Trucks: Vehicle Noise:	70 78	.2 ontour (in feet,	76.8	70 c	73.9 dBA		69.0 dBA	6	0 dBA	55	dBA
Heavy Trucks:	70 78	.2 ontour (in feet,	76.8	70 c 15 17	73.9 dBA 59	3	69.0	e		55 1,	78.0 dBA 590 711

Thursday, April 11, 2024

	FH\	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MO	DEL				
	o: HY+P (204								Linda Ho	using	Elen	n
	e: Imperial Hv					Job N	lumber:	15459				
Road Segmer	it: e/o Prospe	ct Av.										
	SPECIFIC IN	IPUT DATA							L INPU	rs		
Highway Data				Si	te Con	ditions	(Hard =	10, Se	oft = 15)			
Average Daily	Traffic (Adt):	45,328 vehicle	s					Autos:				
	Percentage:	9.19%					ucks (2 A	/				
	our Volume:	4,166 vehicle	s		He	avy Tru	cks (3+)	Axles).	15			
	nicle Speed:	55 mph		Ve	hicle	Mix						
Near/Far Lar	ne Distance:	74 feet			Veh	icleType	9	Day	Evening	Nig	ht	Daily
Site Data							Autos:	77.5%	12.9%	. 9	.6%	97.429
Bar	rier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10	.3%	1.849
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	5 2.7%	10	.8%	0.749
Centerline Dis	t. to Barrier:	50.0 feet		N	nise Sr	ource F	levation	s (in f	eef)			
Centerline Dist. t	o Observer:	50.0 feet				Auto		000				
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		000				
Observer Height (/	,	5.0 feet			Heav	/y Truck	(S: 8.)	006	Grade A	djustr	nent:	0.0
	d Elevation:	0.0 feet		_								
	d Elevation:	0.0 feet		Lá	ne Eq		t Distand		feet)			
F	Road Grade:	0.0%				Auto		764 645				
	Left View:	-90.0 degree				m Truck /y Truck		645 764				
	Right View:	90.0 degree	es		пеа	ly much	8. 33.	/04				
FHWA Noise Mode		-										
VehicleType	REMEL	Traffic Flow	Distar		Finite	Road	Fresh	-	Barrier A		Ben	m Atten
Autos:	71.78	3.37		2.45		-1.20		-4.84		.000		0.00
Medium Trucks:	82.40 86.40	-13.86 -17.82		2.48		-1.20		-5.04 -5.43		.000		0.00
Heavy Trucks:						-1.20		-5.43	U	.000		0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou			attenua eq Eve		l ea	Night	1	Ldn		0	VEL
Autos	200 7 Cak 1100 76		74.9	CY LVC	73.1		67.1		75	7	01	76.
Medium Trucks:	69		68.7		62.3		60.8		69			69.
Heavy Trucks:	69	.8	68.8		59.7		61.0)	69	.3		69.
Vehicle Noise:	78	.0	76.6		73.6		68.8	3	77	.3		77.
Centerline Distanc	e to Noise Co	ontour (in feet)									
				70 dE	BA	65	dBA	(60 dBA		55	dBA
			Ldn: NEL:	154 165			131 156		714 768			538 655

		-RD-77-108	HIG	HWAY	NOISE F						
Scenario: HY+P (2									Linda Hou	sing Eler	n
Road Name: Bastanc						Job I	Number	: 15459			
Road Segment: w/o Imp	erial ⊦	łwy.									
SITE SPECIFIC	INP	UT DATA							L INPUT	S	
Highway Data					Site Co	nditions	6 (Hard	= 10, So	oft = 15)		
Average Daily Traffic (Adt,	: 17,	592 vehicles	s					Autos:	15		
Peak Hour Percentage	e 9	9.19%			М	edium T	rucks (2	Axles):	15		
Peak Hour Volume	: 1,	617 vehicles	5		н	eavy Tru	ucks (3+	Axles)	15		
Vehicle Speed	l:	50 mph		F	Vehicle	Mix					
Near/Far Lane Distance	e -	50 feet				hicleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	9.6%	
Barrier Heigh	ŀ-	0.0 feet			٨	ledium :	Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm		0.0				Heavy	Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrie		40.0 feet		-	N-i *		-1 4"	(*	41		
Centerline Dist. to Observe		40.0 feet		2	Noise S	ource E			eet)		
Barrier Distance to Observe		0.0 feet				Aut		2.000			
Observer Height (Above Pad		5.0 feet				um Truc		4.000			
Pad Elevation		0.0 feet			Hea	vy Truc	ks: {	3.006	Grade Ad	justment.	0.0
Road Elevation	n:	0.0 feet			Lane Ed	quivaler	nt Dista	nce (in	feet)		
Road Grade	e:	0.0%		Γ		Aut	os: 3	1.369			
Left View	с	-90.0 degree	es		Medi	um Truc	ks: 3	1.241			
Right View	<i>r</i> :	90.0 degree	es		Hea	vy Truc	ks: 3	1.369			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	T	raffic Flow	Di	stance	Finite	e Road	Free	snel	Barrier Att	en Ber	m Atten
Autos: 70.		-0.32		2.9		-1.20		-4.83		000	0.00
Medium Trucks: 81.		-17.56		2.9		-1.20		-5.08		000	0.00
Heavy Trucks: 85.	38	-21.52		2.9	3	-1.20		-5.56	0.	000	0.00
Unmitigated Noise Levels (w	-					1		-			
VehicleType Leq Peak I		Leq Day		Leq E	vening		Night		Ldn		VEL
Autos:	71.6		70.1		68.			.3	70.		71.
Medium Trucks:	65.2		64.1		57.			.2	64.		64.
Heavy Trucks:	65.6		64.5		55.			i.8	65.		65.
Vehicle Noise:	73.3		71.9		68.	9	64	.1	72.	6	73.
Centerline Distance to Noise	Cont	tour (in feet,)			-					
					dBA		i dBA	(60 dBA		dBA
			Ldn:		i0 i5		129		279		01
			VEL				139		299		45

Thursday, April 11, 2024

Scena	io: HY+P (204	5)				Project N	lame [,] V	orba I	inda Hous	ing Elen	0
	ne: Bastanchur						mber: 1		inua rious		
	nt: e/o Imperia					000 140	noci. I	,400			
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODE		3	
Highway Data				S	Site Con	ditions (l	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	22,791 vehicles					Α	utos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Truc	ks (2 A)	(les):	15		
Peak I	our Volume:	2,094 vehicles	;		Hea	avy Truck	s (3+ A)	des):	15		
Ve	hicle Speed:	50 mph		1	/ehicle N	liv					
Near/Far La	ne Distance:	50 feet		-		cleType	Ľ)av	Evening	Night	Daily
Site Data								7.5%	•	9.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tru	cks: 8	4.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0			H	leavy Tru	cks: 8	6.5%	2.7%	10.8%	0.749
	ist. to Barrier:	40.0 feet			laisa Sa	urce Ele	vations	(in fo	of)		
Centerline Dist.	to Observer:	40.0 feet		-	10/36 30	Autos:			eij		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks:					
Observer Height	(Above Pad):	5.0 feet				y Trucks:			Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet								usument.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	31.3	69			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	31.2	41			
	Right View:	90.0 degree	s		Heav	y Trucks:	31.3	69			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite		Fresne	1 1	Barrier Atte	en Ber	m Atten
Autos:	70.20	0.80		2.93	3	-1.20	-	4.83	0.0	00	0.00
Medium Trucks:	81.00	-16.44		2.96	6	-1.20	-	5.08	0.0	00	0.00
Heavy Trucks:	85.38	-20.39		2.93	3	-1.20	-	5.56	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	1	Leq Ev	rening	Leq N	ight		Ldn		VEL
Autos:	. –		71.2		69.4		63.4		72.0		72.
Medium Trucks:			55.2		58.8		57.3		65.7		66.
Heavy Trucks:		.7	65.7		56.6		57.9		66.2		66.
Vehicle Noise:	74	.4	73.1		70.0		65.2		73.8		74.
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 d		65 di		6	0 dBA	55	dBA
			Ldn:	71	1	154	1		331	7	14
			IEL:	77		16			356		67

