

Appendices

Appendix I Noise Study

Appendices

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Agua Mansa Commerce Park Specific Plan

NOISE IMPACT ANALYSIS

CITY OF JURUPA VALLEY

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	III
APPENDICES.....	IV
LIST OF EXHIBITS.....	V
LIST OF TABLES	V
LIST OF ABBREVIATED TERMS	VII
EXECUTIVE SUMMARY	1
Off-Site Traffic Noise Analysis.....	1
Operational (Stationary-Source) Noise Analysis.....	1
Operational Vibration Analysis	2
Construction Noise Analysis	2
Construction Vibration Analysis	2
Summary of Significance Findings	3
1 INTRODUCTION.....	5
1.1 Site Location.....	5
1.2 Project Description.....	5
2 FUNDAMENTALS	9
2.1 Range of Noise	9
2.2 Noise Descriptors	10
2.3 Sound Propagation.....	10
2.4 Noise Control	11
2.5 Noise Barrier Attenuation.....	12
2.6 Land Use Compatibility With Noise	12
2.7 Community Response to Noise	12
2.8 Exposure to High Noise Levels	13
2.9 Vibration	13
3 REGULATORY SETTING	17
3.1 State of California Noise Requirements.....	17
3.2 State of California Green Building Standards Code	17
3.3 Transportation Noise Criteria	17
3.4 Operational (Stationary-Source) Noise Standards.....	19
3.5 Construction Noise Standards.....	21
3.6 Vibration Standards	22
3.7 Agua Mansa Industrial Corridor Specific Plan.....	22
4 SIGNIFICANCE CRITERIA	23
4.1 Long-Term Noise Level Increases.....	23
4.2 Significance Criteria Summary	25
5 EXISTING NOISE LEVEL MEASUREMENTS	27
5.1 Measurement Procedure and Criteria	27
5.2 Noise Measurement Locations	27
5.3 Noise Measurement Results	28
6 METHODS AND PROCEDURES.....	33
6.1 FHWA Traffic Noise Prediction Model	33

6.2	Off-Site Traffic Noise Prediction Model Inputs	33
6.3	Vibration Assessment	46
7	OFF-SITE TRANSPORTATION NOISE IMPACTS	47
7.1	Traffic Noise Contours	47
7.2	Existing Conditions Project Traffic Noise Level Contributions	63
7.3	Opening Year 2020 Project Traffic Noise Level Contributions	68
7.4	Year 2035 Project Traffic Noise Level Contributions	73
8	SENSITIVE RECEIVER LOCATIONS	79
9	OPERATIONAL (STATIONARY-SOURCE) NOISE IMPACTS	83
9.1	Operational (Stationary-Source) Noise Sources	83
9.2	Reference Noise Levels	83
9.3	Project Operational (Stationary-Source) Noise Levels	87
9.4	Project Operational (Stationary-Source) Noise Level Contributions	91
9.5	Operational Vibration Impacts	93
10	CONSTRUCTION IMPACTS	95
10.1	Construction Noise Levels	95
10.2	Construction Reference Noise Levels	95
10.3	Construction Noise Analysis	98
10.4	Construction Noise Thresholds of Significance	103
10.5	Construction Vibration Impacts	106
11	REFERENCES	109
12	CERTIFICATION	111

APPENDICES

APPENDIX 3.1: CITY OF JURUPA VALLEY CEQA THRESHOLDS GUIDANCE

APPENDIX 3.2: COUNTY OF SAN BERNARDINO DEVELOPMENT CODE

APPENDIX 5.1: STUDY AREA PHOTOS

APPENDIX 5.2: NOISE LEVEL MEASUREMENT WORKSHEETS

APPENDIX 6.1: PCE TO ACTUAL VEHICLE TRAFFIC VOLUMES

APPENDIX 7.1: OFF-SITE TRAFFIC NOISE CONTOURS

APPENDIX 9.1: OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS

LIST OF EXHIBITS

EXHIBIT 1-A: LOCATION MAP	7
EXHIBIT 1-B: SITE PLAN.....	8
EXHIBIT 2-A: TYPICAL NOISE LEVELS	9
EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION	13
EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION	15
EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS.....	31
EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS.....	81
EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS.....	88
EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS	96

LIST OF TABLES

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS	3
TABLE 3-1: OPERATIONAL (STATIONARY-SOURCE) NOISE STANDARDS	21
TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY	26
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS	30
TABLE 6-1: OFF-SITE ROADWAY PARAMETERS.....	34
TABLE 6-2: EXISTING CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES	35
TABLE 6-3: OPENING YEAR 2020 CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES	36
TABLE 6-4: YEAR 2035 CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES.....	37
TABLE 6-5: TIME OF DAY VEHICLE SPLITS	39
TABLE 6-6: WITHOUT PROJECT CONDITIONS VEHICLE MIX.....	39
TABLE 6-7: EXISTING WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX	40
TABLE 6-8: EXISTING WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX	41
TABLE 6-9: OPENING YEAR 2020 WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX.....	42
TABLE 6-10: OPENING YEAR 2020 WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX.....	43
TABLE 6-11: YEAR 2035 WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX	44
TABLE 6-12: YEAR 2035 WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX	45
TABLE 6-13: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT	46
TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS	48
TABLE 7-2: EXISTING WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS.....	49
TABLE 7-3: EXISTING WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS	50
TABLE 7-4: EXISTING WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS.....	51
TABLE 7-5: EXISTING WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS	52
TABLE 7-6: OPENING YEAR 2020 WITHOUT PROJECT CONDITIONS NOISE CONTOURS	53
TABLE 7-7: OPENING YEAR 2020 WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS.....	54
TABLE 7-8: OPENING YEAR 2020 WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS.....	55
TABLE 7-9: OPENING YEAR 2020 WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS.....	56
TABLE 7-10: OPENING YEAR 2020 WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS.....	57
TABLE 7-11: YEAR 2035 WITHOUT PROJECT CONDITIONS NOISE CONTOURS	58
TABLE 7-12: YEAR 2035 WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS	59
TABLE 7-13: YEAR 2035 WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS	60
TABLE 7-14: YEAR 2035 WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS	61
TABLE 7-15: YEAR 2035 WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS	62

TABLE 7-16: UNMITIGATED EXISTING PROJECT ALTERNATIVE 1 TRAFFIC NOISE IMPACTS	64
TABLE 7-17: UNMITIGATED EXISTING PROJECT ALTERNATIVE 1A TRAFFIC NOISE IMPACTS.....	65
TABLE 7-18: UNMITIGATED EXISTING PROJECT ALTERNATIVE 2 TRAFFIC NOISE IMPACTS	66
TABLE 7-19: UNMITIGATED EXISTING PROJECT ALTERNATIVE 2A TRAFFIC NOISE IMPACTS.....	67
TABLE 7-20: UNMITIGATED YEAR 2020 ALTERNATIVE 1 TRAFFIC NOISE IMPACTS	69
TABLE 7-21: UNMITIGATED YEAR 2020 ALTERNATIVE 1A TRAFFIC NOISE IMPACTS	70
TABLE 7-22: UNMITIGATED YEAR 2020 ALTERNATIVE 2 TRAFFIC NOISE IMPACTS	71
TABLE 7-23: UNMITIGATED YEAR 2020 ALTERNATIVE 2A TRAFFIC NOISE IMPACTS	72
TABLE 7-24: UNMITIGATED YEAR 2035 ALTERNATIVE 1 TRAFFIC NOISE IMPACTS	74
TABLE 7-25: UNMITIGATED YEAR 2035 ALTERNATIVE 1A TRAFFIC NOISE IMPACTS	75
TABLE 7-26: UNMITIGATED YEAR 2035 ALTERNATIVE 2 TRAFFIC NOISE IMPACTS	76
TABLE 7-27: UNMITIGATED YEAR 2035 ALTERNATIVE 2A TRAFFIC NOISE IMPACTS	77
TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS	86
TABLE 9-2: UNMITIGATED PROJECT-ONLY OPERATIONAL NOISE LEVELS	89
TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE	91
TABLE 9-4: PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS.....	92
TABLE 9-5: PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS	93
TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS	97
TABLE 10-2: DEMOLITION EQUIPMENT NOISE LEVELS	98
TABLE 10-3: SITE PREPARATION EQUIPMENT NOISE LEVELS	99
TABLE 10-4: GRADING EQUIPMENT NOISE LEVELS	100
TABLE 10-5: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS.....	101
TABLE 10-6: PAVING EQUIPMENT NOISE LEVELS.....	102
TABLE 10-7: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS.....	103
TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA L _{EQ})	104
TABLE 10-9: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA L _{EQ})	105
TABLE 10-12: PROJECT CONSTRUCTION VIBRATION LEVELS	108

LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
I-10	Interstate 10
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
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Agua Mansa Commerce Park Specific Plan
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
SR-60	State Route 60
VdB	Vibration Decibels

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Agua Mansa Commerce Park Specific Plan development ("Project"). The Project site is located east of Rubidoux Boulevard between El Rivino Road, the West Riverside Canal, and Hall Avenue in the City of Jurupa Valley. The Project site is proposed to consist of five high-cube warehouse distribution center buildings totaling 4,216,000 square feet (comprised of 3,452,000 square foot building footprint with 764,000 square feet of mezzanine), an approximately 71.3 acre regional park, 200,000 square feet of light industrial (Alternative 1) or 170,000 square feet of business park and 25,000 square feet of commercial retail (Alternative 2), and 64,000 square feet of research and development (Cal Portland). At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown, and therefore, this noise study includes a conservative analysis of the proposed Project uses. This study has been prepared to satisfy applicable City of Jurupa Valley and adjacent local jurisdiction standards and thresholds of significance, consistent with guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of all Project Alternatives (1, 1A, 2, and 2A) will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 40 study-area roadway segments were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis* prepared by Ganddini Group, Inc. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2020, and Year 2035 conditions.

The analysis shows that based on the City of Jurupa Valley thresholds of significance for off-site traffic noise impacts, the unmitigated Project-related traffic noise level increases under the with Project traffic scenarios are considered *less than significant* impacts at noise-sensitive and commercial land uses adjacent to the 40 study-area roadway segments.

OPERATIONAL (STATIONARY-SOURCE) NOISE ANALYSIS

Using reference noise levels to represent the expected noise sources from the Agua Mansa Commerce Park Specific Plan site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Agua Mansa Commerce Park Specific Plan are anticipated to include roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities). The operational (stationary-source) noise analysis shows that the Project-related stationary-source noise levels at all receiver locations will satisfy the applicable daytime and nighttime exterior noise level standards, and therefore, the operational (stationary-source) noise level impacts will be *less than significant*.

Further, this analysis demonstrates that the Project will not contribute a long-term operational (stationary-source) noise level impact to the existing ambient noise environment at any of the sensitive receiver locations. Therefore, the operational (stationary-source) noise level impacts associated with the proposed 24-hour seven days per week Project activities, such as the roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities), are considered *less than significant*.

OPERATIONAL VIBRATION ANALYSIS

The operation of the Project site will include heavy trucks moving on site to and from the loading dock areas. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Agua Mansa Commerce Park Specific Plan heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV and 0.003 in/sec RMS at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment*. (3) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the applicable vibration thresholds, and therefore, will be *less than significant*.

CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of the Agua Mansa Commerce Park Specific Plan site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. The Project-related short-term construction noise levels are expected to range from 43.8 to 70.2 dBA L_{eq} during the daytime hours and from 35.8 to 62.2 dBA L_{eq} during the nighttime hours and will satisfy the 80 dBA L_{eq} daytime and 70 dBA L_{eq} nighttime exterior noise level thresholds, respectively, as identified by the City of Jurupa Valley at all receiver locations. Therefore, based on the results of this analysis, all nearby sensitive receiver locations will experience *less than significant* impacts due to Project construction noise levels.

CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. This analysis shows the highest construction vibration levels are expected to approach a peak particle velocity of 0.015 in/sec (PPV), which is below the vibration standard of 0.2 in/sec PPV at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Agua Mansa Commerce Park Specific Plan Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	<i>Less Than Significant</i>	-
Operational (Stationary) Noise	9	<i>Less Than Significant</i>	-
Operational Vibration		<i>Less Than Significant</i>	-
Construction Noise	10	<i>Less Than Significant</i>	-
Construction Vibration		<i>Less Than Significant</i>	-

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Agua Mansa Commerce Park Specific Plan (“Project”). This noise study briefly describes 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 (stationary-source) and short-term construction noise impacts.

1.1 SITE LOCATION

The proposed Agua Mansa Commerce Park Specific Plan site is located east of Rubidoux Boulevard between El Rivino Road, the West Riverside Canal, and Hall Avenue in the City of Jurupa Valley; while unincorporated San Bernardino County and the City of Rialto border the Project site to the north across El Rivino Road, as shown on Exhibit 1-A.

The Project site is currently occupied by an existing Riverside Cement Plant. Existing land uses near the site include residential homes north, south, east, and west of the Project site. A planned industrial warehouse use is located north of the Project site across El Rivino Road, and existing industrial uses border the Project site to the east, south, and southwest. State Route 60 (SR-60) is located roughly 1.2 miles south of the Project site, and Interstate 10 (I-10) is located approximately 2.4 miles north of the Project site. The San Bernardino International Airport is located roughly 8 miles northeast of the Project site in the City of San Bernardino, Riverside Municipal Airport is located roughly 5.7 miles southwest of the Project site, and Flabob Airport is located approximately 2.5 miles southwest of the Project site. No airports are located within 2 miles of the Project site.

1.2 PROJECT DESCRIPTION

The Project site is proposed to consist of five high-cube warehouse distribution center buildings totaling 4,216,000 square feet (comprised of 3,452,000 square foot building footprint with 764,000 square feet of mezzanine), an approximately 71.3 acre regional park, 200,000 square feet of light industrial (Alternative 1) or 170,000 square feet of business park and 25,000 square feet of commercial retail (Alternative 2), and 64,000 square feet of research and development (Cal Portland). The Project site plan is shown on Exhibit 1-B.

Additional analysis is provided for Alternatives 1A and 2A, consistent with the *Traffic Impact Analysis* which evaluates Alternatives 1 and 2 if connectivity between Buildings 1 to 5 (Industrial Park) and Rubidoux Boulevard does not exist because access is not possible across the railroad spur line.

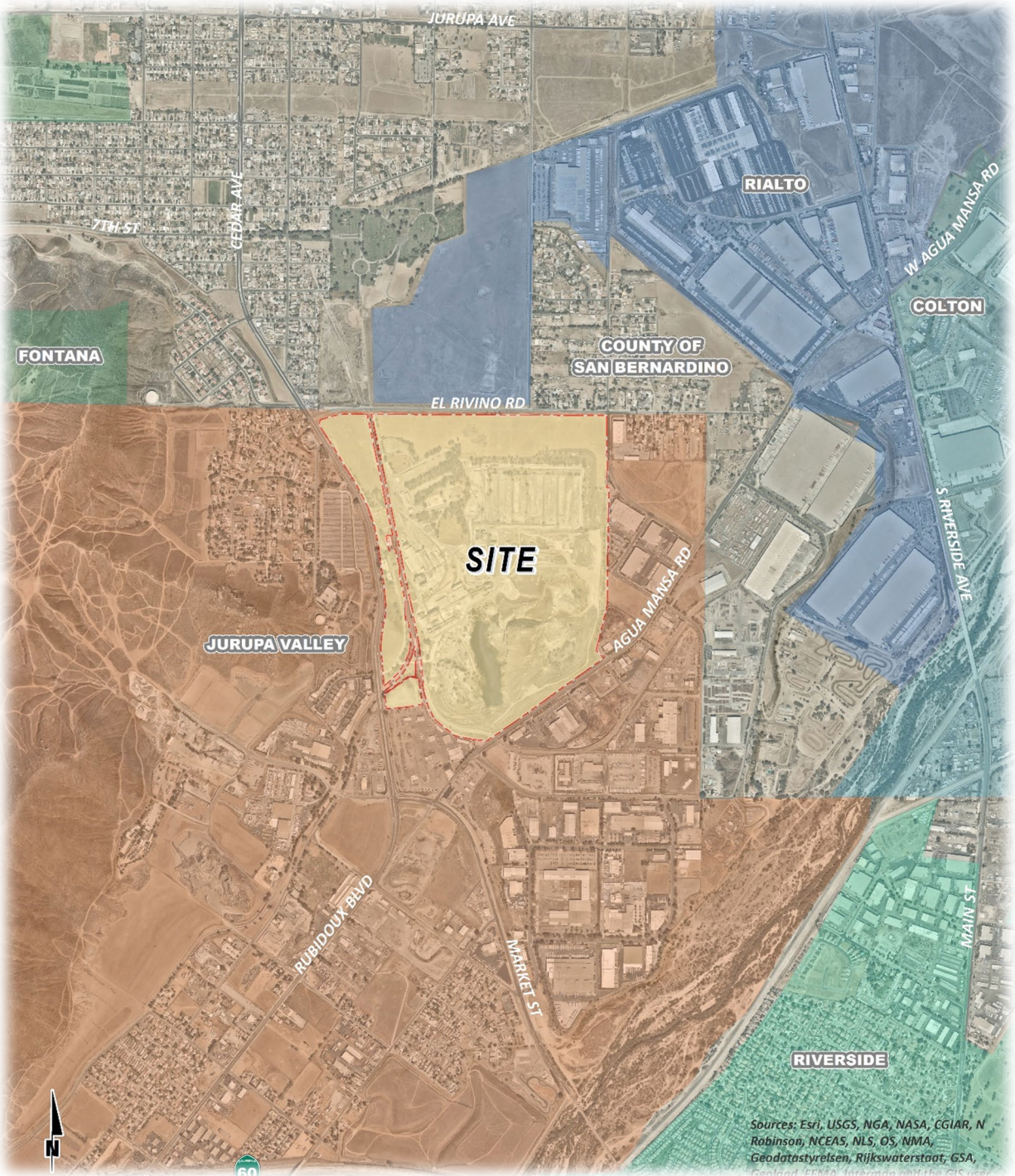
At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds,

a dog park, and trail activities). This noise analysis is intended to describe noise level impacts associated with the expected typical operational (stationary-source) activities at the Project site.

Traffic noise analysis provided in this report is based on the passenger car equivalent (PCE) average daily traffic (ADT) volumes obtained from the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis* prepared by Ganddini Group, Inc. for the Project. (2) PCE volumes convert medium and heavy trucks into an equivalent number of passenger cars for traffic impact analysis, however, this approach underestimates the potential impacts with regard to off-site traffic noise levels generated by medium and heavy trucks. Therefore, to present a conservative off-site traffic noise analysis and account for the effect of individual medium and heavy truck trips on the study area roadway network, this noise study converts all PCE ADT volumes into actual vehicle volumes for analysis.

Per the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis* prepared by Ganddini Group, Inc. the Project is expected to generate a total of approximately 7,674 trip-ends per day (actual vehicles) and includes 2,457 truck trip-ends per day under Alternative 1. Under Alternative 2 conditions, the Project is expected to generate a total of approximately 9,741 trip-ends per day (actual vehicles), with truck trips reduced to 2,245 truck trip-ends per day. This noise study relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

EXHIBIT 1-A: LOCATION MAP



1-86



2 FUNDAMENTALS

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

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
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	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

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

2.1 RANGE OF NOISE

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

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

2.2 NOISE DESCRIPTORS

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

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{50} , L_{25} , L_8 and L_2 , are commonly used. The percentile noise descriptors are the noise levels equaled or exceeded during 50 percent, 25 percent, 8 percent, and 2 percent of a stated time. Sound levels associated with the L_2 and L_8 typically describe transient or short-term events, while levels associated with the L_{50} describe the steady state (or median) noise conditions. While the L_{50} describes the median noise levels occurring 50 percent of the time, the L_{eq} accounts for the total energy (average) observed for the entire hour.