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PRED		IODEL			
Road Nar	rio: HY+P (204 ne: Imperial Hv ent: n/o Lemon	vý.				oject Name ob Numbe		i Linda Hous)	ing Elen	n
SITE	SPECIFIC IN	IPUT DATA				NOIS	MOD	EL INPUTS	3	
Highway Data				Si	ite Conditi	ons (Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	40,574 vehicle	s				Autos	: 15		
Peak Hou	r Percentage:	9.19%			Mediur	n Trucks (2 Axles	: 15		
Peak I	Hour Volume:	3,729 vehicle	s		Heavy	Trucks (3	+ Axles	: 15		
V	ehicle Speed:	55 mph		14	ehicle Mix					
Near/Far La	ane Distance:	74 feet		V	Vehicle	Tvne	Day	Evening	Night	Daily
Site Data					Vernole	Autos	77.5	-	9.6%	
		0.0 feet			Mediu	m Trucks			10.3%	1.84%
Barrier Type (0-V	arrier Height:	0.0 teet 0.0				vy Trucks:			10.8%	0.74%
	ist. to Barrier:	0.0 50.0 feet				·				
Centerline Dist.		50.0 feet		N	oise Sourc			feet)		
Barrier Distance		0.0 feet				Autos:	2.000			
Observer Height		5.0 feet			Medium T		4.000			
	ad Elevation:	0.0 feet			Heavy T	rucks:	8.006	Grade Adj	ustment:	0.0
	ad Elevation:	0.0 feet		Li	ane Equiva	lent Dista	nce (in	feet)		
110	Road Grade:	0.0%					3.764	,		
	Left View:	-90.0 degre	29		Medium T		3.645			
	Right View:	90.0 degree			Heavy T		3.764			
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite Roa	ad Fre	snel	Barrier Atte	en Ber	m Atten
Autos	71.78	2.89		2.45	-1	.20	-4.84	0.0	00	0.000
Medium Trucks	82.40	-14.35		2.48	-1	.20	-5.04	0.0	00	0.000
Heavy Trucks	86.40	-18.30		2.45	-1	.20	-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with									
				eq Eve		Leg Night		Ldn		VEL
VehicleType	Leg Peak Hou			.04 210	•					
Autos	Leq Peak Hou 75	.9	74.4	.04 270	72.6	6	6.6	75.2		
Autos Medium Trucks	Leq Peak Hou 75 69	.9 .3	74.4 68.2	.09 270	72.6 61.8	6	0.3	68.7		69.0
Autos. Medium Trucks. Heavy Trucks.	Leq Peak Hou 75 69 69	.9 .3 .3	74.4 68.2 68.3		72.6 61.8 59.3	6 6 6	0.3 0.5	68.7 68.9		69.0 69.0
Autos. Medium Trucks. Heavy Trucks. Vehicle Noise.	Leq Peak Hou 75 69 69 77	.9 .3 .3 .5	74.4 68.2 68.3 76.1		72.6 61.8	6 6 6	0.3	68.7		69.0 69.0
Autos. Medium Trucks. Heavy Trucks. Vehicle Noise.	Leq Peak Hou 75 69 69 77	.9 .3 .3 .5	74.4 68.2 68.3 76.1		72.6 61.8 59.3 73.2	6 6 6	0.3 0.5	68.7 68.9 76.8		69.0 69.0 77.3
Autos. Medium Trucks. Heavy Trucks.	Leq Peak Hou 75 69 69 77	.9 .3 .3 .5	74.4 68.2 68.3 76.1	70 dE	72.6 61.8 59.3 73.2 BA	6 6 6 65 dBA	0.3 0.5	68.7 68.9 76.8 60 dBA	55	75.8 69.0 69.0 77.3 dBA
Autos. Medium Trucks. Heavy Trucks. Vehicle Noise.	Leq Peak Hou 75 69 69 77	.9 .3 .5 .5 ontour (in feet	74.4 68.2 68.3 76.1		72.6 61.8 59.3 73.2 BA	6 6 6	0.3 0.5	68.7 68.9 76.8	55 1,	69.0 69.0 77.3