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (4)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor 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 receptor, 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 receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. 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 resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (6)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor 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 receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (6)

2.6 LAND USE COMPATIBILITY WITH NOISE

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

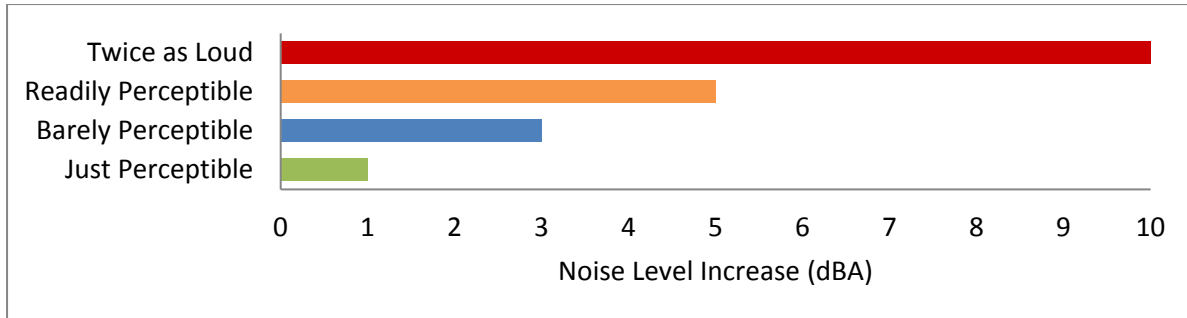
2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

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

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (10)

2.9 VIBRATION

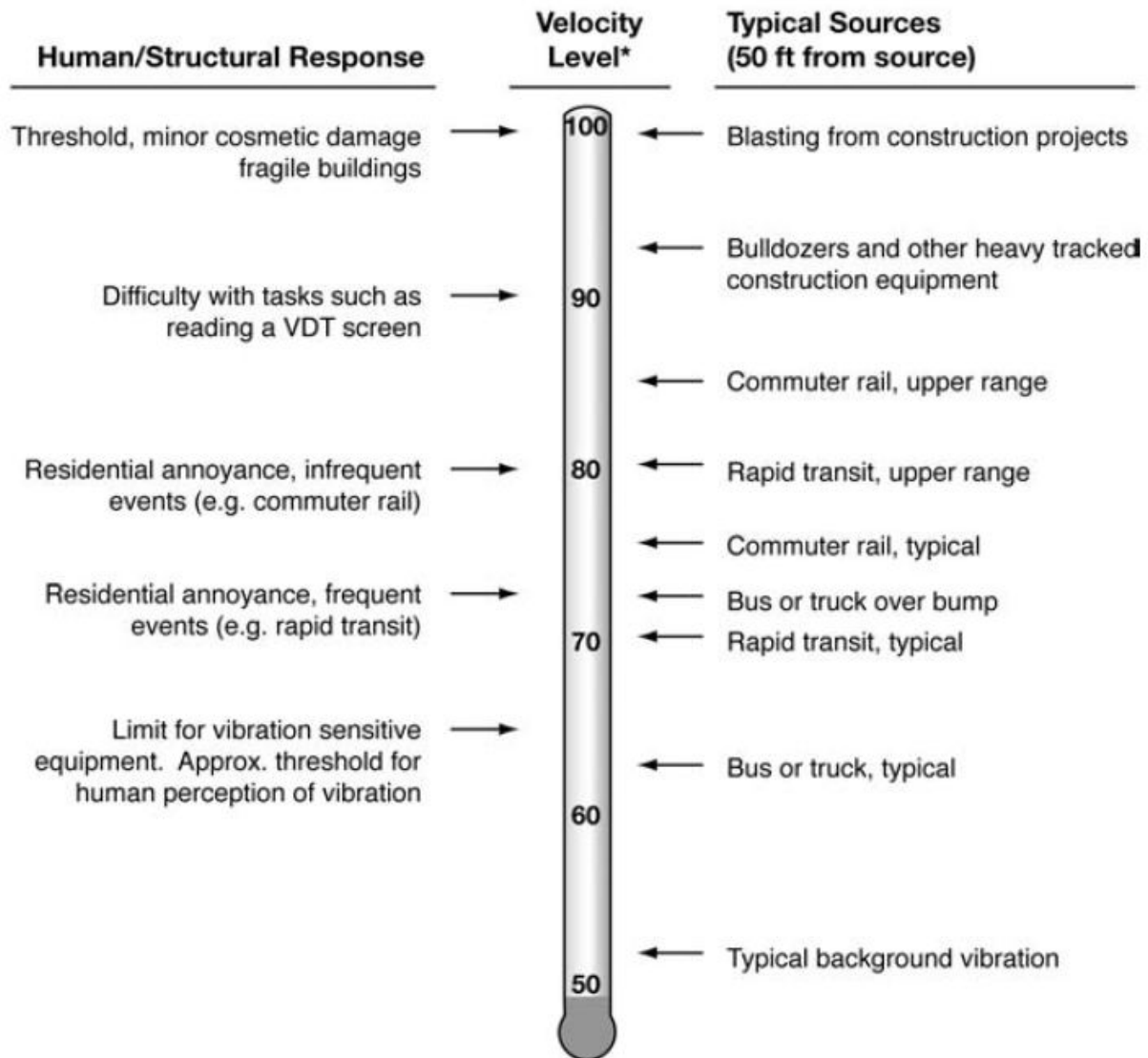
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (3), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural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

As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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

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



* RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second

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

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3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (11) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*.

3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (12) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 TRANSPORTATION NOISE CRITERIA

Off-site roadway segments conveying Project traffic are in the City of Jurupa Valley and adjacent jurisdictions of the County of San Bernardino, City of Rialto, and City of Riverside. As such, General Plan noise criteria of each jurisdiction is described below as they relate to this noise study for the Project.

3.3.1 CITY OF JURUPA VALLEY GENERAL PLAN NOISE ELEMENT

The City of Jurupa Valley adopted the Draft 2017 Jurupa Valley General Plan on August 17, 2017, and therefore, the Draft 2017 adopted General Plan is used in this report. (13) The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community, and establishes noise level requirements for all land uses.

The *Land Use/Noise Compatibility Matrix*, Figure 7-3 of the General Plan, identifies guidelines to describe categories of compatibility and not specific noise standards. The noise-sensitive residential land use in the Project study area, is considered *normally acceptable* with unmitigated exterior levels of less than 60 dBA CNEL and *conditionally acceptable* with noise levels approaching 70 dBA CNEL. For industrial land uses, exterior noise levels approaching 70 dBA CNEL are considered *normally acceptable*, and noise levels ranging from 70 dBA CNEL to 80 dBA CNEL are considered *conditionally acceptable*. For *conditionally acceptable* exterior noise levels, *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design.* (13)

3.3.2 COUNTY OF SAN BERNARDINO GENERAL PLAN NOISE ELEMENT

The County of San Bernardino has adopted a Noise Element of the General Plan to limit the exposure of the community to excessive noise levels. (14) The most common sources of environmental noise in San Bernardino County are associated with roads, airports, railroad operations, and industrial activities. The facilities are used to transport residents, consumer products and provide basic infrastructure for the community. (14) To address these noise sources found in the County, the following goals have been identified in the General Plan Noise Element:

- N 1 *The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.*
- N 1.5 *Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.*
- N 2 *The County will strive to preserve and maintain the quiet environment of mountain, desert, and other rural areas.*

3.3.3 COUNTY OF SAN BERNARDINO DEVELOPMENT CODE

While the County of San Bernardino General Plan Noise Element provides guidelines and criteria to assess transportation noise on sensitive land uses, the County Code, Title 8 Development Code contains the noise level limits for mobile, stationary, and construction-related noise sources. (15) Section 83.01.080(d), Table 83-3, contains the County's mobile noise source-related standards. Based on the County's mobile noise source standards, there are no exterior or interior noise level standards for the industrial warehouse use of the Project and existing uses in the Project study

area. Exterior transportation (mobile) noise level standards for residential land uses in the Project study area are shown to be up to 65 dBA CNEL with mitigation.

3.3.4 CITY OF RIALTO GENERAL PLAN SAFETY & NOISE ELEMENT

The City of Rialto General Plan Safety & Noise Element establishes policies to guard against the creation of any new noise and land use conflicts, and to minimize the impact of existing noise sources on the community. The Noise Element does not contain specific transportation-related noise standards; however, it does provide land use compatibility guidelines for future development and the future noise contour boundaries for major roadways in the City of Rialto.

The Rialto Noise Guidelines for Land Use Planning matrix indicates that light industrial land uses, such as the Project site, are considered normally acceptable with exterior noise levels below 70 dBA CNEL, and conditionally acceptable with noise levels below 75 dBA CNEL. Noise-sensitive residential land uses are considered normally acceptable with exterior noise levels below 60 dBA CNEL, and conditionally acceptable with noise levels below 65 dBA CNEL. For conditionally acceptable land uses, *new development should be undertaken only after detailed analysis of noise reduction requirements are made.* (16)

3.3.5 CITY OF RIVERSIDE GENERAL PLAN NOISE ELEMENT

The City of Riverside adopted a Noise Element of the General Plan to identify noise conflicts and to reduce existing and potential noise impacts. (17) The Noise Element contains objectives and policies to achieve and maintain noise levels compatible with various types of land uses. The *Noise/Land Use Noise Compatibility Criteria* (Figure N-10) in the City of Riverside General Plan Noise Element provides guidelines to evaluate the land use compatibility of transportation related noise. Based on the land use noise compatibility categories, residential land use is considered *normally acceptable* with unmitigated exterior noise levels of less than 60 dBA CNEL, and *conditionally acceptable* with noise levels approaching 65 dBA CNEL. Industrial land uses are considered *normally acceptable* with exterior noise levels approaching 70 dBA CNEL and *conditionally acceptable* with exterior noise level of up to 80 dBA CNEL. For *conditionally acceptable* land use, *new construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.*

3.4 OPERATIONAL (STATIONARY-SOURCE) NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Agua Mansa Commerce Park Specific Plan Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities) are typically evaluated against standards established under a City's Municipal Code. Although the Project site is located within the City of Jurupa Valley, sensitive receivers are also located in the adjacent jurisdiction of the County of San Bernardino (north). Therefore, to accurately describe the potential operational

(stationary-source) noise levels, this analysis presents the appropriate operational (stationary-source) noise standards for each of the noise-sensitive receiver location within their respective jurisdictions. Table 3-1 shows the operational (stationary-source) noise level limits by jurisdiction used in this noise study.

3.4.1 CITY OF JURUPA VALLEY OPERATIONAL NOISE STANDARDS

Chapter 11.05 of the City of Jurupa Valley Municipal Code sets stationary-source (operational) exterior noise limits for residential uses in the Project study area of 55 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. (18) However, consistent with guidance received from the City of Jurupa Valley, dated December 19th, 2018, this noise study has been prepared to evaluate potential impacts based on 65 dBA L_{eq} daytime (7:00 a.m. to 10:00 p.m.), and 45 dBA L_{eq} nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standards. (19) The City of Jurupa Valley noise-related CEQA thresholds guidance is provided in Appendix 3.1 for reference.

3.4.2 CITY OF RIALTO OPERATIONAL NOISE STANDARDS

The City of Rialto Municipal Code does not identify specific stationary-source exterior noise level standards. (20) Therefore, to evaluate potential impacts at adjacent sensitive receiver locations per CEQA Guidelines, discussed in Section 4, exterior noise level thresholds are identified based on the County of San Bernardino Development Code.

3.4.3 COUNTY OF SAN BERNARDINO OPERATIONAL NOISE STANDARDS

The County of San Bernardino County Code, Title 8 Development Code, Section 83.01.080(c) establishes the noise level standards for stationary noise sources. For residential properties the exterior noise level shall not exceed 55 dBA L_{eq} during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 45 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.) for both the whole hour, and for not more than 30 minutes in any hour. (21) These standards shall apply for a cumulative period of 30 minutes in any hour, as well as the standard plus 5 dBA cannot be exceeded 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. Appendix 3.2 includes the County Code noise standards.

TABLE 3-1: OPERATIONAL (STATIONARY-SOURCE) NOISE STANDARDS

Jurisdiction	Land Use ¹	Time Period	Exterior Noise Level Standards (dBA) ¹					
			Leq (E. Avg.)	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
City of Jurupa Valley ²	Residential	Daytime	65	-	-	-	-	-
		Nighttime	45	-	-	-	-	-
County of San Bernardino ³	Residential	Daytime	55	55	60	65	70	75
		Nighttime	45	45	50	55	60	65
	Professional Services	Anytime	55	55	60	65	70	75
	Other Commercial	Anytime	60	60	65	70	75	80
	Industrial	Anytime	70	70	75	80	85	90

¹ Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L₂₅ is the noise level exceeded 25% of the time.

² Source: City of Jurupa Valley guidance (December 19, 2018).

³ Source: Section 83.01.080(c) of the County of San Bernardino County Code, Title 8 Development Code (Appendix 3.2).

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "E. Avg." = logarithmic (energy) average

3.5 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City of Jurupa Valley has established limits to the hours of operation. Section 11.05.020 of the City's Municipal Code, indicates that noise sources associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling are exempt from the noise regulations if construction activity occurs between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (18) However, neither the City of Jurupa Valley, City of Rialto, or County of San Bernardino General Plans 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*. Further, the City of Jurupa Valley, the City of Rialto, and County of San Bernardino General Plan and Municipal Code do not identify specific construction noise level thresholds, and therefore, the following construction noise level threshold is used in this noise study based on guidance received from the City of Jurupa Valley. (19)

Per City of Jurupa Valley guidance, the daytime and nighttime 8-hour construction noise level standards are 80 dBA L_{eq} and 70 dBA L_{eq} , respectively. These standards are consistent with FTA guidance for construction noise analysis. (3)

3.6 VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Agua Mansa Commerce Park Specific Plan, vibration-generating activities are evaluated against standards identified by the City of Jurupa Valley as a threshold of 0.2 inches per second (in/sec) peak-particle-velocity (PPV) during either long-term operation or construction of the Project. (19)

3.7 AGUA MANSA INDUSTRIAL CORRIDOR SPECIFIC PLAN

While the Project is proposing to be removed from the Agua Mansa Industrial Corridor Specific Plan, the existing *Agua Mansa Industrial Corridor Specific Plan* (AMICSP) document, prepared in July 1986, identifies development standards related to industrial uses. (22) Page 4-16 of the AMICSP document indicates that residentially-zoned property exterior noise level standards are 55 dBA during daytime hours, and 50 dBA during nighttime hours. While the daytime standard identified in the AMICSP is lower than the daytime threshold identified in guidance provided by the City of Jurupa Valley for the purpose of this analysis, the nighttime noise level threshold identified by the City's threshold guidance of 45 dBA L_{eq} represents a more conservative threshold during the noise-sensitive nighttime hours at sensitive residential uses. (19) This study has been prepared consistent with the City of Jurupa Valley's guidance for CEQA noise thresholds of significance and evaluates Project noise level compliance based on the 2018 guidance received from the City of Jurupa Valley; and therefore, does not rely on the AMICSP standards.

4 SIGNIFICANCE CRITERIA

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

- A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.
- E. For a project located within 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, expose people residing or working in the Project area to excessive noise levels.
- F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

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

CEQA GUIDELINES NOT FURTHER ANALYZED

The Project site is located approximately 8 miles southwest of SBIA, Riverside Municipal Airport is located roughly 5.7 miles southwest of the Project site, and Flabob Airport is located approximately 2.5 miles southwest of the Project site. Further, no private airstrips are in the vicinity of the Project site. As such, the Project would not be exposed to substantial noise from aircraft overflights. Accordingly, people at the Project site would not be exposed to excessive noise levels from nearby airport operations, and therefore, impacts are considered *less than significant* and no further noise analysis is conducted in relation to Guidelines E and F.

4.1 LONG-TERM NOISE LEVEL INCREASES

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a

significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (23)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Based on guidance dated December 19th, 2018 provided by the City of Jurupa Valley, the following significance criteria is used to assess potential off-site traffic noise impacts at noise-sensitive uses related to operational noise level increases over without Project conditions (i.e., the ambient noise environment) (19):

- When the Project creates a 3 dBA CNEL or greater off-site traffic noise level increase at existing and future noise-sensitive land uses (e.g. residential, etc.), increasing the without Project off-site traffic noise level to 65 dBA CNEL or above;

Similarly, the City of Jurupa Valley has provided the following guidance related to commercial uses and operational noise level increases over without Project conditions (i.e., the ambient noise environment):

- When the Project creates a 3 dBA CNEL or greater off-site traffic noise level increase at existing and future commercial, increasing the without Project off-site traffic noise level to 70 dBA CNEL or above (City of Jurupa Valley guidance received December 19th, 2018).

OPERATIONAL (STATIONARY-SOURCE) NOISE LEVEL INCREASES

For the purpose of this Noise Impact Analysis a threshold must be determined to evaluate the operational (stationary-source) noise level increases related to the Project. As such, the criteria previously discussed and provided by the City of Jurupa Valley for off-site traffic noise is used with the equivalent noise level metrics to describe stationary-source noise levels at nearby sensitive uses, as follows:

- When the Project creates a 3 dBA L_{eq} or greater operational (stationary-source) noise level increase at existing and future noise-sensitive land uses (e.g. residential, etc.), increasing the without Project off-site traffic noise level to 65 dBA L_{eq} or above;

Similarly, the City of Jurupa Valley has provided the following guidance related to commercial uses and operational noise level increases over without Project conditions (i.e., the ambient noise environment):

- When the Project creates a 3 dBA L_{eq} or greater operational (stationary-source) noise level increase at existing and future commercial, increasing the without Project off-site traffic noise level to 70 dBA L_{eq} or above (City of Jurupa Valley guidance received December 19th, 2018).

4.2 SIGNIFICANCE CRITERIA SUMMARY

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

OFF-SITE TRAFFIC NOISE

- An analysis of off-site traffic noise levels under without and with Project scenarios is included in this noise study for Existing, Opening Year 2020, and Year 2035 conditions. While existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) has been included in this report, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) scenario will not actually occur since the Project would not be fully constructed and operational until Opening Year 2020 conditions. As such, impact evaluations related to Project off-site traffic noise level increases are based on Opening Year 2020 and Year 2035 conditions, according to the following criteria:
 - When the Project creates a 3 dBA CNEL or greater off-site traffic noise level increase at existing and future noise-sensitive land uses (e.g. residential, etc.), increasing the without Project off-site traffic noise level to 65 dBA CNEL or above;
 - When the Project creates a 3 dBA CNEL or greater off-site traffic noise level increase at existing and future commercial, increasing the without Project off-site traffic noise level to 70 dBA CNEL or above (City of Jurupa Valley guidance received December 19th, 2018).

OPERATIONAL (STATIONARY-SOURCE) NOISE

- If Project-related operational (stationary-source) noise levels exceed:
 - the exterior 65 dBA L_{eq} daytime or 45 dBA L_{eq} nighttime noise level standards at nearby sensitive receiver locations in the City of Jurupa Valley (City of Jurupa Valley guidance received December 19th, 2018); or
 - the exterior 55 dBA L_{eq} daytime or 45 dBA L_{eq} nighttime noise level standards for sensitive land uses in unincorporated County of San Bernardino and in the City of Rialto. These standards shall not be exceeded for a cumulative period of 30 minutes (L_{50}), or the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes (L_{25}) in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes (L_8) in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute (L_2) in any hour, or the standard plus 20 dBA at any time (L_{max}) (Section 83.01.080(c) of the County of San Bernardino County Code, Title 8 Development Code).
- Long-term operational (stationary-source) noise level impacts are evaluated as follows:
 - When the Project creates a 3 dBA L_{eq} or greater operational (stationary-source) noise level increase at existing and future noise-sensitive land uses (e.g. residential, etc.), increasing the without Project off-site traffic noise level to 65 dBA L_{eq} or above; or
 - When the Project creates a 3 dBA L_{eq} or greater operational (stationary-source) noise level increase at existing and future commercial, increasing the without Project off-site traffic noise level to 70 dBA L_{eq} or above (City of Jurupa Valley guidance received December 19th, 2018).