Thursday, April 11, 2024

Average Daily Traffic (Ad): 37,865 vehicles Autos: 15 Peak Hour Percentage: 9,19% Medium Trucks: 15 Peak Hour Volume: 3,480 vehicles Heavy Trucks (2 Axles): 15 Vehicle Speed: 55 mph Heavy Trucks (2 Axles): 15 Site Data Autos: 74 feet Vehicle Mix Day Evening Night Da Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dserver: 50.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0.3% Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dserver: 50.0 feet Molise Source Elevations (in feet) Medium Trucks: 8.06% 7.7% 10.8% 0.3% Deserver Height (Nove Pad): 5.0 feet Autos: 2.3% 4.40% 4.000 Medium Trucks: 8.066 Grade Adjustment: 0.0 Road Grade: 0.0% Itent View: 90.0 degrees Heavy Trucks: 33		FH	WA-RD-77-108	B HIGH	IWAY N	OISE P	REDICT	ION MC	DEL			
Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 37,865 vehicles Autos: 15 Peak Hour Porcentage: 9,19% Autos: 15 Peak Hour Volume: 3,480 vehicles Autos: 15 Vehicle Speed: 55 mph Medium Trucks (24,4ke): 15 Vehicle Speed: 55 mph Vehicle Speed: 55 mph Site Data Vehicle Mix Barrier Height: 0.0 feet Barrier Type (0-Wail, 1-Berm): 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.4 Barrier Distance to Observer: 50.0 feet Medium Trucks: 80.06 Grade Adjustment: 0.0 Centerline Dist. to Observer: 0.0 feet Medium Trucks: 8.006 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 8.3645 Right View: 90.0 degrees Finite Road Fresnel Barrier Atten Berm Attten WehicleType	Road Nam	ne: Imperial H	wý.								sing Ele	em
Average Daily Traffic (Adt): 37,865 vehicles Autos: 15 Peak Hour Percentage: 9,19% Medium Trucks (2 Axles): 15 Peak Hour Percentage: 9,19% Medium Trucks (2 Axles): 15 Peak Hour Vencentage: 9,19% Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Heavy Trucks (3 Axles): 15 Site Data Autos: 7.75% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0.3% Centerline Dist. to Observer: 0.0 feet Autos: 2.000 Medium Trucks: 80.66 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos: 33.764 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos: 33.764 Heavy Trucks: 33.764 WehicleType <	SITE	SPECIFIC II	NPUT DATA								S	
Deak Hour Percentage: 9.19% Medium Trucks (2 Akles): 15 Peak Hour Volume: 3.480 vehicles Heavy Trucks (3 Akles): 15 Vehicle Speed: 55 mph Heavy Trucks (3 Akles): 15 Near/Far Lane Distance: 74 feet Vehicle Type Day Evening Night Da Site Date Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97. Barrier Type (O-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Type (O-Wall, 1-Berm): 0.0 feet Autos: 2.000 Medium Trucks: 8.65% 2.7% 10.8% 0.7% 0.0% 10.0% 1.1 10.0% 1.1 Heavy Trucks: 8.006 Grade Adjustment: 0.0 10.0% 1.1 10.0% 1.1 10.0% 1.1 10.0% 1.1 10.0% 1.1 10.0% 1.1 10.0%	Highway Data				S	ite Cor	nditions	(Hard =	10, Se	oft = 15)		
Peak Hour Volume: 3,480 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 74 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Centerline Dist. to Dserver: 50.0 feet Barrier Distance to Observer: 50.0 feet Barrier Distance to Observer: 50.0 feet Barrier Dist. to Barrier: 50.0 feet Barrier Distance to Observer: 50.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 83.645 Heavy Trucks: 83.645 </td <td>• •</td> <td>. ,</td> <td></td> <td>s</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	• •	. ,		s								
Vehicle Speed: Near/Far Lane Distance: 55 mph 74 feet Vehicle Mix Vehicle Type Day Evening Night Day Site Data Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Dist to Distrever: 50.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0.1 Centerline Dist to Disterver: 0.0 feet Medium Trucks: 4.000 Medium Trucks: 4.000 Pad Elevation: 0.0 feet Autos: 33.764 Medium Trucks: 33.645 FHWA Noise Model Calculations Vehicle Type RetMEL Traffic Flow Distance Friesnel Barrier Atten Berm Att Autos: 71.78 2.59 2.45 -1.20 -6.43 0.000 0 Medium Trucks: 86.40 -18.60 2.45 -1.20<		•							/			
Near/Far Lane Distance: 74 feet Venicle MiX Levening Night Day Site Data Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.1 Barrier Distance to Observer: 0.0 feet Noise Source Elevations (in feet) Autos: 2.000 Road Elevation: 0.0 feet Autos: 3.064 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: 90.0 degrees Heavy Trucks: 33.764 Heavy Trucks: 33.764 FHWA Noise Model Calculations Finite Road Fresnel Barrier Atten Berm Att VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos:			- ,	s		H	eavy Iru	CKS (3+.	Axies).	15		
Site Data Vehicle Type Day Elevating Night D.3 Site Data Autos: 7.75% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Matos: 7.75% 12.9% 9.6% 97.4 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.4 Barrier Distance to Observer: 50.0 feet Moise Source Elevations (in feet) Noise Source (in feet) Noise Model Calculations Medium Trucks: 33.764 Noise Model Calculations Neavy Trucks: 33.764 Noise Model Calculations Noise Model Calculations Noise Levals (without Topo and barrier attenuation) Noise Model Calculations Noise Model Calculations Noise Levals (without Topo and barrier attenuation) Noise Model Calculations Noise Levals (without Topo and barrier attenuation) Noise Model Calculations Noise Model Calculations N					v	ehicle	Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Barrier Distance to Observer: 50.0 feet Barrier Distance to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 82.40 Autos: 71.78 2.59 2.45 -1.20 -6.44 Medium Trucks: 82.40 -14.65 2.48 -12.0 -6.44 0.000 0 Medium Trucks: 86.40 -16.60 2.45 -12.0 -6.44 0.000 0 Medium Trucks: 69.0 66.3 74.9	Near/Far La	ne Distance:	74 feet			Vel	nicleType	e	Day	Evening	Night	Daily
Barrier Tregerit Ut refer Heavy Trucks: 86.5% 2.7% 10.8% 0.1 Centerline Dist. to Doserver: 50.0 feet Noise Source Elevations (in feet) Noise Source Ele	Site Data							Autos:	77.5%	6 12.9%	9.69	6 97.42
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 0.1 Centerline Dist. to Desriver: 50.0 feet Autos: 2.000 Autos: 3.064 Autos: 3.064 Autos: 3.064 Autos: 3.064 Autos: 3.000 00 Autos: 3.000 0 0 Autos: 3.000 0 0 Autos: 3.000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td>Ba</td> <td>rrier Heiaht:</td> <td>0.0 feet</td> <td></td> <td></td> <td>N</td> <td>ledium T</td> <td>rucks:</td> <td>84.8%</td> <td>6 4.9%</td> <td>10.3</td> <td>6 1.84</td>	Ba	rrier Heiaht:	0.0 feet			N	ledium T	rucks:	84.8%	6 4.9%	10.3	6 1.84
Centerline Dist. to Observer: 50.0 feet Noise Source Levations (in feet) Barrier Distance to Observer: 0.0 feet Autos: 2.000 Deserver Height (Above Pad): 5.0 feet Medium Trucks: 4.000 Pad Elevation: 0.0 feet Medium Trucks: 8.006 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 33.645 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 71.78 2.59 2.45 -120 -4.84 0.000 0 Heavy Trucks: 82.40 -14.65 2.48 -120 -5.43 0.000 0 Heavy Trucks: 86.40 -18.60 2.45 -120 -5.43 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) User Source 69.0 65.0 65.4 60.0 68.4 0.000 0 Heavy Trucks: 69.0 68.0 59.0 <	Barrier Type (0-W	/all, 1-Berm):					Heavy T	rucks:	86.5%	6 2.7%	10.89	% 0.74
Barrier Distance to Observer: 0.0 feet Autos: 2.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 8.006 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: 90.0 degrees Autos: 33.764 FHWA Noise Model Calculations VenicleType Rem Ret Traffic Flow Distance Friesnel Barrier Atten Berm Att Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0 Medium Trucks: 86.40 -18.60 2.45 -1.20 -5.43 0.000 0 Medium Trucks: 86.40 -18.60 2.45 -1.20 -5.43 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Night Ldn CNEL Autos: 75.6 77.9 61.5 60.0 68.4 0 Heavy Trucks: 69.0<					N	oise S	ource E	levation	s (in f	eet)		
Observer Height (Above Pad): 5.0 feet Medium Trucks: 4.000 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Left View: -90.0 degrees Meavy Trucks: 33.764 FHWA Noise Model Calculations VenicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att VenicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Medium Trucks: 82.40 -14.65 2.45 -120 -5.44 0.000 0.0 Medium Trucks: 82.40 -18.60 2.45 -120 -5.43 0.000 0.0 Medium Trucks: 86.40 -18.60 2.45 -120 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks:<							Auto	s: 2.	000			
Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Constraints Lane Equivalent Distance (in feet) Lane Equivalent Distance (in fee						Mediu	ım Truck	(s: 4.	000			
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 33.764 Left View: 90.0 degrees Medium Trucks: 33.845 FHWA Noise Model Calculations Enter View: 90.0 degrees Finite Road Fresnel Barrier Atten Berm Att VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0 Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.43 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 75.5 VehicleType Roy of 69.0 68.0 76.5 75.5 Cente	• •	· ,				Hea	vy Truck	(s: 8.	006	Grade Ad	ljustmer	nt: 0.0
Road Grade: 0.0% Autos: 33.764 Left View: -90.0 degrees Medium Trucks: 33.645 Heavy Trucks: 33.764 Medium Trucks: 33.764 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Medium Trucks: 82.40 -14.65 2.45 -120 -4.84 0.000 0 Heavy Trucks: 82.40 -18.60 2.45 -120 -5.04 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) UenicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 68.0 59.0 60.2 68.6 10 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 76.5					-		·					
Left View. -90.0 degrees Right View. Medium Trucks: 33.645 Heavy Trucks: 33.645 33.645 FHWA Noise Model Calculations Medium Trucks: 33.645 Heavy Trucks: Medium Trucks: 33.645 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0 Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.04 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) Ue (Leg Peak Hour) Leg Day Leg Pay L Leg Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 68.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0 66.0					L	ane Eq				feet)		
Right View: 90.0 degrees Heavy Trucks: 33.764 FHWA Noise Model Calculations Distance Finite Road Fresnel Barrier Atten Bern Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Mutos: 71.78 2.59 2.45 -1.20 -4.64 0.000 0 Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.43 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle/Pype Leg Peak Hour Leg Day Leg Right Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 1 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 1 Heavy Trucks: 69.0 67.9 61.5 60.0 68.4 1 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 1 Vehicle Noise: 77.2 75.8												
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0. Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.04 0.000 0. Heavy Trucks: 86.0 -18.60 2.45 -1.20 -5.43 0.000 0. Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Medium Trucks: 69.0 67.9 61.5 60.0 68.4 0. Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 0. Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364												
Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0 Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.04 0.000 0 Heavy Trucks: 82.40 -18.60 2.45 -1.20 -5.04 0.000 0 Umitigate Moise Levels (without Top and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 0 Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 0 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet)	FHWA Noise Mod	el Calculation	IS									
Autos: 71.78 2.59 2.45 -1.20 -4.84 0.000 0. Medium Trucks: 82.40 -14.65 2.48 -1.20 -5.04 0.000 0. Heavy Trucks: 86.40 -18.60 2.45 -1.20 -5.04 0.000 0. Unnitigated Noise Levels (without Topo and barrier attenuation) UehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 74.9 76.5 72.9 75.0 76.5 74.9 74.9 74.9 74.9 74.9 75.0 76.5 72.9 76.5 <td< td=""><td>VehicleType</td><td>REMEL</td><td>Traffic Flow</td><td>Dis</td><td>stance</td><td>Finite</td><td>Road</td><td>Fresi</td><td>nel</td><td>Barrier Att</td><td>en Be</td><td>erm Atter</td></td<>	VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atter
Heavy Trucks: 86.40 -18.60 2.45 -1.20 -5.43 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Evening Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Mutos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 0 Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 0 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 0 Centerline Distance to Noise Contour (in feet) Image: Contour (in feet) Ima	Autos:	71.78	2.59)	2.45		-1.20		-4.84	0.	000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 68.6 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	Medium Trucks:	82.40	-14.65	;	2.48		-1.20		-5.04	0.	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 66.3 Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 60.2 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 60.0 Centerline Distance to Noise Contour (in feet) 70.dBA 65.dBA 60.dBA 55.dBA Ldn: 136 294 633 1,364	Heavy Trucks:	86.40	-18.60)	2.45		-1.20		-5.43	0.	000	0.00
Autos: 75.6 74.1 72.3 66.3 74.9 Medium Trucks: 69.0 67.9 61.5 60.0 68.4 Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 0 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 7 Centerline Distance to Noise Contour (in feet)	Unmitigated Noise	e Levels (with	out Topo and	barri	er attenu	ation)						
Medium Trucks: 69.0 67.9 61.5 60.0 68.4 60.7 Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 60.7 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Ev	ening	Leq	Night		Ldn	(CNEL
Heavy Trucks: 69.0 68.0 59.0 60.2 68.6 Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet) 170 dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	Autos:	75	5.6	74.1		72.3	3	66.	3	74.	9	75
Vehicle Noise: 77.2 75.8 72.9 68.0 76.5 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	Medium Trucks:	69	9.0	67.9		61.5	5	60.	C	68.	4	68
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	Heavy Trucks:	69	9.0	68.0		59.0)	60.	2	68.	6	68
TO dBA 65 dBA 60 dBA 55 dBA Ldn: 136 294 633 1,364	Vehicle Noise:	77	7.2	75.8		72.9)	68.	C	76.	5	77
Ldn: 136 294 633 1,364	Centerline Distand	ce to Noise C	ontour (in fee	t)	70 4	04		-10.4		0 -10 4		C -10.4
				I da:					1 '		-	
CIVEL: 147 310 681 1,468			~									
			L L	NEL:	14.	r	3	010		180		1,408