- If long-term Project operational vibration levels exceed the City of Jurupa Valley vibration threshold of 0.2 in/sec PPV at sensitive receiver locations (City of Jurupa Valley guidance received December 19th, 2018).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities generate noise levels at sensitive receiver locations which exceed the 80 dBA L_{eq} daytime and/or 70 dBA L_{eq} nighttime noise level standards identified by the FTA (FTA, Transit Noise and Vibration Impact Assessment);
- If short-term Project construction vibration levels exceed the City of Jurupa Valley vibration threshold of 0.2 in/sec PPV at sensitive receiver locations (City of Jurupa Valley guidance received December 19th, 2018).

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Jurisdiction	Condition(s)	Significance Criteria ¹	
				Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive ¹	All	If ambient is < 65 dBA CNEL	Project plus ambient > 65 dBA CNEL and a ≥ 3 dBA CNEL Project increase	
	Commercial ¹		If ambient is < 70 dBA CNEL	Project plus ambient > 65 dBA CNEL and a ≥ 3 dBA CNEL Project increase	
Operational (Stationary)	Noise-Sensitive	City of Jurupa Valley	See Table 3-1 for the Operational Noise Level Standards by Jurisdiction & Land Use		
		County of San Bernardino			
	Commercial	All	If ambient is < 65 dBA L _{eq}	Project plus ambient > 65 dBA L _{eq} and a ≥ 3 dBA L _{eq} Project increase	
			If ambient is < 70 dBA L _{eq}	Project plus ambient > 65 dBA L _{eq} and a ≥ 3 dBA L _{eq} Project increase	
			Sensitive	Vibration Level Threshold	0.2 in/sec PPV
Construction	Noise-Sensitive	All	Noise Level Threshold	80 dBA L _{eq}	70 dBA L _{eq}
			Vibration Level Threshold	0.2 in/sec PPV	

¹ All thresholds of significance based on guidance from the City of Jurupa Valley dated December 19, 2018. Additional operational (stationary-source) noise level standards are used for receiver locations located outside the City's jurisdiction in the County of San Bernardino.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified; "PPV" = Peak Particle Velocity

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at 10 locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, August 30th, 2017. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

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

5.2 NOISE MEASUREMENT LOCATIONS

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

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

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

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, and the jurisdiction in which each measurement was located. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels near existing residential homes northwest of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 66.2 dBA CNEL. The hourly noise levels measured at location L1 ranged from 57.2 to 66.9 dBA L_{eq} during the daytime hours and from 53.6 to 63.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 61.6 dBA L_{eq} with an average nighttime noise level of 59.1 dBA L_{eq} .
- Location L2 represents the noise levels ear existing residential homes on El Rivino Road north of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 65.5 dBA CNEL. The hourly noise levels measured at location L2 ranged from 56.3 to 62.6 dBA L_{eq} during the daytime hours and from 49.8 to 62.5 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 59.6 dBA L_{eq} with an average nighttime noise level of 58.8 dBA L_{eq} .
- Location L3 represents the noise levels near existing residential homes on El Rivino Road northeast of the Project site. The 24-hour CNEL indicates that the overall exterior noise level is 65.3 dBA CNEL. At location L3 the background ambient noise levels ranged from 57.8 to 64.8 dBA L_{eq} during the daytime hours to levels of 51.0 to 62.1 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 60.8 dBA L_{eq} with an average nighttime noise level of 58.1 dBA L_{eq} .
- Located east of the Project site, location L4 represents the noise levels near existing industrial uses on Agua Mansa Road. The noise level measurements collected show an overall 24-hour exterior noise level of 77.3 dBA CNEL. The hourly noise levels measured at location L4 ranged from 67.4 to 73.2 dBA L_{eq} during the daytime hours and from 68.5 to 73.2 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 70.6 dBA L_{eq} with an average nighttime noise level of 70.7 dBA L_{eq} .
- Location L5 represents the noise levels on Wilson Street near an existing residential home and industrial uses. The 24-hour CNEL indicates that the overall exterior noise level is 69.1 dBA CNEL. At location L5 the background ambient noise levels ranged from 57.0 to 67.6 dBA L_{eq} during the daytime hours to levels of 58.1 to 64.9 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 63.7 dBA L_{eq} with an average nighttime noise level of 62.4 dBA L_{eq} .
- Location L6 represents the noise levels on Agua Mansa Road south of the Project site near existing industrial uses. The noise level measurements collected show an overall 24-hour exterior noise level of 76.9 dBA CNEL. The hourly noise levels measured at location L6 ranged from 65.7 to 73.2 dBA L_{eq} during the daytime hours and from 66.8 to 73.3 dBA L_{eq} during the

nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 71.4 dBA L_{eq} with an average nighttime noise level of 70.1 dBA L_{eq} .

- Location L7 represents the noise levels measured on Hall Avenue near existing residential homes south of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 67.8 dBA CNEL. The hourly noise levels measured at location L7 ranged from 59.6 to 66.7 dBA L_{eq} during the daytime hours and from 53.9 to 63.4 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 64.2 dBA L_{eq} with an average nighttime noise level of 60.1 dBA L_{eq} .
- Location L8 represents the noise levels on 24th Street near Avalon Park south of the Project site. The 24-hour CNEL indicates that the overall exterior noise level is 67.1 dBA CNEL. At location L8 the background ambient noise levels ranged from 55.5 to 65.3 dBA L_{eq} during the daytime hours to levels of 53.4 to 64.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 62.3 dBA L_{eq} with an average nighttime noise level of 60.2 dBA L_{eq} .
- Located west of the Project site, location L9 represents the noise levels on Andalusia Avenue near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 56.5 dBA CNEL. The hourly noise levels measured at location L9 ranged from 46.1 to 55.5 dBA L_{eq} during the daytime hours and from 46.9 to 52.7 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 50.6 dBA L_{eq} with an average nighttime noise level of 49.6 dBA L_{eq} .
- Location L10 represents the noise levels on Castellano Road west of the Project site near existing residential homes. The 24-hour CNEL indicates that the overall exterior noise level is 65.4 dBA CNEL. At location L10 the background ambient noise levels ranged from 56.9 to 61.0 dBA L_{eq} during the daytime hours to levels of 53.6 to 62.2 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 59.2 dBA L_{eq} with an average nighttime noise level of 58.7 dBA L_{eq} .

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1 , L_2 , L_5 , L_8 , L_{25} , L_{50} , L_{90} , L_{95} , and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial transportation network, such as State Route 60 (SR-60), and background industrial land use activities. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 5-1.

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

Location ¹	Jurisdiction	Distance to Project Boundary (Feet)	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
				Daytime	Nighttime	
L1	County of SB	1,075'	Located near existing residential homes northwest of the Project site.	61.6	59.1	66.2
L2	Jurupa Valley	40'	Located near existing residential homes on El Rivino Road north of the Project site.	59.6	58.8	65.5
L3	County of SB	740'	Located near existing residential homes on El Rivino Road northeast of the Project site.	60.8	58.1	65.3
L4	Jurupa Valley	170'	Located on Agua Mansa Road east of the Project site near existing industrial uses.	70.6	70.7	77.3
L5	Jurupa Valley	2,290'	Located on Wilson Street near an existing residential home and industrial uses.	63.7	62.4	69.1
L6	Jurupa Valley	80'	Located on Agua Mansa Road south of the Project site near existing industrial uses.	71.4	70.1	76.9
L7	Jurupa Valley	3,000'	Located on Hall Avenue near existing residential homes south of the Project site.	64.2	60.1	67.8
L8	Jurupa Valley	2,995'	Located on 24th Street near Avalon Park south of the Project site.	62.3	60.2	67.1
L9	Jurupa Valley	925'	Located on Andalusia Avenue west of the Project site near existing residential homes.	50.6	49.6	56.5
L10	Jurupa Valley	240'	Located on Castellano Road west of the Project site near existing residential homes.	59.2	58.7	65.4

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

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

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

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (25) 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. (26) 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. (27)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 40 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Jurupa Valley, County of San Bernardino, City of Rialto, and City of Riverside General Plan Circulation Elements, and the posted vehicle speeds. The ADT volumes used in this study are presented on Tables 6-2 to 6-4 are based on the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis* prepared by Ganddini Group, Inc., for the following traffic scenarios: Existing, Opening Year 2020, and Year 2035 conditions under Project Alternatives 1, 1A, 2, and 2A. (2)

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Land Use ¹	Distance from Centerline to Nearest Adjacent Land Use (Feet) ²	Posted Vehicle Speed (mph)
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	52	40
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	52	40
3	Cedar Av.	s/o Slover Av.	General Commercial	52	40
4	Cedar Av.	s/o Santa Ana Av.	Residential	52	40
5	Cedar Av.	s/o Jurupa Av.	General Commercial	52	50
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	59	50
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	59	50
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	59	50
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	59	50
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	59	50
11	Rubidoux Bl.	s/o 28th St.	Residential	59	50
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	59	50
13	Rubidoux Bl.	s/o 34th St.	Residential	59	50
14	Cactus Av.	n/o El Rivino Rd.	Residential	30	40
15	Rivera St.	n/o Market St.	Business Park	33	30
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	60	40
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	60	50
18	Riverside Av.	s/o Slover Av.	General Industrial	52	50
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	52	55
20	Riverside Av.	s/o Jurupa Av.	General Industrial	52	55
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	52	40
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	52	40
23	Slover Av.	w/o Cedar Av.	Light Industrial	52	50
24	Slover Av.	w/o Riverside Av.	General Industrial	52	50
25	Santa Ana Av.	w/o Cedar Av.	Residential	44	40
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	44	40
27	Jurupa Av.	w/o Cedar Av.	Residential	52	40
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	44	45
29	El Rivino Rd.	e/o Cactus Av.	Residential	44	45
30	El Rivino Rd.	e/o Hall Av.	Residential	44	45
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	50	45
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	50	45
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	52	45
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	52	45
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	60	45
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	60	45
37	20th St.	e/o Rubidoux Bl.	Light Industrial	50	45
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	50	45
39	Market St.	e/o Hall Av.	Light Industrial	50	45
40	Market St.	e/o Rivera St.	Business Park	50	45

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

² Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Elements.

TABLE 6-2: EXISTIND CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes ¹				
			Existing				
			Without Project	With Alt 1	With Alt 1A	With Alt 2	With Alt 2A
1	Cedar Av.	n/o I-10 Fwy.	40,344	40,822	40,822	40,842	40,842
2	Cedar Av.	s/o I-10 Fwy.	27,873	29,346	29,346	29,378	29,378
3	Cedar Av.	s/o Slover Av.	23,526	25,285	25,285	25,392	25,392
4	Cedar Av.	s/o Santa Ana Av.	23,715	25,820	25,820	26,036	26,036
5	Cedar Av.	s/o Jurupa Av.	20,881	23,181	23,181	23,527	23,527
6	Rubidoux Bl.	s/o El Rivino Rd.	21,070	24,138	25,178	24,531	25,563
7	Rubidoux Bl.	s/o Production Circle	20,786	25,469	25,246	25,862	25,632
8	Rubidoux Bl.	s/o 20th St.	17,574	20,118	19,871	20,304	20,057
9	Rubidoux Bl.	s/o 24th St.	18,519	20,815	20,815	21,002	21,002
10	Rubidoux Bl.	s/o 26th St.	19,086	21,382	21,382	21,569	21,569
11	Rubidoux Bl.	s/o 28th St.	20,597	22,868	22,868	22,976	22,976
12	Rubidoux Bl.	s/o SR-60 Fwy.	23,810	24,340	24,340	24,399	24,399
13	Rubidoux Bl.	s/o 34th St.	18,141	18,671	18,671	18,730	18,730
14	Cactus Av.	n/o El Rivino Rd.	2,929	3,215	3,215	3,320	3,320
15	Rivera St.	n/o Market St.	8,692	8,797	8,797	8,862	8,862
16	Riverside Av.	n/o I-10 Fwy.	37,604	37,978	37,978	37,998	37,998
17	Riverside Av.	s/o I-10 Fwy.	38,738	39,927	39,927	39,961	39,961
18	Riverside Av.	s/o Slover Av.	36,093	37,295	37,295	37,328	37,328
19	Riverside Av.	s/o Santa Ana Av.	27,967	29,221	29,221	29,255	29,255
20	Riverside Av.	s/o Jurupa Av.	32,691	33,946	33,946	33,979	33,979
21	Rancho Av.	n/o Agua Mansa Rd.	17,763	18,148	18,148	18,177	18,177
22	Rancho Av.	s/o Agua Mansa Rd.	12,661	12,918	12,918	12,940	12,940
23	Slover Av.	w/o Cedar Av.	10,960	11,181	11,181	11,260	11,260
24	Slover Av.	w/o Riverside Av.	10,015	10,067	10,067	10,067	10,067
25	Santa Ana Av.	w/o Cedar Av.	6,330	6,664	6,664	6,745	6,745
26	Santa Ana Av.	w/o Riverside Av.	3,968	4,020	4,020	4,020	4,020
27	Jurupa Av.	w/o Cedar Av.	5,102	5,284	5,284	5,389	5,389
28	El Rivino Rd.	e/o Cedar Av.	4,063	6,301	9,097	7,096	9,990
29	El Rivino Rd.	e/o Cactus Av.	3,779	5,849	5,849	6,501	6,501
30	El Rivino Rd.	e/o Hall Av.	2,929	4,257	4,257	4,387	4,387
31	Agua Mansa Rd.	e/o 20th St.	10,677	11,509	11,856	12,114	12,458
32	Agua Mansa Rd.	w/o Brown Av.	10,677	11,378	11,856	11,984	12,458
33	Agua Mansa Rd.	w/o Holly St.	12,094	12,730	12,656	13,201	13,224
34	Agua Mansa Rd.	e/o Holly St.	12,094	12,282	12,675	12,631	12,631
35	Agua Mansa Rd.	e/o El Rivino Rd.	14,361	16,271	16,271	16,357	16,357
36	Agua Mansa Rd.	e/o Riverside Av.	7,275	7,917	7,917	7,970	7,970
37	20th St.	e/o Rubidoux Bl.	20,975	23,696	23,439	23,919	23,648
38	20th St.	e/o Agua Mansa Rd.	16,062	19,329	19,329	19,579	19,579
39	Market St.	e/o Hall Av.	22,298	25,565	25,565	25,776	25,776
40	Market St.	e/o Rivera St.	26,739	29,901	29,901	30,048	30,048

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

TABLE 6-3: OPENING YEAR 2020 CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes ¹				
			Opening Year 2020				
			Without Project	With Alt 1	With Alt 1A	With Alt 2	With Alt 2A
1	Cedar Av.	n/o I-10 Fwy.	44,029	44,507	44,507	44,527	44,527
2	Cedar Av.	s/o I-10 Fwy.	37,699	39,173	39,173	39,205	39,205
3	Cedar Av.	s/o Slover Av.	30,518	32,277	32,277	32,383	32,383
4	Cedar Av.	s/o Santa Ana Av.	30,707	32,812	32,812	33,028	33,028
5	Cedar Av.	s/o Jurupa Av.	27,873	30,172	30,172	30,519	30,519
6	Rubidoux Bl.	s/o El Rivino Rd.	28,439	31,507	32,547	31,900	32,933
7	Rubidoux Bl.	s/o Production Circle	28,156	32,838	32,615	33,231	33,001
8	Rubidoux Bl.	s/o 20th St.	23,621	26,165	25,917	26,351	26,104
9	Rubidoux Bl.	s/o 24th St.	24,377	26,673	26,673	26,860	26,860
10	Rubidoux Bl.	s/o 26th St.	25,227	27,524	27,524	27,710	27,710
11	Rubidoux Bl.	s/o 28th St.	26,550	28,820	28,820	28,929	28,929
12	Rubidoux Bl.	s/o SR-60 Fwy.	27,306	27,835	27,835	27,894	27,894
13	Rubidoux Bl.	s/o 34th St.	20,503	21,033	21,033	21,092	21,092
14	Cactus Av.	n/o El Rivino Rd.	7,464	7,751	7,751	7,855	7,855
15	Rivera St.	n/o Market St.	10,110	10,214	10,214	10,279	10,279
16	Riverside Av.	n/o I-10 Fwy.	40,439	40,812	40,812	40,832	40,832
17	Riverside Av.	s/o I-10 Fwy.	45,163	46,352	46,352	46,385	46,385
18	Riverside Av.	s/o Slover Av.	41,762	42,964	42,964	42,997	42,997
19	Riverside Av.	s/o Santa Ana Av.	33,353	34,607	34,607	34,640	34,640
20	Riverside Av.	s/o Jurupa Av.	38,171	39,426	39,426	39,459	39,459
21	Rancho Av.	n/o Agua Mansa Rd.	20,219	20,605	20,605	20,634	20,634
22	Rancho Av.	s/o Agua Mansa Rd.	14,645	14,902	14,902	14,924	14,924
23	Slover Av.	w/o Cedar Av.	13,795	14,016	14,016	14,094	14,094
24	Slover Av.	w/o Riverside Av.	11,338	11,390	11,390	11,390	11,390
25	Santa Ana Av.	w/o Cedar Av.	8,031	8,364	8,364	8,446	8,446
26	Santa Ana Av.	w/o Riverside Av.	5,102	5,154	5,154	5,154	5,154
27	Jurupa Av.	w/o Cedar Av.	7,181	7,363	7,363	7,467	7,467
28	El Rivino Rd.	e/o Cedar Av.	9,543	11,781	14,577	12,576	15,470
29	El Rivino Rd.	e/o Cactus Av.	5,669	7,739	7,739	8,391	8,391
30	El Rivino Rd.	e/o Hall Av.	3,874	5,202	5,202	5,332	5,332
31	Agua Mansa Rd.	e/o 20th St.	14,739	15,571	15,918	16,177	16,521
32	Agua Mansa Rd.	w/o Brown Av.	14,739	15,441	15,918	16,047	16,521
33	Agua Mansa Rd.	w/o Holly St.	15,023	15,659	15,585	16,130	16,153
34	Agua Mansa Rd.	e/o Holly St.	15,023	15,211	15,604	15,560	15,560
35	Agua Mansa Rd.	e/o El Rivino Rd.	18,330	20,239	20,239	20,325	20,325
36	Agua Mansa Rd.	e/o Riverside Av.	9,637	10,279	10,279	10,332	10,332
37	20th St.	e/o Rubidoux Bl.	28,062	30,783	30,525	31,005	30,734
38	20th St.	e/o Agua Mansa Rd.	24,282	27,549	27,549	27,799	27,799
39	Market St.	e/o Hall Av.	33,069	36,336	36,336	36,547	36,547
40	Market St.	e/o Rivera St.	36,754	39,917	39,917	40,063	40,063

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

TABLE 6-4: YEAR 2035 CONDITIONS AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes ¹				
			Year 2035				
			Without Project	With Alt 1	With Alt 1A	With Alt 2	With Alt 2A
1	Cedar Av.	n/o I-10 Fwy.	46,297	46,774	46,774	46,794	46,794
2	Cedar Av.	s/o I-10 Fwy.	37,699	39,173	39,173	39,205	39,205
3	Cedar Av.	s/o Slover Av.	30,518	32,277	32,277	32,383	32,383
4	Cedar Av.	s/o Santa Ana Av.	30,707	32,812	32,812	33,028	33,028
5	Cedar Av.	s/o Jurupa Av.	27,873	30,172	30,172	30,519	30,519
6	Rubidoux Bl.	s/o El Rivino Rd.	28,439	31,507	32,547	31,900	32,933
7	Rubidoux Bl.	s/o Production Circle	28,156	32,838	32,615	33,231	33,001
8	Rubidoux Bl.	s/o 20th St.	23,621	26,165	25,917	26,351	26,104
9	Rubidoux Bl.	s/o 24th St.	24,377	26,673	26,673	26,860	26,860
10	Rubidoux Bl.	s/o 26th St.	25,227	27,524	27,524	27,710	27,710
11	Rubidoux Bl.	s/o 28th St.	27,400	29,671	29,671	29,779	29,779
12	Rubidoux Bl.	s/o SR-60 Fwy.	27,778	28,308	28,308	28,367	28,367
13	Rubidoux Bl.	s/o 34th St.	20,503	21,033	21,033	21,092	21,092
14	Cactus Av.	n/o El Rivino Rd.	7,464	7,751	7,751	7,855	7,855
15	Rivera St.	n/o Market St.	10,110	10,214	10,214	10,279	10,279
16	Riverside Av.	n/o I-10 Fwy.	49,604	49,977	49,977	49,997	49,997
17	Riverside Av.	s/o I-10 Fwy.	54,989	56,179	56,179	56,212	56,212
18	Riverside Av.	s/o Slover Av.	51,021	52,223	52,223	52,256	52,256
19	Riverside Av.	s/o Santa Ana Av.	43,651	44,906	44,906	44,939	44,939
20	Riverside Av.	s/o Jurupa Av.	43,651	44,906	44,906	44,939	44,939
21	Rancho Av.	n/o Agua Mansa Rd.	23,148	23,534	23,534	23,563	23,563
22	Rancho Av.	s/o Agua Mansa Rd.	18,802	19,060	19,060	19,082	19,082
23	Slover Av.	w/o Cedar Av.	16,818	17,039	17,039	17,117	17,117
24	Slover Av.	w/o Riverside Av.	11,621	11,674	11,674	11,674	11,674
25	Santa Ana Av.	w/o Cedar Av.	8,787	9,120	9,120	9,201	9,201
26	Santa Ana Av.	w/o Riverside Av.	5,102	5,154	5,154	5,154	5,154
27	Jurupa Av.	w/o Cedar Av.	7,370	7,552	7,552	7,656	7,656
28	El Rivino Rd.	e/o Cedar Av.	10,771	13,009	15,805	13,804	16,698
29	El Rivino Rd.	e/o Cactus Av.	6,236	8,305	8,305	8,957	8,957
30	El Rivino Rd.	e/o Hall Av.	3,874	5,202	5,202	5,332	5,332
31	Agua Mansa Rd.	e/o 20th St.	18,802	19,634	19,981	20,240	20,584
32	Agua Mansa Rd.	w/o Brown Av.	18,802	19,504	19,981	20,110	20,584
33	Agua Mansa Rd.	w/o Holly St.	18,519	19,155	19,081	19,626	19,649
34	Agua Mansa Rd.	e/o Holly St.	18,519	18,707	19,100	19,056	19,056
35	Agua Mansa Rd.	e/o El Rivino Rd.	22,582	24,491	24,491	24,577	24,577
36	Agua Mansa Rd.	e/o Riverside Av.	10,393	11,035	11,035	11,088	11,088
37	20th St.	e/o Rubidoux Bl.	28,156	30,877	30,620	31,100	30,828
38	20th St.	e/o Agua Mansa Rd.	24,282	27,549	27,549	27,799	27,799
39	Market St.	e/o Hall Av.	33,069	36,336	36,336	36,547	36,547
40	Market St.	e/o Rivera St.	41,195	44,357	44,357	44,504	44,504

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

Traffic noise analysis provided in this report is based on the actual vehicle volumes derived from passenger car equivalent (PCE) average daily traffic (ADT) volumes obtained from the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis* prepared by Ganddini Group, Inc. for the Project. (2) PCE volumes convert medium and heavy trucks into an equivalent number of passenger cars for traffic impact analysis, however, this approach underestimates the potential impacts with regard to off-site traffic noise levels generated by medium and heavy trucks. Therefore, to present a conservative off-site traffic noise analysis and account for the effect of individual medium and heavy truck trips on the study area roadway network, this noise study converts all PCE ADT volumes into actual vehicle volumes for analysis. Appendix 6.1 includes the PCE to actual vehicle ADT volume calculation worksheets by roadway segment.

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

Table 6-5 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-6 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-7 to 6-12 show the vehicle mixes used for the with Project traffic scenarios.

TABLE 6-5: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	73.25%	8.12%	18.63%	100.00%
Medium Trucks	82.18%	3.85%	13.97%	100.00%
Heavy Trucks	76.47%	3.99%	19.54%	100.00%

Based on existing ADT count data taken at Market Street and 24th Street. Vehicle mix percentage values rounded to the nearest one-hundredth.

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

TABLE 6-6: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	89.90%	2.50%	7.60%	100.00%

Based on existing PM peak hour count data taken at Rubidoux Boulevard and 20th Street/Market Street (Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-7: EXISTING WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 1 ¹				With Project Alternative 1A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.84%	2.50%	7.66%	100%	89.84%	2.50%	7.66%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.07%	2.61%	8.32%	100%	89.07%	2.61%	8.32%	100%
3	Cedar Av.	s/o Slover Av.	88.95%	2.62%	8.43%	100%	88.95%	2.62%	8.43%	100%
4	Cedar Av.	s/o Santa Ana Av.	88.72%	2.65%	8.62%	100%	88.72%	2.65%	8.62%	100%
5	Cedar Av.	s/o Jurupa Av.	88.68%	2.65%	8.68%	100%	88.68%	2.65%	8.68%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	86.40%	3.04%	10.56%	100%	87.64%	2.79%	9.57%	100%
7	Rubidoux Bl.	s/o Production Circle	87.23%	2.85%	9.92%	100%	87.79%	2.76%	9.45%	100%
8	Rubidoux Bl.	s/o 20th St.	88.37%	2.69%	8.95%	100%	88.22%	2.72%	9.06%	100%
9	Rubidoux Bl.	s/o 24th St.	88.30%	2.71%	8.99%	100%	88.30%	2.71%	8.99%	100%
10	Rubidoux Bl.	s/o 26th St.	88.34%	2.70%	8.95%	100%	88.34%	2.70%	8.95%	100%
11	Rubidoux Bl.	s/o 28th St.	88.43%	2.69%	8.87%	100%	88.43%	2.69%	8.87%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.82%	2.50%	7.69%	100%	89.82%	2.50%	7.69%	100%
13	Rubidoux Bl.	s/o 34th St.	89.79%	2.50%	7.71%	100%	89.79%	2.50%	7.71%	100%
14	Cactus Av.	n/o El Rivino Rd.	90.80%	2.28%	6.92%	100%	90.80%	2.28%	6.92%	100%
15	Rivera St.	n/o Market St.	90.02%	2.47%	7.51%	100%	90.02%	2.47%	7.51%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.80%	2.51%	7.69%	100%	89.80%	2.51%	7.69%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.28%	2.59%	8.13%	100%	89.28%	2.59%	8.13%	100%
18	Riverside Av.	s/o Slover Av.	89.24%	2.60%	8.17%	100%	89.24%	2.60%	8.17%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.07%	2.62%	8.31%	100%	89.07%	2.62%	8.31%	100%
20	Riverside Av.	s/o Jurupa Av.	89.19%	2.60%	8.21%	100%	89.19%	2.60%	8.21%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.57%	2.55%	7.88%	100%	89.57%	2.55%	7.88%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.72%	2.52%	7.76%	100%	89.72%	2.52%	7.76%	100%
23	Slover Av.	w/o Cedar Av.	90.10%	2.45%	7.45%	100%	90.10%	2.45%	7.45%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.56%	100%	89.95%	2.49%	7.56%	100%
25	Santa Ana Av.	w/o Cedar Av.	88.92%	2.65%	8.44%	100%	88.92%	2.65%	8.44%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.03%	2.47%	7.50%	100%	90.03%	2.47%	7.50%	100%
27	Jurupa Av.	w/o Cedar Av.	90.25%	2.41%	7.34%	100%	90.25%	2.41%	7.34%	100%
28	El Rivino Rd.	e/o Cedar Av.	89.58%	2.31%	8.11%	100%	82.52%	3.44%	14.05%	100%
29	El Rivino Rd.	e/o Cactus Av.	85.92%	2.97%	11.12%	100%	85.92%	2.97%	11.12%	100%
30	El Rivino Rd.	e/o Hall Av.	93.05%	1.72%	5.23%	100%	93.05%	1.72%	5.23%	100%
31	Agua Mansa Rd.	e/o 20th St.	88.49%	2.70%	8.81%	100%	86.34%	3.07%	10.59%	100%
32	Agua Mansa Rd.	w/o Brown Av.	88.36%	2.73%	8.91%	100%	86.34%	3.07%	10.59%	100%
33	Agua Mansa Rd.	w/o Holly St.	88.47%	2.72%	8.81%	100%	88.99%	2.63%	8.38%	100%
34	Agua Mansa Rd.	e/o Holly St.	89.05%	2.64%	8.31%	100%	86.29%	3.11%	10.60%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	87.91%	2.77%	9.31%	100%	87.91%	2.77%	9.31%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	88.86%	2.63%	8.51%	100%	88.86%	2.63%	8.51%	100%
37	20th St.	e/o Rubidoux Bl.	88.26%	2.72%	9.03%	100%	88.45%	2.69%	8.87%	100%
38	20th St.	e/o Agua Mansa Rd.	87.03%	2.89%	10.07%	100%	87.03%	2.89%	10.07%	100%
39	Market St.	e/o Hall Av.	87.73%	2.80%	9.47%	100%	87.73%	2.80%	9.47%	100%
40	Market St.	e/o Rivera St.	88.01%	2.76%	9.22%	100%	88.01%	2.76%	9.22%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-8: EXISTING WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 2 ¹				With Project Alternative 2A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.86%	2.50%	7.65%	100%	89.86%	2.50%	7.65%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.19%	2.57%	8.24%	100%	89.19%	2.57%	8.24%	100%
3	Cedar Av.	s/o Slover Av.	89.14%	2.56%	8.30%	100%	89.14%	2.56%	8.30%	100%
4	Cedar Av.	s/o Santa Ana Av.	88.99%	2.57%	8.44%	100%	88.99%	2.57%	8.44%	100%
5	Cedar Av.	s/o Jurupa Av.	89.03%	2.54%	8.43%	100%	89.03%	2.54%	8.43%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	87.30%	2.79%	9.91%	100%	88.51%	2.57%	8.92%	100%
7	Rubidoux Bl.	s/o Production Circle	88.07%	2.62%	9.31%	100%	88.65%	2.53%	8.81%	100%
8	Rubidoux Bl.	s/o 20th St.	88.71%	2.57%	8.72%	100%	88.57%	2.60%	8.82%	100%
9	Rubidoux Bl.	s/o 24th St.	88.63%	2.60%	8.77%	100%	88.63%	2.60%	8.77%	100%
10	Rubidoux Bl.	s/o 26th St.	88.67%	2.60%	8.74%	100%	88.67%	2.60%	8.74%	100%
11	Rubidoux Bl.	s/o 28th St.	88.70%	2.60%	8.70%	100%	88.70%	2.60%	8.70%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.87%	2.48%	7.65%	100%	89.87%	2.48%	7.65%	100%
13	Rubidoux Bl.	s/o 34th St.	89.85%	2.48%	7.67%	100%	89.85%	2.48%	7.67%	100%
14	Cactus Av.	n/o El Rivino Rd.	91.09%	2.21%	6.71%	100%	91.09%	2.21%	6.71%	100%
15	Rivera St.	n/o Market St.	90.09%	2.45%	7.45%	100%	90.09%	2.45%	7.45%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.83%	2.50%	7.67%	100%	89.83%	2.50%	7.67%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.37%	2.56%	8.08%	100%	89.37%	2.56%	8.08%	100%
18	Riverside Av.	s/o Slover Av.	89.33%	2.56%	8.11%	100%	89.33%	2.56%	8.11%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.19%	2.57%	8.23%	100%	89.19%	2.57%	8.23%	100%
20	Riverside Av.	s/o Jurupa Av.	89.29%	2.56%	8.14%	100%	89.29%	2.56%	8.14%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.64%	2.52%	7.84%	100%	89.64%	2.52%	7.84%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.77%	2.50%	7.73%	100%	89.77%	2.50%	7.73%	100%
23	Slover Av.	w/o Cedar Av.	90.17%	2.43%	7.40%	100%	90.17%	2.43%	7.40%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.56%	100%	89.95%	2.49%	7.56%	100%
25	Santa Ana Av.	w/o Cedar Av.	89.20%	2.55%	8.24%	100%	89.20%	2.55%	8.24%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.03%	2.47%	7.50%	100%	90.03%	2.47%	7.50%	100%
27	Jurupa Av.	w/o Cedar Av.	90.44%	2.37%	7.20%	100%	90.44%	2.37%	7.20%	100%
28	El Rivino Rd.	e/o Cedar Av.	90.74%	2.00%	7.27%	100%	83.09%	3.07%	13.84%	100%
29	El Rivino Rd.	e/o Cactus Av.	87.91%	2.45%	9.63%	100%	87.91%	2.45%	9.63%	100%
30	El Rivino Rd.	e/o Hall Av.	93.26%	1.67%	5.07%	100%	93.26%	1.67%	5.07%	100%
31	Agua Mansa Rd.	e/o 20th St.	88.69%	2.59%	8.72%	100%	86.66%	2.90%	10.45%	100%
32	Agua Mansa Rd.	w/o Brown Av.	88.57%	2.62%	8.82%	100%	86.66%	2.90%	10.45%	100%
33	Agua Mansa Rd.	w/o Holly St.	89.56%	2.48%	7.96%	100%	89.40%	2.51%	8.09%	100%
34	Agua Mansa Rd.	e/o Holly St.	86.59%	3.00%	10.41%	100%	86.59%	3.00%	10.41%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	88.25%	2.66%	9.09%	100%	88.25%	2.66%	9.09%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	89.09%	2.56%	8.36%	100%	89.09%	2.56%	8.36%	100%
37	20th St.	e/o Rubidoux Bl.	88.80%	2.57%	8.63%	100%	89.05%	2.54%	8.42%	100%
38	20th St.	e/o Agua Mansa Rd.	87.58%	2.71%	9.70%	100%	87.58%	2.71%	9.70%	100%
39	Market St.	e/o Hall Av.	88.12%	2.67%	9.21%	100%	88.12%	2.67%	9.21%	100%
40	Market St.	e/o Rivera St.	88.32%	2.66%	9.02%	100%	88.32%	2.66%	9.02%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-9: OPENING YEAR 2020 WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 1 ¹				With Project Alternative 1A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.84%	2.50%	7.66%	100%	89.84%	2.50%	7.66%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.28%	2.58%	8.14%	100%	89.28%	2.58%	8.14%	100%
3	Cedar Av.	s/o Slover Av.	89.16%	2.60%	8.25%	100%	89.16%	2.60%	8.25%	100%
4	Cedar Av.	s/o Santa Ana Av.	88.98%	2.62%	8.40%	100%	88.98%	2.62%	8.40%	100%
5	Cedar Av.	s/o Jurupa Av.	88.96%	2.61%	8.43%	100%	88.96%	2.61%	8.43%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	87.22%	2.91%	9.87%	100%	88.15%	2.73%	9.12%	100%
7	Rubidoux Bl.	s/o Production Circle	87.83%	2.77%	9.40%	100%	88.27%	2.70%	9.04%	100%
8	Rubidoux Bl.	s/o 20th St.	88.72%	2.64%	8.63%	100%	88.62%	2.67%	8.72%	100%
9	Rubidoux Bl.	s/o 24th St.	88.65%	2.66%	8.69%	100%	88.65%	2.66%	8.69%	100%
10	Rubidoux Bl.	s/o 26th St.	88.69%	2.66%	8.65%	100%	88.69%	2.66%	8.65%	100%
11	Rubidoux Bl.	s/o 28th St.	88.74%	2.65%	8.61%	100%	88.74%	2.65%	8.61%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.83%	2.50%	7.67%	100%	89.83%	2.50%	7.67%	100%
13	Rubidoux Bl.	s/o 34th St.	89.80%	2.50%	7.70%	100%	89.80%	2.50%	7.70%	100%
14	Cactus Av.	n/o El Rivino Rd.	90.27%	2.41%	7.32%	100%	90.27%	2.41%	7.32%	100%
15	Rivera St.	n/o Market St.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.81%	2.51%	7.68%	100%	89.81%	2.51%	7.68%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.36%	2.58%	8.06%	100%	89.36%	2.58%	8.06%	100%
18	Riverside Av.	s/o Slover Av.	89.32%	2.58%	8.09%	100%	89.32%	2.58%	8.09%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.20%	2.60%	8.20%	100%	89.20%	2.60%	8.20%	100%
20	Riverside Av.	s/o Jurupa Av.	89.29%	2.59%	8.13%	100%	89.29%	2.59%	8.13%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.61%	2.54%	7.85%	100%	89.61%	2.54%	7.85%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.75%	2.52%	7.74%	100%	89.75%	2.52%	7.74%	100%
23	Slover Av.	w/o Cedar Av.	90.06%	2.46%	7.48%	100%	90.06%	2.46%	7.48%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.57%	100%	89.95%	2.49%	7.57%	100%
25	Santa Ana Av.	w/o Cedar Av.	89.12%	2.62%	8.27%	100%	89.12%	2.62%	8.27%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
27	Jurupa Av.	w/o Cedar Av.	90.15%	2.44%	7.41%	100%	90.15%	2.44%	7.41%	100%
28	El Rivino Rd.	e/o Cedar Av.	89.73%	2.40%	7.87%	100%	85.29%	3.08%	11.62%	100%
29	El Rivino Rd.	e/o Cactus Av.	86.89%	2.85%	10.26%	100%	86.89%	2.85%	10.26%	100%
30	El Rivino Rd.	e/o Hall Av.	92.48%	1.86%	5.66%	100%	92.48%	1.86%	5.66%	100%
31	Agua Mansa Rd.	e/o 20th St.	88.86%	2.65%	8.49%	100%	87.25%	2.92%	9.83%	100%
32	Agua Mansa Rd.	w/o Brown Av.	88.77%	2.67%	8.56%	100%	87.25%	2.92%	9.83%	100%
33	Agua Mansa Rd.	w/o Holly St.	88.74%	2.68%	8.58%	100%	89.16%	2.61%	8.23%	100%
34	Agua Mansa Rd.	e/o Holly St.	89.22%	2.61%	8.17%	100%	86.97%	3.00%	10.03%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	88.30%	2.72%	8.98%	100%	88.30%	2.72%	8.98%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	89.10%	2.60%	8.30%	100%	89.10%	2.60%	8.30%	100%
37	20th St.	e/o Rubidoux Bl.	88.64%	2.67%	8.70%	100%	88.79%	2.64%	8.57%	100%
38	20th St.	e/o Agua Mansa Rd.	87.89%	2.78%	9.33%	100%	87.89%	2.78%	9.33%	100%
39	Market St.	e/o Hall Av.	88.38%	2.71%	8.91%	100%	88.38%	2.71%	8.91%	100%
40	Market St.	e/o Rivera St.	88.49%	2.70%	8.82%	100%	88.49%	2.70%	8.82%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-10: OPENING YEAR 2020 WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 2 ¹				With Project Alternative 2A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.86%	2.50%	7.64%	100%	89.86%	2.50%	7.64%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.37%	2.55%	8.08%	100%	89.37%	2.55%	8.08%	100%
3	Cedar Av.	s/o Slover Av.	89.31%	2.54%	8.15%	100%	89.31%	2.54%	8.15%	100%
4	Cedar Av.	s/o Santa Ana Av.	89.18%	2.55%	8.26%	100%	89.18%	2.55%	8.26%	100%
5	Cedar Av.	s/o Jurupa Av.	89.23%	2.53%	8.24%	100%	89.23%	2.53%	8.24%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	87.90%	2.72%	9.37%	100%	88.82%	2.55%	8.62%	100%
7	Rubidoux Bl.	s/o Production Circle	88.47%	2.59%	8.93%	100%	88.93%	2.53%	8.54%	100%
8	Rubidoux Bl.	s/o 20th St.	88.98%	2.56%	8.46%	100%	88.88%	2.58%	8.54%	100%
9	Rubidoux Bl.	s/o 24th St.	88.91%	2.58%	8.51%	100%	88.91%	2.58%	8.51%	100%
10	Rubidoux Bl.	s/o 26th St.	88.94%	2.58%	8.49%	100%	88.94%	2.58%	8.49%	100%
11	Rubidoux Bl.	s/o 28th St.	88.94%	2.58%	8.48%	100%	88.94%	2.58%	8.48%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.87%	2.49%	7.64%	100%	89.87%	2.49%	7.64%	100%
13	Rubidoux Bl.	s/o 34th St.	89.86%	2.48%	7.66%	100%	89.86%	2.48%	7.66%	100%
14	Cactus Av.	n/o El Rivino Rd.	90.40%	2.38%	7.22%	100%	90.40%	2.38%	7.22%	100%
15	Rivera St.	n/o Market St.	90.07%	2.46%	7.47%	100%	90.07%	2.46%	7.47%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.83%	2.50%	7.67%	100%	89.83%	2.50%	7.67%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.44%	2.55%	8.01%	100%	89.44%	2.55%	8.01%	100%
18	Riverside Av.	s/o Slover Av.	89.41%	2.55%	8.04%	100%	89.41%	2.55%	8.04%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.30%	2.56%	8.13%	100%	89.30%	2.56%	8.13%	100%
20	Riverside Av.	s/o Jurupa Av.	89.38%	2.56%	8.07%	100%	89.38%	2.56%	8.07%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.67%	2.52%	7.81%	100%	89.67%	2.52%	7.81%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.79%	2.50%	7.71%	100%	89.79%	2.50%	7.71%	100%
23	Slover Av.	w/o Cedar Av.	90.11%	2.45%	7.44%	100%	90.11%	2.45%	7.44%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.57%	100%	89.95%	2.49%	7.57%	100%
25	Santa Ana Av.	w/o Cedar Av.	89.34%	2.54%	8.12%	100%	89.34%	2.54%	8.12%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
27	Jurupa Av.	w/o Cedar Av.	90.29%	2.40%	7.31%	100%	90.29%	2.40%	7.31%	100%
28	El Rivino Rd.	e/o Cedar Av.	90.37%	2.22%	7.41%	100%	85.50%	2.87%	11.63%	100%
29	El Rivino Rd.	e/o Cactus Av.	88.36%	2.46%	9.18%	100%	88.36%	2.46%	9.18%	100%
30	El Rivino Rd.	e/o Hall Av.	92.66%	1.82%	5.52%	100%	92.66%	1.82%	5.52%	100%
31	Agua Mansa Rd.	e/o 20th St.	88.99%	2.57%	8.44%	100%	87.45%	2.80%	9.75%	100%
32	Agua Mansa Rd.	w/o Brown Av.	88.90%	2.59%	8.51%	100%	87.45%	2.80%	9.75%	100%
33	Agua Mansa Rd.	w/o Holly St.	89.62%	2.48%	7.90%	100%	89.49%	2.50%	8.00%	100%
34	Agua Mansa Rd.	e/o Holly St.	87.22%	2.90%	9.88%	100%	87.22%	2.90%	9.88%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	88.57%	2.63%	8.80%	100%	88.57%	2.63%	8.80%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	89.27%	2.54%	8.18%	100%	89.27%	2.54%	8.18%	100%
37	20th St.	e/o Rubidoux Bl.	89.05%	2.55%	8.40%	100%	89.24%	2.53%	8.23%	100%
38	20th St.	e/o Agua Mansa Rd.	88.27%	2.65%	9.08%	100%	88.27%	2.65%	9.08%	100%
39	Market St.	e/o Hall Av.	88.65%	2.62%	8.73%	100%	88.65%	2.62%	8.73%	100%
40	Market St.	e/o Rivera St.	88.71%	2.62%	8.67%	100%	88.71%	2.62%	8.67%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-11: YEAR 2035 WITH PROJECT ALT. 1 & 1A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 1 ¹				With Project Alternative 1A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.84%	2.50%	7.65%	100%	89.84%	2.50%	7.65%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.28%	2.58%	8.14%	100%	89.28%	2.58%	8.14%	100%
3	Cedar Av.	s/o Slover Av.	89.16%	2.60%	8.25%	100%	89.16%	2.60%	8.25%	100%
4	Cedar Av.	s/o Santa Ana Av.	88.98%	2.62%	8.40%	100%	88.98%	2.62%	8.40%	100%
5	Cedar Av.	s/o Jurupa Av.	88.96%	2.61%	8.43%	100%	88.96%	2.61%	8.43%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	87.22%	2.91%	9.87%	100%	88.15%	2.73%	9.12%	100%
7	Rubidoux Bl.	s/o Production Circle	87.83%	2.77%	9.40%	100%	88.27%	2.70%	9.04%	100%
8	Rubidoux Bl.	s/o 20th St.	88.72%	2.64%	8.63%	100%	88.62%	2.67%	8.72%	100%
9	Rubidoux Bl.	s/o 24th St.	88.65%	2.66%	8.69%	100%	88.65%	2.66%	8.69%	100%
10	Rubidoux Bl.	s/o 26th St.	88.69%	2.66%	8.65%	100%	88.69%	2.66%	8.65%	100%
11	Rubidoux Bl.	s/o 28th St.	88.77%	2.65%	8.58%	100%	88.77%	2.65%	8.58%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.83%	2.50%	7.67%	100%	89.83%	2.50%	7.67%	100%
13	Rubidoux Bl.	s/o 34th St.	89.80%	2.50%	7.70%	100%	89.80%	2.50%	7.70%	100%
14	Cactus Av.	n/o El Rivino Rd.	90.27%	2.41%	7.32%	100%	90.27%	2.41%	7.32%	100%
15	Rivera St.	n/o Market St.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.83%	2.51%	7.67%	100%	89.83%	2.51%	7.67%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.46%	2.56%	7.98%	100%	89.46%	2.56%	7.98%	100%
18	Riverside Av.	s/o Slover Av.	89.43%	2.57%	8.01%	100%	89.43%	2.57%	8.01%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.36%	2.58%	8.06%	100%	89.36%	2.58%	8.06%	100%
20	Riverside Av.	s/o Jurupa Av.	89.36%	2.58%	8.06%	100%	89.36%	2.58%	8.06%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.64%	2.54%	7.82%	100%	89.64%	2.54%	7.82%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.78%	2.51%	7.71%	100%	89.78%	2.51%	7.71%	100%
23	Slover Av.	w/o Cedar Av.	90.03%	2.47%	7.50%	100%	90.03%	2.47%	7.50%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.57%	100%	89.95%	2.49%	7.57%	100%
25	Santa Ana Av.	w/o Cedar Av.	89.18%	2.61%	8.21%	100%	89.18%	2.61%	8.21%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
27	Jurupa Av.	w/o Cedar Av.	90.14%	2.44%	7.42%	100%	90.14%	2.44%	7.42%	100%
28	El Rivino Rd.	e/o Cedar Av.	89.75%	2.41%	7.85%	100%	85.65%	3.04%	11.31%	100%
29	El Rivino Rd.	e/o Cactus Av.	87.09%	2.83%	10.08%	100%	87.09%	2.83%	10.08%	100%
30	El Rivino Rd.	e/o Hall Av.	92.48%	1.86%	5.66%	100%	92.48%	1.86%	5.66%	100%
31	Agua Mansa Rd.	e/o 20th St.	89.08%	2.62%	8.31%	100%	87.79%	2.84%	9.37%	100%
32	Agua Mansa Rd.	w/o Brown Av.	89.00%	2.64%	8.36%	100%	87.79%	2.84%	9.37%	100%
33	Agua Mansa Rd.	w/o Holly St.	88.95%	2.65%	8.40%	100%	89.30%	2.59%	8.11%	100%
34	Agua Mansa Rd.	e/o Holly St.	89.34%	2.59%	8.06%	100%	87.51%	2.91%	9.59%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	88.58%	2.68%	8.74%	100%	88.58%	2.68%	8.74%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	89.16%	2.59%	8.25%	100%	89.16%	2.59%	8.25%	100%
37	20th St.	e/o Rubidoux Bl.	88.64%	2.67%	8.70%	100%	88.79%	2.64%	8.57%	100%
38	20th St.	e/o Agua Mansa Rd.	87.89%	2.78%	9.33%	100%	87.89%	2.78%	9.33%	100%
39	Market St.	e/o Hall Av.	88.38%	2.71%	8.91%	100%	88.38%	2.71%	8.91%	100%
40	Market St.	e/o Rivera St.	88.63%	2.68%	8.69%	100%	88.63%	2.68%	8.69%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-12: YEAR 2035 WITH PROJECT ALT. 2 & 2A CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project Alternative 2 ¹				With Project Alternative 2A ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cedar Av.	n/o I-10 Fwy.	89.86%	2.50%	7.64%	100%	89.86%	2.50%	7.64%	100%
2	Cedar Av.	s/o I-10 Fwy.	89.37%	2.55%	8.08%	100%	89.37%	2.55%	8.08%	100%
3	Cedar Av.	s/o Slover Av.	89.31%	2.54%	8.15%	100%	89.31%	2.54%	8.15%	100%
4	Cedar Av.	s/o Santa Ana Av.	89.18%	2.55%	8.26%	100%	89.18%	2.55%	8.26%	100%
5	Cedar Av.	s/o Jurupa Av.	89.23%	2.53%	8.24%	100%	89.23%	2.53%	8.24%	100%
6	Rubidoux Bl.	s/o El Rivino Rd.	87.90%	2.72%	9.37%	100%	88.82%	2.55%	8.62%	100%
7	Rubidoux Bl.	s/o Production Circle	88.47%	2.59%	8.93%	100%	88.93%	2.53%	8.54%	100%
8	Rubidoux Bl.	s/o 20th St.	88.98%	2.56%	8.46%	100%	88.88%	2.58%	8.54%	100%
9	Rubidoux Bl.	s/o 24th St.	88.91%	2.58%	8.51%	100%	88.91%	2.58%	8.51%	100%
10	Rubidoux Bl.	s/o 26th St.	88.94%	2.58%	8.49%	100%	88.94%	2.58%	8.49%	100%
11	Rubidoux Bl.	s/o 28th St.	88.97%	2.58%	8.45%	100%	88.97%	2.58%	8.45%	100%
12	Rubidoux Bl.	s/o SR-60 Fwy.	89.87%	2.49%	7.64%	100%	89.87%	2.49%	7.64%	100%
13	Rubidoux Bl.	s/o 34th St.	89.86%	2.48%	7.66%	100%	89.86%	2.48%	7.66%	100%
14	Cactus Av.	n/o El Rivino Rd.	90.40%	2.38%	7.22%	100%	90.40%	2.38%	7.22%	100%
15	Rivera St.	n/o Market St.	90.07%	2.46%	7.47%	100%	90.07%	2.46%	7.47%	100%
16	Riverside Av.	n/o I-10 Fwy.	89.84%	2.50%	7.65%	100%	89.84%	2.50%	7.65%	100%
17	Riverside Av.	s/o I-10 Fwy.	89.52%	2.54%	7.94%	100%	89.52%	2.54%	7.94%	100%
18	Riverside Av.	s/o Slover Av.	89.49%	2.54%	7.96%	100%	89.49%	2.54%	7.96%	100%
19	Riverside Av.	s/o Santa Ana Av.	89.44%	2.55%	8.01%	100%	89.44%	2.55%	8.01%	100%
20	Riverside Av.	s/o Jurupa Av.	89.44%	2.55%	8.01%	100%	89.44%	2.55%	8.01%	100%
21	Rancho Av.	n/o Agua Mansa Rd.	89.70%	2.52%	7.78%	100%	89.70%	2.52%	7.78%	100%
22	Rancho Av.	s/o Agua Mansa Rd.	89.81%	2.50%	7.69%	100%	89.81%	2.50%	7.69%	100%
23	Slover Av.	w/o Cedar Av.	90.08%	2.46%	7.47%	100%	90.08%	2.46%	7.47%	100%
24	Slover Av.	w/o Riverside Av.	89.95%	2.49%	7.57%	100%	89.95%	2.49%	7.57%	100%
25	Santa Ana Av.	w/o Cedar Av.	89.39%	2.54%	8.07%	100%	89.39%	2.54%	8.07%	100%
26	Santa Ana Av.	w/o Riverside Av.	90.00%	2.47%	7.52%	100%	90.00%	2.47%	7.52%	100%
27	Jurupa Av.	w/o Cedar Av.	90.28%	2.41%	7.32%	100%	90.28%	2.41%	7.32%	100%
28	El Rivino Rd.	e/o Cedar Av.	90.33%	2.24%	7.43%	100%	85.83%	2.84%	11.33%	100%
29	El Rivino Rd.	e/o Cactus Av.	88.46%	2.47%	9.08%	100%	88.46%	2.47%	9.08%	100%
30	El Rivino Rd.	e/o Hall Av.	92.66%	1.82%	5.52%	100%	92.66%	1.82%	5.52%	100%
31	Agua Mansa Rd.	e/o 20th St.	89.17%	2.55%	8.27%	100%	87.94%	2.74%	9.32%	100%
32	Agua Mansa Rd.	w/o Brown Av.	89.10%	2.57%	8.32%	100%	87.94%	2.74%	9.32%	100%
33	Agua Mansa Rd.	w/o Holly St.	89.67%	2.49%	7.84%	100%	89.57%	2.50%	7.93%	100%
34	Agua Mansa Rd.	e/o Holly St.	87.71%	2.83%	9.46%	100%	87.71%	2.83%	9.46%	100%
35	Agua Mansa Rd.	e/o El Rivino Rd.	88.80%	2.61%	8.59%	100%	88.80%	2.61%	8.59%	100%
36	Agua Mansa Rd.	e/o Riverside Av.	89.32%	2.54%	8.14%	100%	89.32%	2.54%	8.14%	100%
37	20th St.	e/o Rubidoux Bl.	89.05%	2.55%	8.40%	100%	89.24%	2.53%	8.23%	100%
38	20th St.	e/o Agua Mansa Rd.	88.27%	2.65%	9.08%	100%	88.27%	2.65%	9.08%	100%
39	Market St.	e/o Hall Av.	88.65%	2.62%	8.73%	100%	88.65%	2.62%	8.73%	100%
40	Market St.	e/o Rivera St.	88.83%	2.61%	8.56%	100%	88.83%	2.61%	8.56%	100%