F	-HM	A-RD-77-108	HIGI	HWAY N	OISE PR	REDICT	TION MC	DEL			
Scenario: HY+P (2	2045)					Projec	t Name:	Yorba	Linda Hou	sing Elen	n
Road Name: Lakeview	w Av.					Job I	Number:	15459			
Road Segment: n/o Buer	na Vi	sta Av.									
SITE SPECIFIC	INP	UT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt,): 18	3,106 vehicles	5					Autos:	15		
Peak Hour Percentage	e.:	9.19%			Med	dium Ti	rucks (2	Axles):	15		
Peak Hour Volume	e: 1	,664 vehicles	5		Hea	avy Tru	ıcks (3+	Axles):	15		
Vehicle Speed	1:	45 mph			/ehicle N	liv					
Near/Far Lane Distance	e:	52 feet		-		cleTyp	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	9.6%	
Barrier Heigh	* -	0.0 feet			Ме	dium 1	rucks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wall, 1-Berm		0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Barrie		50.0 feet		L.							
Centerline Dist. to Observe		50.0 feet		^	loise So				eet)		
Barrier Distance to Observe		0.0 feet				Auto		.000			
Observer Height (Above Pad		5.0 feet			Mediur			.000			
Pad Elevation		0.0 feet			Heav	y Trucł	(s: 8	.006	Grade Ad	justment.	0.0
Road Elevation		0.0 feet		L	ane Equ	iivalen	t Distan	ce (in	feet)		
Road Grade	e:	0.0%				Auto	os: 42	.814			
Left View	v:	-90.0 degree	es		Mediun	n Trucl	ks: 42	.720			
Right View	V:	90.0 degree			Heav	y Trucł	(s: 42	.814			
FHWA Noise Model Calculati	ions										
VehicleType REMEL		Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 68.	.46	0.26		0.91	I	-1.20		-4.84	0.	000	0.00
Medium Trucks: 79.	.45	-16.98		0.92	2	-1.20		-5.04	0.	000	0.00
Heavy Trucks: 84.	25	-20.93		0.91	I	-1.20		-5.43	0.	000	0.00
Unmitigated Noise Levels (w	ithou	ut Topo and	barri	er atten	uation)						
VehicleType Leq Peak I				Leq Ev		Leq	Night		Ldn		VEL
Autos:	68.4		66.9		65.1		59.		67.		68.
Medium Trucks:	62.2		61.1		54.7		53.		61.		61.
Heavy Trucks:	63.0		62.0		52.9		54.		62.		62.
Vehicle Noise:	70.3		68.9		65.7		61.	1	69.	6	70.
Centerline Distance to Noise	Con	tour (in feet,)								
				70 a			dBA	6	60 dBA		dBA
			Ldn:	4			01		218		70
			VEL	50			09		234		05

Thursday, April 11, 2024

0		- \				Designed		V- dr -	Linda I Iau	unin n El		-
	<i>io:</i> HY+P (204) ne: Lakeview A					Job Nu			Linda Hou	Ising EI	em	
	nt: s/o Buena \					JOD 144	mper.	15459				
				1						_		
SITE Highway Data	SPECIFIC IN	PUT DATA			Site Con				EL INPUT oft = 15)	5		
Average Daily	Traffic (Adt):	14,960 vehicles				,		Autos:	15			
• •	Percentage:	9.19%			Med	dium Tru	cks (2	Axles).	15			
	our Volume:	1,375 vehicles			Hea	avy Truci	ks (3+	Axles).	15			
Ve	hicle Speed:	45 mph		Ŀ,	Vehicle N	Aise	-	-				
Near/Far La	ne Distance:	52 feet		H		leTvpe		Dav	Evening	Night	t Di	ailv
Site Data					10/1		utos:	77.5%	•	•		42
		0.0 feet			Me	dium Tri		84.8%				.84
ва Barrier Type (0-И	rrier Height:	0.0			F	leavy Tru	icks:	86.5%	6 2.7%	10.8	% 0	.749
	ist. to Barrier:	50.0 feet		-								
Centerline Dist.		50.0 feet		Ľ	Noise So				eet)			
Barrier Distance	to Observer:	0.0 feet				Autos n Trucks		.000				
Observer Height	(Above Pad):	5.0 feet				n Trucks y Trucks		.000	Grade Ad	diuctmo	nt: 0.0	
P	ad Elevation:	0.0 feet			neav	y mucks	. 0	.000	Grade At	ijusune	<i>m.</i> 0.0	'
Ro	ad Elevation:	0.0 feet		1	Lane Equ	ivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	: 42	.814				
	Left View:	-90.0 degree	s			n Trucks		.720				
	Right View:	90.0 degree	s		Heav	y Trucks	: 42	.814				
FHWA Noise Mod	el Calculation	S										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier At	ten B	lerm At	tten
Autos:	68.46	-0.57		0.9	1	-1.20		-4.84	0.	.000	C	0.00
Medium Trucks:	79.45	-17.81		0.9	2	-1.20		-5.04	0.	.000	C	0.00
Heavy Trucks:	84.25	-21.76		0.9	1	-1.20		-5.43	0.	.000	C	0.00
Unmitigated Nois	e Levels (with	out Topo and L	arrier	atten	uation)					-		_
VehicleType	Leq Peak Hou	r Leq Day	1	Leq E	vening	Leq N	light		Ldn		CNEL	
Autos:			6.1		64.3		58.		66.			67.
Medium Trucks:			60.2		53.9		52.		60.			61.
Heavy Trucks:			61.1		52.1		53.		61.			61.
Vehicle Noise:	69	.4 6	68.1		64.9		60.	2	68	.8		69
Centerline Distan	ce to Noise Co	ntour (in feet)										
				70 0	dBA	65 d	BA		50 dBA	1	55 dBA	í –
			.dn: IEL:	4		89 96	-		192 206		414 444	

	FHV	VA-RD-77-108	HIGHV	VAY N	IOISE PF	REDICT	ION MO	DEL			
Scenario: HY+ Road Name: Bue Road Segment: w/o	na Vist	a Av.					t Name: ` lumber:		Linda Hous	sing Eler	n
SITE SPECI	FIC IN	IPUT DATA				1	IOISE I	IODE	L INPUT	5	
Highway Data				S	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic	(Adt):	9,080 vehicles	6					Autos:	15		
Peak Hour Percen	tage:	9.19%			Me	dium Tr	ucks (2 /	(xles	15		
Peak Hour Vol	ume:	834 vehicles	6		He	avy Tru	cks (3+ /	(xles	15		
Vehicle S	beed:	45 mph			/ehicle N	Niv					
Near/Far Lane Dist	ance:	36 feet		-		cleType		Dav	Evening	Night	Daily
Site Data				-			Autos:	77.5%	•	9.6%	
Barrier He	iaht [.]	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-B		0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Ba		40.0 feet							41		
Centerline Dist. to Obs	erver:	40.0 feet		~	Voise So	Auto		5 (IN 1 000	eet)		
Barrier Distance to Obse	erver:	0.0 feet				Auto n Truck		000			
Observer Height (Above	Pad):	5.0 feet				y Truck		000 006	Grade Ad	iuctmont	
Pad Elev	ation:	0.0 feet			Heav	у писк	.s. o.	000	Grade Auj	usument	. 0.0
Road Elev	ation:	0.0 feet		L	ane Equ	uivalen	t Distan	ce (in	feet)		
Road G	rade:	0.0%				Auto		847			
Left	View:	-90.0 degree				n Truck		735			
Right	View:	90.0 degree	s		Heav	y Truck	s: 35.	847			
FHWA Noise Model Calc	lation	s		I							
VehicleType REN	1EL	Traffic Flow	Dista	nce	Finite		Fresh	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.74		2.06	-	-1.20		-4.83		000	0.00
Medium Trucks:	79.45	-19.98		2.08	3	-1.20		-5.08	0.0	000	0.00
Heavy Trucks:	84.25	-23.93		2.06	6	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Level			barrier	attenu	uation)						
, ,	eak Hou			Leq Ev	•	Leq	Night		Ldn		NEL
Autos:	66		65.1		63.3		57.2	-	65.9		66.
Medium Trucks:	60		59.2		52.9		51.3		59.8		60.
Heavy Trucks:	61		60.1		51.1		52.3		60.7		60.
Vehicle Noise:	68		67.0		63.9		59.2	2	67.8	3	68.
Centerline Distance to N	oise Co	ontour (in feet)									
			L	70 d			dBA		60 dBA		dBA
			Ldn:	28	в	6	51		132	2	84
		~	VEL:	30	-		36		141		04

Thursday, April 11, 2024

	FH\	WA-RD-77-108	HIGH	NAY NO	DISE P	REDICT	ION MO	DEL			
	o: HY+P (204 e: Bastanchur nt: w/o Plumos	ry Rd.					Name: lumber:		Linda Hou	sing Ele	m
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	17,510 vehicle	s					Autos:	15		
Peak Hour	Percentage:	9.19%					ucks (2 /	,			
Peak H	our Volume:	1,609 vehicle	S		He	eavy Tru	cks (3+)	Axles):	15		
	nicle Speed:	50 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	50 feet			Veł	nicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42
Bar	rier Height:	0.0 feet			Μ	ledium T	rucks:	84.8%	4.9%	10.3%	6 1.84
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.74
Centerline Dis		40.0 feet		N	oise S	ource El	levation	s (in fe	eet)		
Centerline Dist. t		40.0 feet				Auto	s: 2.	000			
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 4.	000			
Observer Height ()	,	5.0 feet			Hea	vy Truck	s: 8.	006	Grade Ad	justmen	t: 0.0
	d Elevation: d Elevation:	0.0 feet			nno Fo	u i ve le n	t Distan	aa (in j	fa a tì		
	a Elevation: Road Grade:	0.0 feet 0.0%		-	ше сч	Auto		369	eel)		
r	Left View:	-90.0 degree			Mediu	m Truck	••••••	241			
	Right View:	90.0 degree				vy Truck		369			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atter
Autos:	70.20	-0.34		2.93		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	81.00			2.96		-1.20		-5.08		000	0.00
Heavy Trucks:	85.38			2.93		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise					/			1			
	Leq Peak Hou			Leq Eve		<u> </u>	Night		Ldn		NEL
Autos: Medium Trucks:	71 65		70.1 64.0		68.3 57.7		62.2 56.1	-	70.9 64.6	-	71 64
	65		64.0 64.5		57.7 55.5		56.7			-	65
Heavy Trucks: Vehicle Noise:	73		64.5 71.9		55.5 68.9		56. 64.1		65. 72.0		65 73
Centerline Distanc	e to Noise Co	ontour (in feet)								
		(70 dE	BA	65	dBA	6	0 dBA	55	5 dBA
			Ldn:	60		1	29		278		599
			NEL:	64			39		299		643