¹ Source: Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis, Ganddini Group, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

6.3 VIBRATION ASSESSMENT

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

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-13. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) 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: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$

TABLE 6-13: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.21

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the *Agua Mansa Commerce Park Specific Plan Traffic Impact Analysis*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Without / With Alternative 1 / With Alternative 1A / With Alternative 2 / With Alternative 2A:
 - This scenario refers to the Existing present-day noise conditions, without and with the proposed Project.
- Opening Year 2020 Without / With Alternative 1 / With Alternative 1A / With Alternative 2 / With Alternative 2A:
 - This scenario below refers to the background noise conditions at future Year 2020 without and with the proposed Project plus ambient growth. This scenario corresponds to Year 2020 conditions, and includes all cumulative projects identified in the *Traffic Impact Analysis*.
- Year 2035 Without / With Alternative 1 / With Alternative 1A / With Alternative 2 / With Alternative 2A:
 - This scenario below refers to the background noise conditions at future Year 2035 without and with the proposed Project plus ambient growth. This scenario corresponds to Year 2035 conditions, and includes all cumulative projects identified in the *Traffic Impact Analysis*.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-12 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 40 study area roadway segments analyzed from the without Project to the with Project conditions in each of the following timeframes: Existing, Opening Year 2020, and Year 2035 conditions, under Project Alternatives 1, 1A, 2, and 2A. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Exceeds Land Use Criteria Without Project?	Distance to Contour from Centerline (Feet)		
						70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	Yes	171	369	795
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.2	Yes	134	289	622
3	Cedar Av.	s/o Slover Av.	General Commercial	75.4	Yes	120	258	555
4	Cedar Av.	s/o Santa Ana Av.	Residential	75.5	Yes	120	259	558
5	Cedar Av.	s/o Jurupa Av.	General Commercial	76.7	Yes	145	312	672
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	75.7	Yes	142	305	657
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	75.6	Yes	140	302	651
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	74.9	Yes	125	270	582
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	75.1	Yes	130	280	603
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	75.3	Yes	132	285	615
11	Rubidoux Bl.	s/o 28th St.	Residential	75.6	Yes	139	300	647
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.2	Yes	154	331	713
13	Rubidoux Bl.	s/o 34th St.	Residential	75.0	Yes	128	276	595
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.3	Yes	RW	58	124
15	Rivera St.	n/o Market St.	Business Park	71.2	Yes	40	86	184
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.4	Yes	160	344	741
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.3	Yes	213	460	991
18	Riverside Av.	s/o Slover Av.	General Industrial	79.2	Yes	214	460	991
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	78.9	Yes	203	437	942
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.5	Yes	225	485	1045
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.4	Yes	102	219	471
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	72.9	Yes	81	175	376
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	Yes	94	203	437
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	Yes	89	191	412
25	Santa Ana Av.	w/o Cedar Av.	Residential	70.6	Yes	48	104	225
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	No	RW	76	165
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	Yes	RW	93	200
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	69.6	Yes	RW	89	193
29	El Rivino Rd.	e/o Cactus Av.	Residential	69.3	Yes	RW	85	184
30	El Rivino Rd.	e/o Hall Av.	Residential	68.2	Yes	RW	72	155
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	72.8	Yes	77	167	359
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	72.8	Yes	77	167	359
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	73.5	Yes	88	190	410
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.5	Yes	88	190	410
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	74.5	Yes	120	259	559
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	71.6	Yes	77	165	355
37	20th St.	e/o Rubidoux Bl.	Light Industrial	75.8	Yes	121	261	563
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	74.6	Yes	102	219	471
39	Market St.	e/o Hall Av.	Light Industrial	76.0	Yes	126	272	587
40	Market St.	e/o Rivera St.	Business Park	77.2	Yes	152	327	704

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-2: EXISTING WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	173	374	805
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.7	145	313	673
3	Cedar Av.	s/o Slover Av.	General Commercial	76.1	132	285	614
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.2	136	292	630
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.5	165	356	767
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.3	182	392	844
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.4	183	393	847
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	76.0	148	319	688
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.2	152	328	706
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.3	154	333	717
11	Rubidoux Bl.	s/o 28th St.	Residential	76.5	161	347	747
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.4	157	337	727
13	Rubidoux Bl.	s/o 34th St.	Residential	75.2	131	283	610
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.4	RW	59	126
15	Rivera St.	n/o Market St.	Business Park	71.2	40	86	184
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.5	162	348	750
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.6	225	484	1044
18	Riverside Av.	s/o Slover Av.	General Industrial	79.6	226	486	1048
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	79.3	218	469	1010
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.9	239	515	1110
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.6	105	226	487
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.0	83	179	385
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	95	204	439
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	89	191	412
25	Santa Ana Av.	w/o Cedar Av.	Residential	71.2	53	114	245
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	RW	77	165
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	RW	93	201
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	71.7	57	123	265
29	El Rivino Rd.	e/o Cactus Av.	Residential	72.4	64	138	297
30	El Rivino Rd.	e/o Hall Av.	Residential	68.7	RW	77	166
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	73.6	87	188	406
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	73.6	87	188	405
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.2	98	212	457
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.8	93	201	433
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	75.7	145	312	672
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	72.3	86	184	397
37	20th St.	e/o Rubidoux Bl.	Light Industrial	76.9	143	309	665
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.3	132	285	614
39	Market St.	e/o Hall Av.	Light Industrial	77.3	154	333	717
40	Market St.	e/o Rivera St.	Business Park	78.3	180	387	835