	FHW	A-RD-77-108 H	ligh	WAY N	OISE PF	REDICTIO	ON MOI	DEL			
	o: HY+P (2045								Linda Hou	sing Elen	n
Road Nam	e: Lakeview Av	Ι.				Job Nu	mber: 1	5459			
Road Segmer	nt: s/o Bastanc	hury Rd.									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				s	ite Con	ditions (l	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	0,607 vehicles						Autos:	15		
Peak Hour	Percentage:	9.19%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	our Volume:	975 vehicles			He	avy Truck	(S (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ehicle N	<i>liv</i>					
Near/Far La	ne Distance:	36 feet		F		cleTvpe		Dav	Evening	Night	Dailv
Site Data				-	10/1			77.5%		9.6%	
Poi	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	•	0.0			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		40.0 feet									
Centerline Dist.		40.0 feet		N	oise So	urce Ele			et)		
Barrier Distance		0.0 feet				Autos:		000			
Observer Height (5.0 feet				n Trucks.		000			
• •	ad Elevation:	0.0 feet			Heav	y Trucks:	8.0	006	Grade Ad	justment:	0.0
	ad Elevation:	0.0 feet		L	ane Equ	uivalent l	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	35.8	347			
	Left View:	-90.0 degrees			Mediur	n Trucks	35.7	735			
	Right View:	90.0 degrees	;		Heav	y Trucks:	35.8	847			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-2.06		2.06		-1.20		-4.83	0.0	000	0.00
Medium Trucks:	79.45	-19.30		2.08		-1.20		-5.08	0.0	000	0.00
Heavy Trucks:	84.25	-23.26		2.06		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise			arrie								
	Leq Peak Hou			Leq Ev		Leq N	•		Ldn		VEL
Autos:	67.		5.7		64.0		57.9		66.		67.
Medium Trucks:	61.		9.9		53.5		52.0		60.4		60.
Heavy Trucks:	61.		0.8		51.8		53.0		61.4		61.
Vehicle Noise:	69.		7.7		64.6		59.9		68.4	4	68.
Centerline Distanc	e to Noise Co	ntour (in feet)	- 1	70 4		05 4			0 - 10 4		
			L	70 d		65 d		6	0 dBA		dBA
			dn:	31		68			146		15
		CN		34		73			157		38

Thursday, April 11, 2024

Scenar	io: HY+P (204	5)				Project I	lame:	orba	Linda Hous	sing Elen	n
	ne: Bastanchur					Job Nu					
	nt: w/o Lakevie					000 /10		0.00			
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUTS	3	
Highway Data				5	Site Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,873 vehicles						Autos:	15		
Peak Hour	Percentage:	9.19%			Med	dium Tru	cks (2 A	xles):	15		
Peak F	lour Volume:	1,826 vehicles			Hea	avy Truck	(S (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		1	Vehicle N	Aiv					
Near/Far La	ne Distance:	50 feet		F		cleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	•	9.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3%	1.849
ва Barrier Type (0-И		0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	40.0 feet			Voise So	uraa Ela	votion	(in fe	ati		
Centerline Dist.	to Observer:	40.0 feet		'	voise 30	Autos		000	el)		
Barrier Distance	to Observer:	0.0 feet			Madiur	n Trucks		000			
Observer Height	(Above Pad):	5.0 feet				y Trucks.		00	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet								aounonu	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distanc	e (in f	feet)		
	Road Grade:	0.0%				Autos.					
	Left View:	-90.0 degrees				n Trucks.					
	Right View:	90.0 degrees	5		Heav	y Trucks.	31.3	369			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite		Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	0.21		2.93		-1.20		4.83	0.0		0.00
Medium Trucks:				2.96		-1.20		-5.08	0.0		0.00
Heavy Trucks:	85.38	-20.99		2.93	3	-1.20		-5.56	0.0	00	0.00
Unmitigated Noise	e Levels (with	out Topo and b	arrier a	tten	uation)						
VehicleType	Leq Peak Hou			eq E∖	/ening	Leq N			Ldn		VEL
Autos:	72		0.6		68.8		62.8		71.4		72.
Medium Trucks:			4.6		58.2		56.7		65.1		65.
Heavy Trucks:			5.1		56.0		57.3		65.6		65.
Vehicle Noise:	73	.8 7	2.5		69.4		64.6		73.2		73.
Centerline Distan	ce to Noise Co	ontour (in feet)					_		-		
				70 c		65 d		6	0 dBA		dBA
		L	dn:	6		14	-		302		51 00
		CN		70		15			325		

	FH\	NA-RD-77-108 H	IGHWAY	NOISE PR	REDICTI	ON MODEL			
Road Nan	io: HY+P (204 ne: Bastanchur nt: e/o Lakevie	y Rd.				Name: Yorb umber: 1545		sing Elen	n
SITE	SPECIFIC IN	IPUT DATA			N	OISE MOD	EL INPUT	s	
Highway Data				Site Con	ditions (Hard = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	21,251 vehicles				Auto	s: 15		
Peak Hour	Percentage:	9.19%		Me	dium Tru	icks (2 Axles): 15		
Peak F	our Volume:	1,953 vehicles		He	avy Truc	ks (3+ Axles): 15		
Ve	hicle Speed:	50 mph		Vehicle I	live				
Near/Far La	ne Distance:	50 feet			cleType	Day	Evening	Night	Daily
Site Data				ven		utos: 77.5	-	9.6%	
				Me	dium Tr			10.3%	
	rrier Height:	0.0 feet 0.0			leavy Tr			10.8%	
Barrier Type (0-V Centerline Di	. ,	0.0 40.0 feet						10.070	0.717
Centerline Dist.		40.0 feet		Noise So	urce Ele	evations (in	feet)		
Barrier Distance		0.0 feet			Autos				
Observer Height		5.0 feet		Mediur	n Trucks	4.000			
	ad Elevation:	0.0 feet		Heav	y Trucks	8.006	Grade Ad	justment:	: 0.0
	ad Elevation: ad Elevation:	0.0 feet		Lane Fo	ivalent	Distance (ir	feet)		
	Road Grade:	0.0%		Lane Lq	Autos		1000		
	Left View:	-90.0 degrees		Mediu	n Trucks				
	Right View:	90.0 degrees			y Trucks				
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.50	-	.93	-1.20	-4.8		000	0.00
Medium Trucks:	81.00			.96	-1.20	-5.08		000	0.00
Heavy Trucks:	85.38	-20.70	2	.93	-1.20	-5.5	5 0.0	000	0.00
Unmitigated Nois								-	
VehicleType	Leq Peak Hou			Evening	Leq I		Ldn		NEL
Autos:	72			69.1		63.1	71.3		72.3
Medium Trucks:	66			58.5		57.0	65.4		65.
Heavy Trucks:	66			56.3		57.6	65.9		66.
Vehicle Noise:				69.7		64.9	73.	5	73.9
Centerline Distan	ce to Noise Co	ontour (in feet)	7/) dBA	65 c	ID A	60 dBA	55	dBA
		La		68	14		316		00A 81
		CNE		73	14		340	-	32
		CIVE	- - -	10	10		040	'	02

Thursday, April 11, 2024

	FH\	VA-RD-77-108	HIGHWA	AY NOI	SE PF	REDICT	ION MO	DEL			
Scenario	o: HY+P (204	5)				Project	Name:	Yorba	Linda Hou	sing Ele	m
Road Name	e: Lakeview A	v.				Job N	lumber:	15459			
Road Segmen	<i>it:</i> s/o Yorba L	inda Bl.									
	SPECIFIC IN	IPUT DATA								S	
Highway Data				Site	e Con	aitions	(Hard =		,		
Average Daily 1	, ,		s					Autos:			
	Percentage:	9.19%					ucks (2 A	/			
	our Volume:	1,527 vehicle	s		He	avy Tru	cks (3+)	Axles):	15		
	nicle Speed:	45 mph		Vel	hicle I	<i>lix</i>					
Near/Far Lar	ne Distance:	52 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.42
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	6 1.84
Barrier Type (0-Wa		0.0			ŀ	łeavy T	rucks:	86.5%	2.7%	10.8%	6 0.74
Centerline Dis	t. to Barrier:	50.0 feet		No	ise So	urce E	levation	s (in f	eet)		
Centerline Dist. t	o Observer:	50.0 feet				Auto	s: 2	000	,		
Barrier Distance t		0.0 feet			Mediur	n Truck		000			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8	006	Grade Ad	liustmen	t: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		Lai	1e Equ		t Distand		feet)		
F	Road Grade:	0.0%				Auto		814			
	Left View:	-90.0 degree				n Truck		720			
	Right View:	90.0 degre	es		Heav	y Truck	s: 42.	814			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresn	-	Barrier Att		erm Atter
Autos:	68.46	-0.11		0.91		-1.20		-4.84		000	0.00
Medium Trucks:	79.45	-17.35		0.92		-1.20		-5.04		000	0.00
Heavy Trucks:	84.25	-21.31		0.91		-1.20		-5.43	0.	000	0.00
Unmitigated Noise					<u> </u>						
VehicleType Autos:	Leq Peak Hou			eq Ever		Leq	Night		Ldn		NEL
Autos: Medium Trucks:	68 61		66.5 60.7		64.8 54.3		58.7 52.8		67. 61.	-	67 61
Heavy Trucks:	62		61.6		52.6		53.8	-	62.	-	62
Vehicle Noise:	62		68.5		52.6 65.4		53.8		62	-	69
	00						2.5.1		50.		00
Contorlino Distanc	a to Noisa Co	ntour (in feet									
Centerline Distanc	e to Noise Co	ontour (in feet	,	70 dB/	4	65	dBA	6	60 dBA	5	5 dBA
Centerline Distanc	e to Noise Co	ontour (in feet	Ldn:	70 dB/ 44	4		dBA 96	e	60 dBA 206		5 dBA 444

	FHW	/A-RD-77-108	HIG	HWAY NO	DISE PRI	EDICT	ION MO	DDEL			
Scenario: HY+P	(2045	i)			1	Project	Name:	Yorba	Linda Hou:	sing Elen	n
Road Name: Yorba	ı Linda	BI.				Job N	umber:	15459			
Road Segment: w/o L	akevie	w Av.									
SITE SPECIF	IC IN	PUT DATA							L INPUT	S	
Highway Data				Si	ite Cond	itions	(Hard =	= 10, Sc	oft = 15)		
Average Daily Traffic (A	dt): 2	4,856 vehicle	s					Autos:	15		
Peak Hour Percenta	ige:	9.19%			Med	ium Tru	ucks (2	Axles):	15		
Peak Hour Volu	me:	2,284 vehicle	s		Hea	vy Truc	cks (3+	Axles):	15		
Vehicle Spe	ed:	50 mph		V	ehicle M	iv					
Near/Far Lane Distar	nce:	74 feet		-		leType		Dav	Evening	Night	Dailv
Site Data					10/10		Autos:	77.5%			97.429
	uh és	0.0 feet			Med	dium Ti		84.8%		10.3%	
Barrier Heig	-	0.0 feet 0.0					ucks:			10.8%	
Barrier Type (0-Wall, 1-Be Centerline Dist, to Bar		0.0 50.0 feet								10.070	0.7 1
Centerline Dist. to Obser		50.0 feet		N	oise Sou	rce El	evatior	ns (in f	eet)		
Barrier Distance to Obser		0.0 feet				Auto	s: 2	.000			
Observer Height (Above P		5.0 feet			Medium	Truck	s: 4	.000			
Pad Eleval		0.0 feet			Heavy	Truck	s: 8	.006	Grade Ad	justment.	0.0
Road Eleval		0.0 feet		1.	ane Equi	vəlont	Dietar	nco (in	foot)		
Road Gra		0.0%		-	nie Lyu	Auto		.764			
Left V		-90.0 degree			Medium			.645			
Right Vi		90.0 degree			Heavy			.764			
FHWA Noise Model Calcul	ations	;									
VehicleType REME	EL	Traffic Flow	Di	stance	Finite F	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.18		2.45		-1.20		-4.84	0.0	000	0.00
Medium Trucks:	31.00	-16.06		2.48		-1.20		-5.04	0.0	000	0.00
Heavy Trucks:	35.38	-20.02		2.45		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels			-								
VehicleType Leq Pea				Leq Eve	•	Leq	Night		Ldn		VEL
Autos:	72.	-	71.1		69.3		63.		71.9	-	72.
Medium Trucks:	66.		65.1		58.7		57.		65.6		65.
Heavy Trucks:	66.	-	65.6		56.5		57.	-	66.1		66.
Vehicle Noise:	74.	-	72.9		69.9		65.	1	73.7	7	74.
Centerline Distance to Noi	se Co	ntour (in feet)								
			1	70 dE			dBA	(60 dBA		dBA
			Ldn: NEL:	88 94			89 03		408 438		78 43