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-3: EXISTING WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	173	374	805
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.7	145	313	673
3	Cedar Av.	s/o Slover Av.	General Commercial	76.1	132	285	614
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.2	136	292	630
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.5	165	356	767
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.2	178	383	826
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.2	177	382	822
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	76.0	148	319	687
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.2	152	328	706
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.3	154	333	717
11	Rubidoux Bl.	s/o 28th St.	Residential	76.5	161	347	747
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.4	157	337	727
13	Rubidoux Bl.	s/o 34th St.	Residential	75.2	131	283	610
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.4	RW	59	126
15	Rivera St.	n/o Market St.	Business Park	71.2	40	86	184
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.5	162	348	750
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.6	225	484	1044
18	Riverside Av.	s/o Slover Av.	General Industrial	79.6	226	486	1048
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	79.3	218	469	1010
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.9	239	515	1110
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.6	105	226	487
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.0	83	179	385
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	95	204	439
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	89	191	412
25	Santa Ana Av.	w/o Cedar Av.	Residential	71.2	53	114	245
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	RW	77	165
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	RW	93	201
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	75.2	98	210	453
29	El Rivino Rd.	e/o Cactus Av.	Residential	72.4	64	138	297
30	El Rivino Rd.	e/o Hall Av.	Residential	68.7	RW	77	166
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	74.4	98	211	456
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	74.4	98	211	456
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.0	96	206	444
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	74.8	108	233	501
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	75.7	145	312	672
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	72.3	86	184	397
37	20th St.	e/o Rubidoux Bl.	Light Industrial	76.8	141	304	654
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.3	132	285	614
39	Market St.	e/o Hall Av.	Light Industrial	77.3	154	333	717
40	Market St.	e/o Rivera St.	Business Park	78.3	180	387	835

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-4: EXISTING WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	173	373	804
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.7	144	311	670
3	Cedar Av.	s/o Slover Av.	General Commercial	76.0	132	283	610
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.2	135	291	626
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.5	164	354	763
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.2	178	383	825
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.2	178	384	828
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	76.0	147	317	683
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.1	151	325	700
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.2	153	330	712
11	Rubidoux Bl.	s/o 28th St.	Residential	76.5	160	344	741
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.4	156	337	726
13	Rubidoux Bl.	s/o 34th St.	Residential	75.2	131	283	609
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.4	RW	59	127
15	Rivera St.	n/o Market St.	Business Park	71.2	40	86	185
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.5	162	348	750
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.6	224	483	1040
18	Riverside Av.	s/o Slover Av.	General Industrial	79.5	225	485	1044
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	79.3	217	467	1006
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.9	238	513	1106
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.6	105	226	486
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.0	83	179	385
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	95	204	439
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	89	191	412
25	Santa Ana Av.	w/o Cedar Av.	Residential	71.2	53	113	244
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	RW	77	165
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	RW	94	202
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	71.9	58	126	271
29	El Rivino Rd.	e/o Cactus Av.	Residential	72.4	64	137	295
30	El Rivino Rd.	e/o Hall Av.	Residential	68.7	RW	78	167
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	73.8	90	194	417
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	73.8	90	193	417
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.0	96	206	444
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	74.7	107	230	495
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	75.7	143	309	665
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	72.3	85	183	395
37	20th St.	e/o Rubidoux Bl.	Light Industrial	76.7	141	303	654
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.3	131	282	607
39	Market St.	e/o Hall Av.	Light Industrial	77.3	153	329	710
40	Market St.	e/o Rivera St.	Business Park	78.3	178	384	827

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-5: EXISTING WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	173	373	804
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.7	144	311	670
3	Cedar Av.	s/o Slover Av.	General Commercial	76.0	132	283	610
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.2	135	291	626
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.5	164	354	763
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.0	173	373	805
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.0	173	372	801
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	75.9	147	316	681
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.1	151	325	700
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.2	153	330	712
11	Rubidoux Bl.	s/o 28th St.	Residential	76.5	160	344	741
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.4	156	337	726
13	Rubidoux Bl.	s/o 34th St.	Residential	75.2	131	283	609
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.4	RW	59	127
15	Rivera St.	n/o Market St.	Business Park	71.2	40	86	185
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.5	162	348	750
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.6	224	483	1040
18	Riverside Av.	s/o Slover Av.	General Industrial	79.5	225	485	1044
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	79.3	217	467	1006
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.9	238	513	1106
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.6	105	226	486
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.0	83	179	385
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	95	204	439
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	89	191	412
25	Santa Ana Av.	w/o Cedar Av.	Residential	71.2	53	113	244
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	RW	77	165
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	RW	94	202
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	75.5	103	221	477
29	El Rivino Rd.	e/o Cactus Av.	Residential	72.4	64	137	295
30	El Rivino Rd.	e/o Hall Av.	Residential	68.7	RW	78	167
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	74.6	101	217	467
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	74.6	101	217	467
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.0	97	208	449
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	74.7	107	230	495
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	75.7	143	309	665
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	72.3	85	183	395
37	20th St.	e/o Rubidoux Bl.	Light Industrial	76.6	138	297	641
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.3	131	282	607
39	Market St.	e/o Hall Av.	Light Industrial	77.3	153	329	710
40	Market St.	e/o Rivera St.	Business Park	78.3	178	384	827

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-6: OPENING YEAR 2020 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.1	182	391	843
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.5	164	353	760
3	Cedar Av.	s/o Slover Av.	General Commercial	76.6	142	306	660
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.6	143	308	663
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.9	175	378	815
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.0	173	372	802
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.0	172	370	797
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	76.2	153	329	709
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.3	156	336	724
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.5	160	344	741
11	Rubidoux Bl.	s/o 28th St.	Residential	76.7	165	356	766
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.8	168	362	781
13	Rubidoux Bl.	s/o 34th St.	Residential	75.6	139	299	645
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.3	50	108	232
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.7	168	361	778
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.9	236	509	1098
18	Riverside Av.	s/o Slover Av.	General Industrial	79.8	235	507	1092
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	79.6	228	492	1059
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.2	250	538	1159
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.9	111	239	514
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.5	89	192	415
23	Slover Av.	w/o Cedar Av.	Light Industrial	74.9	110	237	510
24	Slover Av.	w/o Riverside Av.	General Industrial	74.0	96	208	447
25	Santa Ana Av.	w/o Cedar Av.	Residential	71.7	57	122	263
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.3	54	117	252
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	73.3	73	158	340
29	El Rivino Rd.	e/o Cactus Av.	Residential	71.1	52	112	241
30	El Rivino Rd.	e/o Hall Av.	Residential	69.4	RW	87	187
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	74.2	96	207	445
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	74.2	96	207	445
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.4	102	220	474
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	74.4	102	220	474
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	75.6	142	305	658
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	72.8	92	199	428
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.0	147	317	684
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.4	134	288	621
39	Market St.	e/o Hall Av.	Light Industrial	77.8	164	354	763
40	Market St.	e/o Rivera St.	Business Park	78.6	188	404	870

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-7: OPENING YEAR 2020 WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.2	184	396	852
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.9	174	375	807
3	Cedar Av.	s/o Slover Av.	General Commercial	77.1	154	332	714
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	157	338	729
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	194	418	901
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.3	210	452	975
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.3	211	454	977
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	174	374	806
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	176	380	819
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.3	180	387	834
11	Rubidoux Bl.	s/o 28th St.	Residential	77.4	185	398	859
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.9	171	369	794
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	660
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	108	233
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.8	170	365	787
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	79.2	247	533	1148
18	Riverside Av.	s/o Slover Av.	General Industrial	80.2	247	532	1147
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	80.0	242	521	1123
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.6	263	566	1220
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.1	114	246	529
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.7	91	196	423
23	Slover Av.	w/o Cedar Av.	Light Industrial	74.9	110	237	511
24	Slover Av.	w/o Riverside Av.	General Industrial	74.0	96	208	448
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.1	61	131	282
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.3	54	117	253
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	74.3	86	184	397
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.4	74	160	344
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	91	197
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	74.8	105	226	488
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	74.8	105	226	487
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.0	111	240	518
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	74.7	107	230	495
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	76.6	164	354	763
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.4	101	217	467
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.9	167	361	777
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	161	347	748
39	Market St.	e/o Hall Av.	Light Industrial	78.7	189	408	879
40	Market St.	e/o Rivera St.	Business Park	79.4	213	459	989

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-8: OPENING YEAR 2020 WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.2	184	396	852
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.9	174	375	807
3	Cedar Av.	s/o Slover Av.	General Commercial	77.1	154	332	714
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	157	338	729
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	194	418	901
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.2	206	444	957
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.1	206	443	954
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	173	373	805
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	176	380	819
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.3	180	387	834
11	Rubidoux Bl.	s/o 28th St.	Residential	77.4	185	398	859
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.9	171	369	794
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	660
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	108	233
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.8	170	365	787
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	79.2	247	533	1148
18	Riverside Av.	s/o Slover Av.	General Industrial	80.2	247	532	1147
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	80.0	242	521	1123
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.6	263	566	1220
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.1	114	246	529
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.7	91	196	423
23	Slover Av.	w/o Cedar Av.	Light Industrial	74.9	110	237	511
24	Slover Av.	w/o Riverside Av.	General Industrial	74.0	96	208	448
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.1	61	131	282
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.3	54	117	253
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	76.6	121	260	560
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.4	74	160	344
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	91	197
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.4	115	247	533
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.4	115	247	533
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.8	109	235	505
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	75.5	121	260	560
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	76.6	164	354	763
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.4	101	217	467
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.8	165	356	767
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	161	347	748
39	Market St.	e/o Hall Av.	Light Industrial	78.7	189	408	879
40	Market St.	e/o Rivera St.	Business Park	79.4	213	459	989

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-9: OPENING YEAR 2020 WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.2	183	395	852
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.8	173	373	805
3	Cedar Av.	s/o Slover Av.	General Commercial	77.0	153	330	711
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	156	337	726
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	193	417	898
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.1	206	444	957
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.2	207	445	959
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	173	372	801
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	175	378	814
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.2	179	385	830
11	Rubidoux Bl.	s/o 28th St.	Residential	77.4	184	396	853
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.9	171	369	794
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	659
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	109	234
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.8	169	365	786
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	79.2	247	531	1145
18	Riverside Av.	s/o Slover Av.	General Industrial	80.1	246	531	1143
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	80.0	241	520	1120
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.5	262	565	1217
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.1	114	245	528
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.7	91	196	423
23	Slover Av.	w/o Cedar Av.	Light Industrial	74.9	110	237	512
24	Slover Av.	w/o Riverside Av.	General Industrial	74.0	96	208	448
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.1	61	131	281
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.3	55	117	253
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	74.4	87	187	403
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.3	74	159	342
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	92	198
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.0	107	231	498
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.0	107	231	498
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.8	109	235	506
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	75.4	119	257	554
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	76.5	163	351	757
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.3	100	216	465
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.8	165	356	767
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	160	344	741
39	Market St.	e/o Hall Av.	Light Industrial	78.6	188	405	873
40	Market St.	e/o Rivera St.	Business Park	79.4	212	456	983

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-10: OPENING YEAR 2020 WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.2	183	395	852
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.8	173	373	805
3	Cedar Av.	s/o Slover Av.	General Commercial	77.0	153	330	711
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	156	337	726
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	193	417	898
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.0	202	435	938
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.0	201	434	934
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	172	371	800
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	175	378	814
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.2	179	385	830
11	Rubidoux Bl.	s/o 28th St.	Residential	77.4	184	396	853
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.9	171	369	794
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	659
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	109	234
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.8	169	365	786
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	79.2	247	531	1145
18	Riverside Av.	s/o Slover Av.	General Industrial	80.1	246	531	1143
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	80.0	241	520	1120
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.5	262	565	1217
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.1	114	245	528
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	73.7	91	196	423
23	Slover Av.	w/o Cedar Av.	Light Industrial	74.9	110	237	512
24	Slover Av.	w/o Riverside Av.	General Industrial	74.0	96	208	448
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.1	61	131	281
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.3	55	117	253
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	76.8	125	270	581
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.3	74	159	342
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	92	198
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.5	117	252	543
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.5	117	252	543
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	74.9	110	237	510
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	75.4	119	257	554
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	76.5	163	351	757
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.3	100	216	465
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.7	163	350	755
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	160	344	741
39	Market St.	e/o Hall Av.	Light Industrial	78.6	188	405	873
40	Market St.	e/o Rivera St.	Business Park	79.4	212	456	983

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-11: YEAR 2035 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.4	188	405	872
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.5	164	353	760
3	Cedar Av.	s/o Slover Av.	General Commercial	76.6	142	306	660
4	Cedar Av.	s/o Santa Ana Av.	Residential	76.6	143	308	663
5	Cedar Av.	s/o Jurupa Av.	General Commercial	77.9	175	378	815
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	77.0	173	372	802
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	77.0	172	370	797
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	76.2	153	329	709
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	76.3	156	336	724
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	76.5	160	344	741
11	Rubidoux Bl.	s/o 28th St.	Residential	76.8	169	363	783
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.9	170	367	790
13	Rubidoux Bl.	s/o 34th St.	Residential	75.6	139	299	645
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.3	50	108	232
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	77.6	192	414	892
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	79.8	270	581	1251
18	Riverside Av.	s/o Slover Av.	General Industrial	80.7	269	579	1248
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	80.8	273	588	1267
20	Riverside Av.	s/o Jurupa Av.	General Industrial	80.8	273	588	1267
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.5	121	261	562
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	74.6	105	227	490
23	Slover Av.	w/o Cedar Av.	Light Industrial	75.7	125	270	582
24	Slover Av.	w/o Riverside Av.	General Industrial	74.1	98	211	455
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.0	60	130	280
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.4	55	119	256
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	73.9	79	171	369
29	El Rivino Rd.	e/o Cactus Av.	Residential	71.5	55	119	256
30	El Rivino Rd.	e/o Hall Av.	Residential	69.4	RW	87	187
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.3	113	243	524
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.3	113	243	524
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.3	117	253	545
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	75.3	117	253	545
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	76.5	163	351	756
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.1	97	209	451
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.1	148	318	685
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	76.4	134	288	621
39	Market St.	e/o Hall Av.	Light Industrial	77.8	164	354	763
40	Market St.	e/o Rivera St.	Business Park	79.1	202	436	939

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-12: YEAR 2035 WITH ALTERNATIVE 1 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.4	190	409	881
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.9	174	375	807
3	Cedar Av.	s/o Slover Av.	General Commercial	77.1	154	332	714
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	157	338	729
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	194	418	901
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.3	210	452	975
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.3	211	454	977
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	174	374	806
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	176	380	819
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.3	180	387	834
11	Rubidoux Bl.	s/o 28th St.	Residential	77.6	188	406	874
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	77.0	173	373	803
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	660
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	108	233
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	77.6	194	418	900
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	80.0	280	603	1299
18	Riverside Av.	s/o Slover Av.	General Industrial	81.0	280	603	1299
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	81.1	286	616	1326
20	Riverside Av.	s/o Jurupa Av.	General Industrial	81.1	286	616	1326
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.7	124	268	577
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	74.7	107	231	498
23	Slover Av.	w/o Cedar Av.	Light Industrial	75.7	126	271	583
24	Slover Av.	w/o Riverside Av.	General Industrial	74.1	98	211	455
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.5	64	138	298
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.4	55	119	257
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	74.8	91	197	424
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.6	77	166	357
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	91	197
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.8	121	261	563
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.8	121	261	562
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.8	126	272	586
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	75.5	122	262	565
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	77.3	184	397	854
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.7	105	227	488
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.9	168	361	779
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	161	347	748
39	Market St.	e/o Hall Av.	Light Industrial	78.7	189	408	879
40	Market St.	e/o Rivera St.	Business Park	79.9	227	489	1054

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-13: YEAR 2035 WITH ALTERNATIVE 1A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.4	190	409	881
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.9	174	375	807
3	Cedar Av.	s/o Slover Av.	General Commercial	77.1	154	332	714
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	157	338	729
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	194	418	901
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.2	206	444	957
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.1	206	443	954
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	173	373	805
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	176	380	819
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.3	180	387	834
11	Rubidoux Bl.	s/o 28th St.	Residential	77.6	188	406	874
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	77.0	173	373	803
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	660
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	108	233
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	77.6	194	418	900
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	80.0	280	603	1299
18	Riverside Av.	s/o Slover Av.	General Industrial	81.0	280	603	1299
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	81.1	286	616	1326
20	Riverside Av.	s/o Jurupa Av.	General Industrial	81.1	286	616	1326
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.7	124	268	577
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	74.7	107	231	498
23	Slover Av.	w/o Cedar Av.	Light Industrial	75.7	126	271	583
24	Slover Av.	w/o Riverside Av.	General Industrial	74.1	98	211	455
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.5	64	138	298
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.4	55	119	257
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	76.8	126	270	583
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.6	77	166	357
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	91	197
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	76.2	130	281	606
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	76.2	130	281	606
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.6	124	267	574
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	76.2	135	290	625
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	77.3	184	397	854
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.7	105	227	488
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.8	166	357	769
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	161	347	748
39	Market St.	e/o Hall Av.	Light Industrial	78.7	189	408	879
40	Market St.	e/o Rivera St.	Business Park	79.9	227	489	1054

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-14: YEAR 2035 WITH ALTERNATIVE 2 CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.4	190	409	880
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.8	173	373	805
3	Cedar Av.	s/o Slover Av.	General Commercial	77.0	153	330	711
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	156	337	726
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	193	417	898
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.1	206	444	957
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.2	207	445	959
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	173	372	801
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	175	378	814
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.2	179	385	830
11	Rubidoux Bl.	s/o 28th St.	Residential	77.5	187	403	869
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	77.0	173	373	803
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	659
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	109	234
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	77.6	194	417	899
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	80.0	279	601	1296
18	Riverside Av.	s/o Slover Av.	General Industrial	80.9	279	602	1296
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	81.1	285	614	1323
20	Riverside Av.	s/o Jurupa Av.	General Industrial	81.1	285	614	1323
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.7	124	267	576
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	74.7	107	231	497
23	Slover Av.	w/o Cedar Av.	Light Industrial	75.8	126	271	584
24	Slover Av.	w/o Riverside Av.	General Industrial	74.1	98	211	455
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.4	64	138	297
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.4	55	120	258
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	74.8	92	199	429
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.6	76	165	355
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	92	198
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	75.9	123	266	573
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	75.9	123	266	572
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.7	124	267	575
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	76.1	134	288	620
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	77.3	183	394	849
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.6	105	226	486
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.8	165	357	768
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	160	344	741
39	Market St.	e/o Hall Av.	Light Industrial	78.6	188	405	873
40	Market St.	e/o Rivera St.	Business Park	79.8	226	486	1047

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

TABLE 7-15: YEAR 2035 WITH ALTERNATIVE 2A CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	78.4	190	409	880
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	77.8	173	373	805
3	Cedar Av.	s/o Slover Av.	General Commercial	77.0	153	330	711
4	Cedar Av.	s/o Santa Ana Av.	Residential	77.2	156	337	726
5	Cedar Av.	s/o Jurupa Av.	General Commercial	78.6	193	417	898
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	78.0	202	435	938
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	78.0	201	434	934
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	77.0	172	371	800
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	77.1	175	378	814
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	77.2	179	385	830
11	Rubidoux Bl.	s/o 28th St.	Residential	77.5	187	403	869
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	77.0	173	373	803
13	Rubidoux Bl.	s/o 34th St.	Residential	75.7	142	306	659
14	Cactus Av.	n/o El Rivino Rd.	Residential	73.4	50	109	234
15	Rivera St.	n/o Market St.	Business Park	71.9	44	95	204
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	77.6	194	417	899
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	80.0	279	601	1296
18	Riverside Av.	s/o Slover Av.	General Industrial	80.9	279	602	1296
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	81.1	285	614	1323
20	Riverside Av.	s/o Jurupa Av.	General Industrial	81.1	285	614	1323
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	75.7	124	267	576
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	74.7	107	231	497
23	Slover Av.	w/o Cedar Av.	Light Industrial	75.8	126	271	584
24	Slover Av.	w/o Riverside Av.	General Industrial	74.1	98	211	455
25	Santa Ana Av.	w/o Cedar Av.	Residential	72.4	64	138	297
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	69.7	RW	90	195
27	Jurupa Av.	w/o Cedar Av.	Residential	70.4	55	120	258
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	77.1	130	280	604
29	El Rivino Rd.	e/o Cactus Av.	Residential	73.6	76	165	355
30	El Rivino Rd.	e/o Hall Av.	Residential	69.8	RW	92	198
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	76.4	133	286	615
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	76.4	133	286	615
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	75.7	125	269	579
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	76.1	134	288	620
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	77.3	183	394	849
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	73.6	105	226	486
37	20th St.	e/o Rubidoux Bl.	Light Industrial	77.7	163	351	756
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	77.6	160	344	741
39	Market St.	e/o Hall Av.	Light Industrial	78.6	188	405	873
40	Market St.	e/o Rivera St.	Business Park	79.8	226	486	1047

¹ Sources: City of Jurupa Valley General Plan Land Use Map, County of San Bernardino General Plan Land Use Zoning Districts Map, City of Rialto General Plan Land Use Policy Plan, and the City of Riverside General Plan Land Use/Urban Design Element.