Thursday, April 11, 2024	Thursday, April 11, 2	024
--------------------------	-----------------------	-----

	io: HY+P (204	5)				Project N	ame '	Yorha	Linda Hou	sing Fler	n
	e: Gypsum C		Project Name: Yorba Linda Housing Elem Job Number: 15459								
	nt: s/o La Paln										
	SPECIFIC IN		NOISE MODEL INPUTS								
Highway Data				1	Site Cond	ditions (H	lard =	10, Sc	,		
• •	, ,	13,717 vehicles						Autos:			
	Percentage:	9.19%				lium Truc					
	our Volume:	1,261 vehicles			Hea	avy Truck	s (3+ /	(xles)	15		
	hicle Speed:	45 mph		1	Vehicle N	lix					
Near/Far La	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.429
Ba	rrier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			н	leavy Tru	cks:	86.5%	2.7%	10.8%	0.749
Centerline Di		40.0 feet		1	Noise So	urce Elev	ation	s (in fe	eet)		
Centerline Dist.	to Observer:	40.0 feet		F		Autos:		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	4	000			
Observer Height (,	5.0 feet			Heav	v Trucks:	8.	006	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		4	Lane Equ				reet)		
	Road Grade:	0.0%				Autos:		847			
	Left View: Right View:	-90.0 degree				n Trucks: y Trucks:		735 847			
	5	90.0 degree	s		neav	y mucks.	30.	047			
FHWA Noise Mod		s Traffic Flow	Distan		Finite	Denet	Fresh	-1	Damian Att		
VehicleType Autos:	REMEL 68.46		Distan	2.0	Finite	-1.20		ei -4.83	Barrier Att	on Ber	m Atten
Medium Trucks:	79.45			2.0	-	-1.20		-4.03	•.	000	0.00
	84.25			2.0	-	-1.20		-5.56	•.	000	0.00
Heavy Trucks					-	1.20		0.00	0.		0.00
Heavy Trucks:	Lougla (with	out Tono and k	orrior o						Ldn	C	NEL
Unmitigated Noise						Lea Ni	aht				
	Leq Peak Hou	ur Leq Day			vening 65.1	Leq Ni	ght 59.0		67.	6	68.
Unmitigated Noise VehicleType	Leq Peak Hot 68	ur Leq Day 8.4 6	Le		vening	Leq Ni	· ·			-	
Unmitigated Noise VehicleType Autos:	Leq Peak Hot 68 62	ur Leq Day 3.4 6 2.2 6	Le 6.8		vening 65.1	Leq Ni	59.0		67.	6	61.
Unmitigated Noise VehicleType Autos: Medium Trucks:	Leq Peak Hot 68 62 63	ur Leq Day 8.4 6 8.2 6 8.0 6	Le 6.8 61.0		vening 65.1 54.6	Leq Ni	59.0 53.1		67. 61.	- 6 5	61. 62.
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hot 68 62 63 70	Leq Day 3.4 6 2.2 6 3.0 6 0.2 6	Le 66.8 61.0 61.9		vening 65.1 54.6 52.9	Leq Ni	59.0 53.1 54.1		67. 61. 62.	- 6 5	61. 62.
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hot 68 62 63 70	Leq Day 3.4 6 2.2 6 3.0 6 0.2 6	Le 66.8 61.0 61.9		vening 65.1 54.6 52.9 65.7	Leq Ni 65 dE	59.0 53.1 54.1 61.0)	67. 61. 62.	6 5 6	61. 62.
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hot 68 62 63 70	ur Leq Day 8.4 6 8.2 6 8.0 6 0.2 6 0.12 6	Le 66.8 61.0 61.9	eq Ei	vening 65.1 54.6 52.9 65.7	·	59.0 53.1 54.1 61.0)	67. 61. 62. 69.	6 5 6 55	68. 61. 62. 70. dBA 74

	FHV	VA-RD-77-108 H	IGHWAY	NOISE PF	REDICTI	ON MODE	EL				
	o: HY+P (204ξ e: La Palma A t: e/o Gypsum	v.	Project Name: Yorba Linda Housing Elem Job Number: 15459								
SITE S	PECIFIC IN	PUT DATA			N	OISE MO	DEL INPUT	s			
Highway Data				Site Con	ditions	(Hard = 10), Soft = 15)				
Average Daily T	raffic (Adt):	9,751 vehicles				Au	tos: 15				
Peak Hour F	Percentage:	9.19%		Me	dium Tru	icks (2 Ax	les): 15				
Peak Ho	our Volume:	896 vehicles		He	avy Truc	cks (3+ Ax	les): 15				
Veh	icle Speed:	50 mph		Vehicle M	Aire						
Near/Far Lan	e Distance:	50 feet			cleType	Da	ay Evening	Night	Daily		
Site Data				VCIII			7.5% 12.9%		97.42%		
Par	ier Height:	0.0 feet		Me	edium Tr	ucks: 84	4.8% 4.9%	10.3%	1.84%		
Barrier Type (0-Wa		0.0		F	leavy Tr	ucks: 86	6.5% 2.7%	10.8%	0.74%		
Centerline Dist		40.0 feet		Noiso So	urco El	evations (in foot)				
Centerline Dist. to	o Observer:	40.0 feet		Noise 30	Auto:		,				
Barrier Distance to	o Observer:	0.0 feet		Madiu							
Observer Height (A	bove Pad):	5.0 feet		Medium Trucks: 4.000 Heavy Trucks: 8.006 Grade Adjustment: 0.0							
Pad	d Elevation:	0.0 feet						jusiment.	0.0		
Road	d Elevation:	0.0 feet		Lane Equivalent Distance (in feet)							
R	oad Grade:	0.0%			Autos	s: 31.36	9				
	Left View:	-90.0 degrees		Mediur	n Truck:	s: 31.24	1				
	Right View:	90.0 degrees		Heav	y Trucks	s: 31.36	9				
FHWA Noise Model	Calculation:	s		1							
VehicleType	REMEL	Traffic Flow	Distance			Fresnel		en Bern	n Atten		
Autos:	70.20	-2.88	-	.93	-1.20			000	0.00		
Medium Trucks:	81.00	-20.12	-	.96	-1.20			000	0.000		
Heavy Trucks:	85.38	-24.08	2	.93	-1.20	-5	.56 0.0	000	0.00		
Unmitigated Noise						á.					
	Leq Peak Hou			Evening	Leq	Night	Ldn	CN			
Autos:	69		.5	65.8		59.7	68.3		68.9		
Medium Trucks:	62		.5	55.1		53.6	62.1		62.3		
Heavy Trucks:	63		2.0	52.9		54.2	62.5		62.7		
Vehicle Noise:	70		9.4	66.3		61.5	70.1	1	70.		
Centerline Distance	e to Noise Co	ontour (in feet)									
				0 dBA		dBA	60 dBA	55 0	BA		
									-		
		L	in:	41 44	8	7	188	40	-		

Thursday, April 11, 2024

APPENDIX 9.1:

STATIONARY SOURCE NOISE CALCULATIONS



This page intentionally left blank



Calibration

CadnaA Noise Prediction Model: 13763_CalibrateAC.cna Date: 26.05.22 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	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
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	M.	ID	Level Lr			Limit. Value			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)
CALIBRATE		R25	61.2	61.2	67.9	0.0	0.0	0.0		х	Total	0.00	а	6085115.21	2271944.57	0.00
CALIBRATE		R50	53.6	53.6	60.2	0.0	0.0	0.0		х	Total	0.00	а	6085129.88	2271914.06	0.00
CALIBRATE		R100	44.8	44.8	51.5	0.0	0.0	0.0		х	Total	0.00	а	6085016.34	2271877.11	0.00
CALIBRATE		R150	34.5	34.5	41.2	0.0	0.0	0.0		х	Total	0.00	а	6084945.52	2271904.96	0.00
CALIBRATE		R200	30.5	30.5	37.2	0.0	0.0	0.0		х	Total	0.00	а	6084891.97	2271970.98	0.00

This page intentionally left blank