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

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

7.2 EXISTING CONDITIONS PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) has been included in this report. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) scenario will not actually occur since the Project would not be fully constructed and operational until Opening Year 2020 conditions.

Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 68.2 to 79.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

7.2.1 EXISTING WITH PROJECT ALTERNATIVE 1 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-2 shows the Existing with Project Alternative 1 conditions will range from 68.6 to 79.9 dBA CNEL. Table 7-16 shows that the Project Alternative 1 off-site traffic noise level increases will range from 0.0 to 3.1 dBA CNEL.

7.2.2 EXISTING WITH PROJECT ALTERNATIVE 1A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-3 shows the Existing with Project Alternative 1A conditions will range from 68.6 to 79.9 dBA CNEL. Table 7-17 shows that the Project Alternative 1A off-site traffic noise level increases will range from 0.0 to 3.1 dBA CNEL.

7.2.3 EXISTING WITH PROJECT ALTERNATIVE 2 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-4 shows the Existing with Project Alternative 2 conditions will range from 68.6 to 79.9 dBA CNEL. Table 7-18 shows that the Project Alternative 2 off-site traffic noise level increases will range from 0.0 to 3.1 dBA CNEL.

7.2.4 EXISTING WITH PROJECT ALTERNATIVE 2A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-5 shows the Existing with Project Alternative 2A conditions will range from 68.6 to 79.9 dBA CNEL. Table 7-19 shows that the Project Alternative 2A off-site traffic noise level increases will range from 0.0 to 5.9 dBA CNEL.

TABLE 7-16: UNMITIGATED EXISTING PROJECT ALTERNATIVE 1 TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?
				No Project	With Project	Project Addition	
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	77.8	0.1	No
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.2	76.7	0.5	No
3	Cedar Av.	s/o Slover Av.	General Commercial	75.4	76.1	0.7	No
4	Cedar Av.	s/o Santa Ana Av.	Residential	75.5	76.2	0.8	Yes
5	Cedar Av.	s/o Jurupa Av.	General Commercial	76.7	77.5	0.9	No
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	75.7	77.3	1.6	No
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	75.6	77.4	1.7	No
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	74.9	76.0	1.1	No
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	75.1	76.2	1.0	No
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	75.3	76.3	1.0	No
11	Rubidoux Bl.	s/o 28th St.	Residential	75.6	76.5	0.9	Yes
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.2	76.4	0.1	Yes
13	Rubidoux Bl.	s/o 34th St.	Residential	75.0	75.2	0.2	Yes
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.3	69.4	0.1	Yes
15	Rivera St.	n/o Market St.	Business Park	71.2	71.2	0.0	No
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.4	76.5	0.1	No
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.3	78.6	0.3	No
18	Riverside Av.	s/o Slover Av.	General Industrial	79.2	79.6	0.4	No
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	78.9	79.3	0.5	No
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.5	79.9	0.4	No
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.4	74.6	0.2	No
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	72.9	73.0	0.2	No
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	73.9	0.0	No
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	73.5	0.0	No
25	Santa Ana Av.	w/o Cedar Av.	Residential	70.6	71.2	0.6	Yes
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	68.6	0.0	No
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	68.8	0.0	Yes
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	69.6	71.7	2.1	No
29	El Rivino Rd.	e/o Cactus Av.	Residential	69.3	72.4	3.1	Yes
30	El Rivino Rd.	e/o Hall Av.	Residential	68.2	68.7	0.5	Yes
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	72.8	73.6	0.8	No
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	72.8	73.6	0.8	No
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	73.5	74.2	0.7	No
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.5	73.8	0.4	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	74.5	75.7	1.2	No
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	71.6	72.3	0.7	No
37	20th St.	e/o Rubidoux Bl.	Light Industrial	75.8	76.9	1.1	No
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	74.6	76.3	1.7	No
39	Market St.	e/o Hall Av.	Light Industrial	76.0	77.3	1.3	No
40	Market St.	e/o Rivera St.	Business Park	77.2	78.3	1.1	No

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

TABLE 7-17: UNMITIGATED EXISTING PROJECT ALTERNATIVE 1A TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?
				No Project	With Project	Project Addition	
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	77.8	0.1	No
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.2	76.7	0.5	No
3	Cedar Av.	s/o Slover Av.	General Commercial	75.4	76.1	0.7	No
4	Cedar Av.	s/o Santa Ana Av.	Residential	75.5	76.2	0.8	Yes
5	Cedar Av.	s/o Jurupa Av.	General Commercial	76.7	77.5	0.9	No
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	75.7	77.3	1.6	No
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	75.6	77.4	1.7	No
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	74.9	76.0	1.1	No
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	75.1	76.2	1.0	No
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	75.3	76.3	1.0	No
11	Rubidoux Bl.	s/o 28th St.	Residential	75.6	76.5	0.9	Yes
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.2	76.4	0.1	Yes
13	Rubidoux Bl.	s/o 34th St.	Residential	75.0	75.2	0.2	Yes
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.3	69.4	0.1	Yes
15	Rivera St.	n/o Market St.	Business Park	71.2	71.2	0.0	No
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.4	76.5	0.1	No
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.3	78.6	0.3	No
18	Riverside Av.	s/o Slover Av.	General Industrial	79.2	79.6	0.4	No
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	78.9	79.3	0.5	No
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.5	79.9	0.4	No
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.4	74.6	0.2	No
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	72.9	73.0	0.2	No
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	73.9	0.0	No
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	73.5	0.0	No
25	Santa Ana Av.	w/o Cedar Av.	Residential	70.6	71.2	0.6	Yes
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	68.6	0.0	No
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	68.8	0.0	Yes
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	69.6	71.7	2.1	No
29	El Rivino Rd.	e/o Cactus Av.	Residential	69.3	72.4	3.1	Yes
30	El Rivino Rd.	e/o Hall Av.	Residential	68.2	68.7	0.5	Yes
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	72.8	73.6	0.8	No
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	72.8	73.6	0.8	No
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	73.5	74.2	0.7	No
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.5	73.8	0.4	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	74.5	75.7	1.2	No
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	71.6	72.3	0.7	No
37	20th St.	e/o Rubidoux Bl.	Light Industrial	75.8	76.9	1.1	No
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	74.6	76.3	1.7	No
39	Market St.	e/o Hall Av.	Light Industrial	76.0	77.3	1.3	No
40	Market St.	e/o Rivera St.	Business Park	77.2	78.3	1.1	No

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

TABLE 7-18: UNMITIGATED EXISTING PROJECT ALTERNATIVE 2 TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?
				No Project	With Project	Project Addition	
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	77.8	0.1	No
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.2	76.7	0.5	No
3	Cedar Av.	s/o Slover Av.	General Commercial	75.4	76.0	0.6	No
4	Cedar Av.	s/o Santa Ana Av.	Residential	75.5	76.2	0.7	Yes
5	Cedar Av.	s/o Jurupa Av.	General Commercial	76.7	77.5	0.8	No
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	75.7	77.2	1.5	No
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	75.6	77.2	1.6	No
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	74.9	76.0	1.0	No
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	75.1	76.1	1.0	No
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	75.3	76.2	1.0	No
11	Rubidoux Bl.	s/o 28th St.	Residential	75.6	76.5	0.9	Yes
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.2	76.4	0.1	Yes
13	Rubidoux Bl.	s/o 34th St.	Residential	75.0	75.2	0.2	Yes
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.3	69.4	0.1	Yes
15	Rivera St.	n/o Market St.	Business Park	71.2	71.2	0.0	No
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.4	76.5	0.1	No
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.3	78.6	0.3	No
18	Riverside Av.	s/o Slover Av.	General Industrial	79.2	79.5	0.3	No
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	78.9	79.3	0.4	No
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.5	79.9	0.4	No
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.4	74.6	0.2	No
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	72.9	73.0	0.1	No
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	73.9	0.0	No
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	73.5	0.0	No
25	Santa Ana Av.	w/o Cedar Av.	Residential	70.6	71.2	0.5	Yes
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	68.6	0.0	No
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	68.8	0.1	Yes
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	69.6	71.9	2.2	No
29	El Rivino Rd.	e/o Cactus Av.	Residential	69.3	72.4	3.1	Yes
30	El Rivino Rd.	e/o Hall Av.	Residential	68.2	68.7	0.5	Yes
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	72.8	73.8	1.0	No
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	72.8	73.8	1.0	No
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	73.5	74.0	0.5	No
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.5	74.7	1.2	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	74.5	75.7	1.1	No
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	71.6	72.3	0.7	No
37	20th St.	e/o Rubidoux Bl.	Light Industrial	75.8	76.7	1.0	No
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	74.6	76.3	1.6	No
39	Market St.	e/o Hall Av.	Light Industrial	76.0	77.3	1.2	No
40	Market St.	e/o Rivera St.	Business Park	77.2	78.3	1.1	No

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

TABLE 7-19: UNMITIGATED EXISTING PROJECT ALTERNATIVE 2A TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?
				No Project	With Project	Project Addition	
1	Cedar Av.	n/o I-10 Fwy.	General Commercial	77.8	77.8	0.1	No
2	Cedar Av.	s/o I-10 Fwy.	Light Industrial	76.2	76.7	0.5	No
3	Cedar Av.	s/o Slover Av.	General Commercial	75.4	76.0	0.6	No
4	Cedar Av.	s/o Santa Ana Av.	Residential	75.5	76.2	0.7	Yes
5	Cedar Av.	s/o Jurupa Av.	General Commercial	76.7	77.5	0.8	No
6	Rubidoux Bl.	s/o El Rivino Rd.	Heavy Industrial	75.7	77.0	1.3	No
7	Rubidoux Bl.	s/o Production Circle	Heavy Industrial	75.6	77.0	1.4	No
8	Rubidoux Bl.	s/o 20th St.	Light Industrial	74.9	75.9	1.0	No
9	Rubidoux Bl.	s/o 24th St.	Light Industrial	75.1	76.1	1.0	No
10	Rubidoux Bl.	s/o 26th St.	Light Industrial	75.3	76.2	1.0	No
11	Rubidoux Bl.	s/o 28th St.	Residential	75.6	76.5	0.9	Yes
12	Rubidoux Bl.	s/o SR-60 Fwy.	Residential	76.2	76.4	0.1	Yes
13	Rubidoux Bl.	s/o 34th St.	Residential	75.0	75.2	0.2	Yes
14	Cactus Av.	n/o El Rivino Rd.	Residential	69.3	69.4	0.1	Yes
15	Rivera St.	n/o Market St.	Business Park	71.2	71.2	0.0	No
16	Riverside Av.	n/o I-10 Fwy.	General Commercial	76.4	76.5	0.1	No
17	Riverside Av.	s/o I-10 Fwy.	General Industrial	78.3	78.6	0.3	No
18	Riverside Av.	s/o Slover Av.	General Industrial	79.2	79.5	0.3	No
19	Riverside Av.	s/o Santa Ana Av.	General Industrial	78.9	79.3	0.4	No
20	Riverside Av.	s/o Jurupa Av.	General Industrial	79.5	79.9	0.4	No
21	Rancho Av.	n/o Agua Mansa Rd.	General Industrial	74.4	74.6	0.2	No
22	Rancho Av.	s/o Agua Mansa Rd.	General Industrial	72.9	73.0	0.1	No
23	Slover Av.	w/o Cedar Av.	Light Industrial	73.9	73.9	0.0	No
24	Slover Av.	w/o Riverside Av.	General Industrial	73.5	73.5	0.0	No
25	Santa Ana Av.	w/o Cedar Av.	Residential	70.6	71.2	0.5	Yes
26	Santa Ana Av.	w/o Riverside Av.	General Industrial	68.6	68.6	0.0	No
27	Jurupa Av.	w/o Cedar Av.	Residential	68.8	68.8	0.1	Yes
28	El Rivino Rd.	e/o Cedar Av.	Heavy Industrial	69.6	75.5	5.9	No
29	El Rivino Rd.	e/o Cactus Av.	Residential	69.3	72.4	3.1	Yes
30	El Rivino Rd.	e/o Hall Av.	Residential	68.2	68.7	0.5	Yes
31	Agua Mansa Rd.	e/o 20th St.	Heavy Industrial	72.8	74.6	1.7	No
32	Agua Mansa Rd.	w/o Brown Av.	Heavy Industrial	72.8	74.6	1.7	No
33	Agua Mansa Rd.	w/o Holly St.	Heavy Industrial	73.5	74.0	0.6	No
34	Agua Mansa Rd.	e/o Holly St.	Heavy Industrial	73.5	74.7	1.2	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	General Industrial	74.5	75.7	1.1	No
36	Agua Mansa Rd.	e/o Riverside Av.	General Industrial	71.6	72.3	0.7	No
37	20th St.	e/o Rubidoux Bl.	Light Industrial	75.8	76.6	0.8	No
38	20th St.	e/o Agua Mansa Rd.	Light Industrial	74.6	76.3	1.6	No
39	Market St.	e/o Hall Av.	Light Industrial	76.0	77.3	1.2	No
40	Market St.	e/o Rivera St.	Business Park	77.2	78.3	1.1	No

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

7.3 OPENING YEAR 2020 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-6 presents the Opening Year 2020 without Project conditions CNEL noise levels. The Opening Year 2020 without Project exterior noise levels are expected to range from 69.4 to 80.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

7.3.1 OPENING YEAR 2020 WITH PROJECT ALTERNATIVE 1 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-7 shows the Opening Year 2020 with Project Alternative 1 conditions will range from 69.7 to 80.6 dBA CNEL. Table 7-20 shows that the Project Alternative 1 off-site traffic noise level increases will range from 0.0 to 2.3 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.3.2 OPENING YEAR 2020 WITH PROJECT ALTERNATIVE 1A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-8 shows the Opening Year 2020 with Project Alternative 1A conditions will range from 69.7 to 80.6 dBA CNEL. Table 7-21 shows that the Project Alternative 1A off-site traffic noise level increases will range from 0.0 to 3.2 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.3.3 OPENING YEAR 2020 WITH PROJECT ALTERNATIVE 2 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-9 shows the Opening Year 2020 with Project Alternative 2 conditions will range from 69.7 to 80.5 dBA CNEL. Table 7-22 shows that the Project Alternative 2 off-site traffic noise level increases will range from 0.0 to 2.3 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.3.4 OPENING YEAR 2020 WITH PROJECT ALTERNATIVE 2A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-10 shows the Opening Year 2020 with Project Alternative 2A conditions will range from 69.7 to 80.5 dBA CNEL. Table 7-23 shows that the Project Alternative 2A off-site traffic noise level increases will range from 0.0 to 3.5 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

TABLE 7-20: UNMITIGATED YEAR 2020 ALTERNATIVE 1 TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.1	78.2	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.9	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.1	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.7	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.3	1.3	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.3	1.3	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.3	0.8	No	No
11	Rubidoux Bl.	s/o 28th St.	76.7	77.4	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.8	76.9	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	76.7	76.8	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	78.9	79.2	0.3	No	No
18	Riverside Av.	s/o Slover Av.	79.8	80.2	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	79.6	80.0	0.4	No	No
20	Riverside Av.	s/o Jurupa Av.	80.2	80.6	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	74.9	75.1	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	73.5	73.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	74.9	74.9	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.0	74.0	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	71.7	72.1	0.5	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.3	70.3	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.3	74.3	1.0	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.1	73.4	2.3	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	74.2	74.8	0.6	No	No
32	Agua Mansa Rd.	w/o Brown Av.	74.2	74.8	0.6	No	No
33	Agua Mansa Rd.	w/o Holly St.	74.4	75.0	0.6	No	No
34	Agua Mansa Rd.	e/o Holly St.	74.4	74.7	0.3	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	75.6	76.6	1.0	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	72.8	73.4	0.6	No	No
37	20th St.	e/o Rubidoux Bl.	77.0	77.9	0.8	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.7	0.9	No	No
40	Market St.	e/o Rivera St.	78.6	79.4	0.8	No	No

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

² Significance Criteria (Section 4).

TABLE 7-21: UNMITIGATED YEAR 2020 ALTERNATIVE 1A TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.1	78.2	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.9	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.1	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.7	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.2	1.1	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.1	1.2	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.3	0.8	No	No
11	Rubidoux Bl.	s/o 28th St.	76.7	77.4	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.8	76.9	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	76.7	76.8	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	78.9	79.2	0.3	No	No
18	Riverside Av.	s/o Slover Av.	79.8	80.2	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	79.6	80.0	0.4	No	No
20	Riverside Av.	s/o Jurupa Av.	80.2	80.6	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	74.9	75.1	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	73.5	73.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	74.9	74.9	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.0	74.0	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	71.7	72.1	0.5	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.3	70.3	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.3	76.6	3.2	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.1	73.4	2.3	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	74.2	75.4	1.2	No	No
32	Agua Mansa Rd.	w/o Brown Av.	74.2	75.4	1.2	No	No
33	Agua Mansa Rd.	w/o Holly St.	74.4	74.8	0.4	No	No
34	Agua Mansa Rd.	e/o Holly St.	74.4	75.5	1.1	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	75.6	76.6	1.0	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	72.8	73.4	0.6	No	No
37	20th St.	e/o Rubidoux Bl.	77.0	77.8	0.7	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.7	0.9	No	No
40	Market St.	e/o Rivera St.	78.6	79.4	0.8	No	No

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

² Significance Criteria (Section 4).

TABLE 7-22: UNMITIGATED YEAR 2020 ALTERNATIVE 2 TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.1	78.2	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.8	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.0	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.6	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.1	1.1	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.2	1.2	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.2	0.7	No	No
11	Rubidoux Bl.	s/o 28th St.	76.7	77.4	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.8	76.9	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	76.7	76.8	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	78.9	79.2	0.3	No	No
18	Riverside Av.	s/o Slover Av.	79.8	80.1	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	79.6	80.0	0.4	No	No
20	Riverside Av.	s/o Jurupa Av.	80.2	80.5	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	74.9	75.1	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	73.5	73.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	74.9	74.9	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.0	74.0	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	71.7	72.1	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.3	70.3	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.3	74.4	1.1	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.1	73.3	2.3	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	74.2	75.0	0.7	No	No
32	Agua Mansa Rd.	w/o Brown Av.	74.2	75.0	0.7	No	No
33	Agua Mansa Rd.	w/o Holly St.	74.4	74.8	0.4	No	No
34	Agua Mansa Rd.	e/o Holly St.	74.4	75.4	1.0	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	75.6	76.5	0.9	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	72.8	73.3	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.0	77.8	0.7	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.6	0.9	No	No
40	Market St.	e/o Rivera St.	78.6	79.4	0.8	No	No

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

² Significance Criteria (Section 4).

TABLE 7-23: UNMITIGATED YEAR 2020 ALTERNATIVE 2A TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.1	78.2	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.8	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.0	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.6	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.0	1.0	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.0	1.0	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.2	0.7	No	No
11	Rubidoux Bl.	s/o 28th St.	76.7	77.4	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.8	76.9	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	76.7	76.8	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	78.9	79.2	0.3	No	No
18	Riverside Av.	s/o Slover Av.	79.8	80.1	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	79.6	80.0	0.4	No	No
20	Riverside Av.	s/o Jurupa Av.	80.2	80.5	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	74.9	75.1	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	73.5	73.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	74.9	74.9	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.0	74.0	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	71.7	72.1	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.3	70.3	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.3	76.8	3.5	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.1	73.3	2.3	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	74.2	75.5	1.3	No	No
32	Agua Mansa Rd.	w/o Brown Av.	74.2	75.5	1.3	No	No
33	Agua Mansa Rd.	w/o Holly St.	74.4	74.9	0.5	No	No
34	Agua Mansa Rd.	e/o Holly St.	74.4	75.4	1.0	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	75.6	76.5	0.9	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	72.8	73.3	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.0	77.7	0.6	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.6	0.9	No	No
40	Market St.	e/o Rivera St.	78.6	79.4	0.8	No	No

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

² Significance Criteria (Section 4).

7.4 YEAR 2035 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-11 presents the Year 2035 without Project conditions CNEL noise levels. The Year 2035 without Project exterior noise levels are expected to range from 69.4 to 80.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

7.4.1 YEAR 2035 WITH PROJECT ALTERNATIVE 1 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-12 shows the Year 2035 with Project Alternative 1 conditions will range from 69.7 to 81.1 dBA CNEL. Table 7-24 shows that the Project Alternative 1 off-site traffic noise level increases will range from 0.0 to 2.2 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.4.2 YEAR 2035 WITH PROJECT ALTERNATIVE 1A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-13 shows the Year 2035 with Project Alternative 1A conditions will range from 69.7 to 81.1 dBA CNEL. Table 7-25 shows that the Project Alternative 1A off-site traffic noise level increases will range from 0.0 to 3.0 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.4.3 YEAR 2035 WITH PROJECT ALTERNATIVE 2 OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-14 shows the Year 2035 with Project Alternative 2 conditions will range from 69.7 to 81.1 dBA CNEL. Table 7-26 shows that the Project Alternative 2 off-site traffic noise level increases will range from 0.0 to 2.1 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

7.4.4 YEAR 2035 WITH PROJECT ALTERNATIVE 2A OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Table 7-15 shows the Year 2035 with Project Alternative 2A conditions will range from 69.7 to 81.1 dBA CNEL. Table 7-27 shows that the Project Alternative 2A off-site traffic noise level increases will range from 0.0 to 3.2 dBA CNEL. Based on the significance criteria in Section 4, land uses adjacent to the study-area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic.

TABLE 7-24: UNMITIGATED YEAR 2035 ALTERNATIVE 1 TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.4	78.4	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.9	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.1	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.7	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.3	1.3	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.3	1.3	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.3	0.8	No	No
11	Rubidoux Bl.	s/o 28th St.	76.8	77.6	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.9	77.0	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	77.6	77.6	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	79.8	80.0	0.2	No	No
18	Riverside Av.	s/o Slover Av.	80.7	81.0	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	80.8	81.1	0.3	No	No
20	Riverside Av.	s/o Jurupa Av.	80.8	81.1	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	75.5	75.7	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	74.6	74.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	75.7	75.7	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.1	74.1	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	72.0	72.5	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.4	70.4	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.9	74.8	0.9	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.5	73.6	2.2	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	75.3	75.8	0.5	No	No
32	Agua Mansa Rd.	w/o Brown Av.	75.3	75.8	0.5	No	No
33	Agua Mansa Rd.	w/o Holly St.	75.3	75.8	0.5	No	No
34	Agua Mansa Rd.	e/o Holly St.	75.3	75.5	0.2	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	76.5	77.3	0.8	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	73.1	73.7	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.1	77.9	0.8	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.7	0.9	No	No
40	Market St.	e/o Rivera St.	79.1	79.9	0.8	No	No

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

² Significance Criteria (Section 4).

TABLE 7-25: UNMITIGATED YEAR 2035 ALTERNATIVE 1A TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.4	78.4	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.9	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.1	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.7	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.2	1.1	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.1	1.2	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.3	0.8	No	No
11	Rubidoux Bl.	s/o 28th St.	76.8	77.6	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.9	77.0	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	77.6	77.6	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	79.8	80.0	0.2	No	No
18	Riverside Av.	s/o Slover Av.	80.7	81.0	0.3	No	No
19	Riverside Av.	s/o Santa Ana Av.	80.8	81.1	0.3	No	No
20	Riverside Av.	s/o Jurupa Av.	80.8	81.1	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	75.5	75.7	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	74.6	74.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	75.7	75.7	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.1	74.1	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	72.0	72.5	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.4	70.4	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.9	76.8	3.0	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.5	73.6	2.2	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	75.3	76.2	0.9	No	No
32	Agua Mansa Rd.	w/o Brown Av.	75.3	76.2	0.9	No	No
33	Agua Mansa Rd.	w/o Holly St.	75.3	75.6	0.3	No	No
34	Agua Mansa Rd.	e/o Holly St.	75.3	76.2	0.9	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	76.5	77.3	0.8	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	73.1	73.7	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.1	77.8	0.7	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.7	0.9	No	No
40	Market St.	e/o Rivera St.	79.1	79.9	0.8	No	No

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

² Significance Criteria (Section 4).

TABLE 7-26: UNMITIGATED YEAR 2035 ALTERNATIVE 2 TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.4	78.4	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.8	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.0	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.6	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.1	1.1	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.2	1.2	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.2	0.7	No	No
11	Rubidoux Bl.	s/o 28th St.	76.8	77.5	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.9	77.0	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	77.6	77.6	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	79.8	80.0	0.2	No	No
18	Riverside Av.	s/o Slover Av.	80.7	80.9	0.2	No	No
19	Riverside Av.	s/o Santa Ana Av.	80.8	81.1	0.3	No	No
20	Riverside Av.	s/o Jurupa Av.	80.8	81.1	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	75.5	75.7	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	74.6	74.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	75.7	75.8	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.1	74.1	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	72.0	72.4	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.4	70.4	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.9	74.8	1.0	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.5	73.6	2.1	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	75.3	75.9	0.6	No	No
32	Agua Mansa Rd.	w/o Brown Av.	75.3	75.9	0.6	No	No
33	Agua Mansa Rd.	w/o Holly St.	75.3	75.7	0.3	No	No
34	Agua Mansa Rd.	e/o Holly St.	75.3	76.1	0.8	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	76.5	77.3	0.8	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	73.1	73.6	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.1	77.8	0.7	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.6	0.9	No	No
40	Market St.	e/o Rivera St.	79.1	79.8	0.7	No	No

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

² Significance Criteria (Section 4).

TABLE 7-27: UNMITIGATED YEAR 2035 ALTERNATIVE 2A TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise-Sensitive Land Use?	Threshold Exceeded? ²
			No Project	With Project	Project Addition		
1	Cedar Av.	n/o I-10 Fwy.	78.4	78.4	0.1	No	No
2	Cedar Av.	s/o I-10 Fwy.	77.5	77.8	0.4	No	No
3	Cedar Av.	s/o Slover Av.	76.6	77.0	0.5	No	No
4	Cedar Av.	s/o Santa Ana Av.	76.6	77.2	0.6	Yes	No
5	Cedar Av.	s/o Jurupa Av.	77.9	78.6	0.6	No	No
6	Rubidoux Bl.	s/o El Rivino Rd.	77.0	78.0	1.0	No	No
7	Rubidoux Bl.	s/o Production Circle	77.0	78.0	1.0	No	No
8	Rubidoux Bl.	s/o 20th St.	76.2	77.0	0.8	No	No
9	Rubidoux Bl.	s/o 24th St.	76.3	77.1	0.8	No	No
10	Rubidoux Bl.	s/o 26th St.	76.5	77.2	0.7	No	No
11	Rubidoux Bl.	s/o 28th St.	76.8	77.5	0.7	Yes	No
12	Rubidoux Bl.	s/o SR-60 Fwy.	76.9	77.0	0.1	Yes	No
13	Rubidoux Bl.	s/o 34th St.	75.6	75.7	0.1	Yes	No
14	Cactus Av.	n/o El Rivino Rd.	73.3	73.4	0.0	Yes	No
15	Rivera St.	n/o Market St.	71.9	71.9	0.0	No	No
16	Riverside Av.	n/o I-10 Fwy.	77.6	77.6	0.1	No	No
17	Riverside Av.	s/o I-10 Fwy.	79.8	80.0	0.2	No	No
18	Riverside Av.	s/o Slover Av.	80.7	80.9	0.2	No	No
19	Riverside Av.	s/o Santa Ana Av.	80.8	81.1	0.3	No	No
20	Riverside Av.	s/o Jurupa Av.	80.8	81.1	0.3	No	No
21	Rancho Av.	n/o Agua Mansa Rd.	75.5	75.7	0.2	No	No
22	Rancho Av.	s/o Agua Mansa Rd.	74.6	74.7	0.1	No	No
23	Slover Av.	w/o Cedar Av.	75.7	75.8	0.0	No	No
24	Slover Av.	w/o Riverside Av.	74.1	74.1	0.0	No	No
25	Santa Ana Av.	w/o Cedar Av.	72.0	72.4	0.4	Yes	No
26	Santa Ana Av.	w/o Riverside Av.	69.7	69.7	0.0	No	No
27	Jurupa Av.	w/o Cedar Av.	70.4	70.4	0.0	Yes	No
28	El Rivino Rd.	e/o Cedar Av.	73.9	77.1	3.2	No	No
29	El Rivino Rd.	e/o Cactus Av.	71.5	73.6	2.1	Yes	No
30	El Rivino Rd.	e/o Hall Av.	69.4	69.8	0.4	Yes	No
31	Agua Mansa Rd.	e/o 20th St.	75.3	76.4	1.0	No	No
32	Agua Mansa Rd.	w/o Brown Av.	75.3	76.4	1.0	No	No
33	Agua Mansa Rd.	w/o Holly St.	75.3	75.7	0.4	No	No
34	Agua Mansa Rd.	e/o Holly St.	75.3	76.1	0.8	No	No
35	Agua Mansa Rd.	e/o El Rivino Rd.	76.5	77.3	0.8	No	No
36	Agua Mansa Rd.	e/o Riverside Av.	73.1	73.6	0.5	No	No
37	20th St.	e/o Rubidoux Bl.	77.1	77.7	0.6	No	No
38	20th St.	e/o Agua Mansa Rd.	76.4	77.6	1.2	No	No
39	Market St.	e/o Hall Av.	77.8	78.6	0.9	No	No
40	Market St.	e/o Rivera St.	79.1	79.8	0.7	No	No

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

² Significance Criteria (Section 4).

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8 SENSITIVE RECEIVER LOCATIONS

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

Sensitive receiver locations in the Project study area include residential and park uses, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

- R1: Located approximately 347 feet north of the Project site, R1 represents existing residential homes east of Cedar Avenue, north of El Rivino Road. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing residential homes located north of the Project site at roughly 133 feet across El Rivino Road. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing residential homes on El Rivino Road approximately 297 feet east of the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing residential homes east of the Project site, across the Hall Avenue, south of El Rivino Road.
- R5: Located approximately 2,232 feet southeast of the Project site, R5 represents an existing residential home on Wilson Street. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing residential homes located south of the Project site at roughly 3,018 feet on Hall Avenue. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing Avalon Park at approximately 2,172 feet southwest of the Project site. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.

- R8: Location R8 represents the existing residential homes west of the Project site on Castellano Road. A 24-hour noise measurement was taken near this location, L9, to describe the existing ambient noise environment.
- R9: Location R9 represents the existing residential homes at approximately 585 feet west of the Project site on Castellano Road.
- R10: Location R10 represents the existing residential homes west of the Project site at roughly 111 feet across Cedar Avenue. A 24-hour noise measurement was taken near this location, L10, to describe the existing ambient noise environment.

EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS



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9 OPERATIONAL (STATIONARY-SOURCE) NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from operation of the proposed Agua Mansa Commerce Park Specific Plan Project. Exhibit 9-A identifies the representative receiver locations and noise source locations used to assess the operational (stationary-source) noise levels.

9.1 OPERATIONAL (STATIONARY-SOURCE) NOISE SOURCES

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities). This noise analysis is intended to describe noise level impacts associated with the expected typical operational (stationary-source) activities at the Project site.

9.2 REFERENCE NOISE LEVELS

To estimate the Project operational (stationary-source) noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational (stationary-source) noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities) all operating simultaneously. These noise level impacts will likely vary throughout the day.

9.2.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken at the Santee Walmart on July 27, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a single mechanical roof-top air conditioning unit on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using the uniform reference distance of 50 feet, the reference air conditioning unit noise level is 57.2 dBA L_{eq} . The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

9.2.2 UNLOADING/DOCKING ACTIVITY

A short-term reference noise level measurement was collected on Wednesday, January 7, 2015, by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The noise level measurement represents the typical weekday dry goods logistics warehouse operation in a single building, of roughly 285,000 square feet, with a loading dock area on the western side of the building façade. Up to ten trucks were observed in the loading dock area including a combination of track trailer semi-trucks, two-axle delivery trucks, and background forklift operations.

The unloading/docking activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of loading dock activities generating a reference noise level of 62.8 dBA L_{eq} at a uniform reference distance of 50 feet. At this measurement location, the noise sources associated with employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine and air brakes noise.

9.2.3 PARKING LOT VEHICLE MOVEMENTS (INDUSTRIAL & R&D USES)

To determine the noise levels associated with industrial and research and development use parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 41.7 dBA L_{eq} . The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

9.2.4 PARKING LOT VEHICLE MOVEMENTS (COMMERCIAL)

To determine the noise levels associated with commercial parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30, 2012. The 15-minute noise level measurement indicates that the parking lot vehicle movements generates noise levels of 45.1 dBA L_{eq} at a normalized distance of 50 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car alarms sounding, and customers moving shopping carts. Noise associated with parking lot vehicle movements is expected during the typical daytime, and nighttime conditions for the entire hour (60 minutes).

9.2.5 PARKING LOT VEHICLE MOVEMENT ACTIVITIES (PARK)

To describe the potential noise level impacts associated with the Project's parking lot activities within the proposed park land uses, a reference noise level measurement was collected on Wednesday, October 8, 2014 at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise levels collected at the Founders Park are expected to reflect the noise level activities at the parking lot for the park use of the Project site, since the reference noise level measurement includes vehicles entering and exiting parking stalls, parents loading and unloading chairs and kids, closing of truck doors and minivan trunk lids, car horn beeps for car alarm arming, car stereos, kids laughing, playing, and dropping sports equipment into a truck bed. The reference noise level is 40.4 dBA L_{eq} at the uniform distance of 50 feet from the source. The parking lot activities are estimated to occur for 60 minutes during the peak hour conditions.

9.2.6 DOG PARK ACTIVITIES

To describe the potential noise level impacts associated with the Agua Mansa Commerce Park Specific Plan park use with dog park, a reference noise level measurement was collected on Wednesday, October 8, 2014 at La Paws Dog Park in the City of Mission Viejo. The reference noise levels collected at the La Paws Dog Park are expected to reflect the noise level activities at the dog park within Project site. The reference noise level measurement at the dog park includes people talking, dogs running, playing fetch, chasing each other, growling, barking and dog owners talking on cell phones. As observed during the noise level measurement, the dual entry gate of the La Paws Dog Park was identified as a key source of noise when opened and closed due to metal hinges squeaking and the metal to metal contact with the gate and its closure. At the uniform reference distance of 50 feet from the noise source, a reference noise level of 42.8 dBA L_{eq} was measured. The dog park activities are estimated to operate continuously for up to 60 minutes during the peak hour conditions.

9.2.7 PLAYGROUND ACTIVITIES

To represent the potential noise level impacts associated with the Project's park and playground activities, a reference noise level measurement was collected on Wednesday, October 8, 2014 at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise levels collected at the Founders Park are expected to reflect the noise level activities within the recreation area of the Project site, since the reference noise level measurement includes girls' youth soccer games, coaches shouting instructions, parents speaking on cell phones, and background noise levels from kids playing on swing sets and people cheering and clapping. Using the uniform reference distance of 50 feet, the reference park activity noise level is 43.4 dBA L_{eq} . The soccer field activities are estimated to occur for 60 minutes during the peak hour conditions.

9.2.8 PARK TRAIL ACTIVITIES

Urban Crossroads, Inc. collected reference noise level measurements from similar trail and park uses on April 13, 2016 at the Rancho Santa Margarita Lake. The reference noise level measurement represents pedestrian and bike activities observed over a two-and-a-half-minute period at a trail adjacent to the lake. The noise sources included in the reference noise level measurement consist of multiple pedestrian pass-by events, people with strollers, groups talking while walking, children on scooters, people jogging, and bike pass-by events. In addition, the reference noise levels include pedestrians talking on cell phones, playing music, laughing, and walking their dogs. At a common distance of 50 feet from the source, a reference noise level of 47.2 dBA L_{eq} was measured.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Land Use	Noise Source	Duration (hh:mm:ss)	Dist. From Source (Feet)	Noise Source Height (Feet)	Hourly Activity (Mins) ¹	Hourly (dBA L_{eq})	
						Reference Noise Level	@ 50'
All	Roof-Top Air Conditioning Unit ²	96:00:00	5	5	39	77.2	57.2
Industrial & R&D	Unloading/Docking Activity ²	00:15:00	30	8	60	67.2	62.8
	Parking Lot Vehicle Movements ³	01:00:00	10	5	60	52.2	41.7
Commercial Retail	Parking Lot Vehicle Movements ⁴	00:15:00	5	5	60	60.1	45.1
Park	Parking Lot Vehicle Movements ⁵	00:08:00	5	5	60	55.4	40.4
	Dog Park Activities ⁶	00:15:00	5	4	60	62.8	42.8
	Playground Activities ⁷	00:15:00	5	4	60	63.4	43.4
	Park Trail Activities ⁸	00:02:30	10	5	60	57.7	47.2

¹ Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

² As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

³ As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest at typical lunch hour (12:00 p.m. to 1:00 p.m.).

⁴ As measured by Urban Crossroads, Inc. on 5/30/2012 by Urban Crossroads, Inc. at the Laguna Niguel Walmart at 27470 Alicia Parkway.

⁵ As measured by Urban Crossroads, Inc. on 10/8/2014 by Urban Crossroads, Inc. at the Founder's Park in the unincorporated community of Ladera Ranch in the County of Orange.

⁶ As measured by Urban Crossroads, Inc. on 10/8/2014 by Urban Crossroads, Inc. at the La Paws Dog Park in the City of Mission Viejo.

⁷ As measured by Urban Crossroads, Inc. on 10/8/2014 by Urban Crossroads, Inc. at the Founder's Park in the unincorporated community of Ladera Ranch in the County of Orange.

⁸ As measured by Urban Crossroads, Inc. on 4/13/2016 by Urban Crossroads, Inc. at the Rancho Santa Margarita Lake.

"R&D" = Research and development

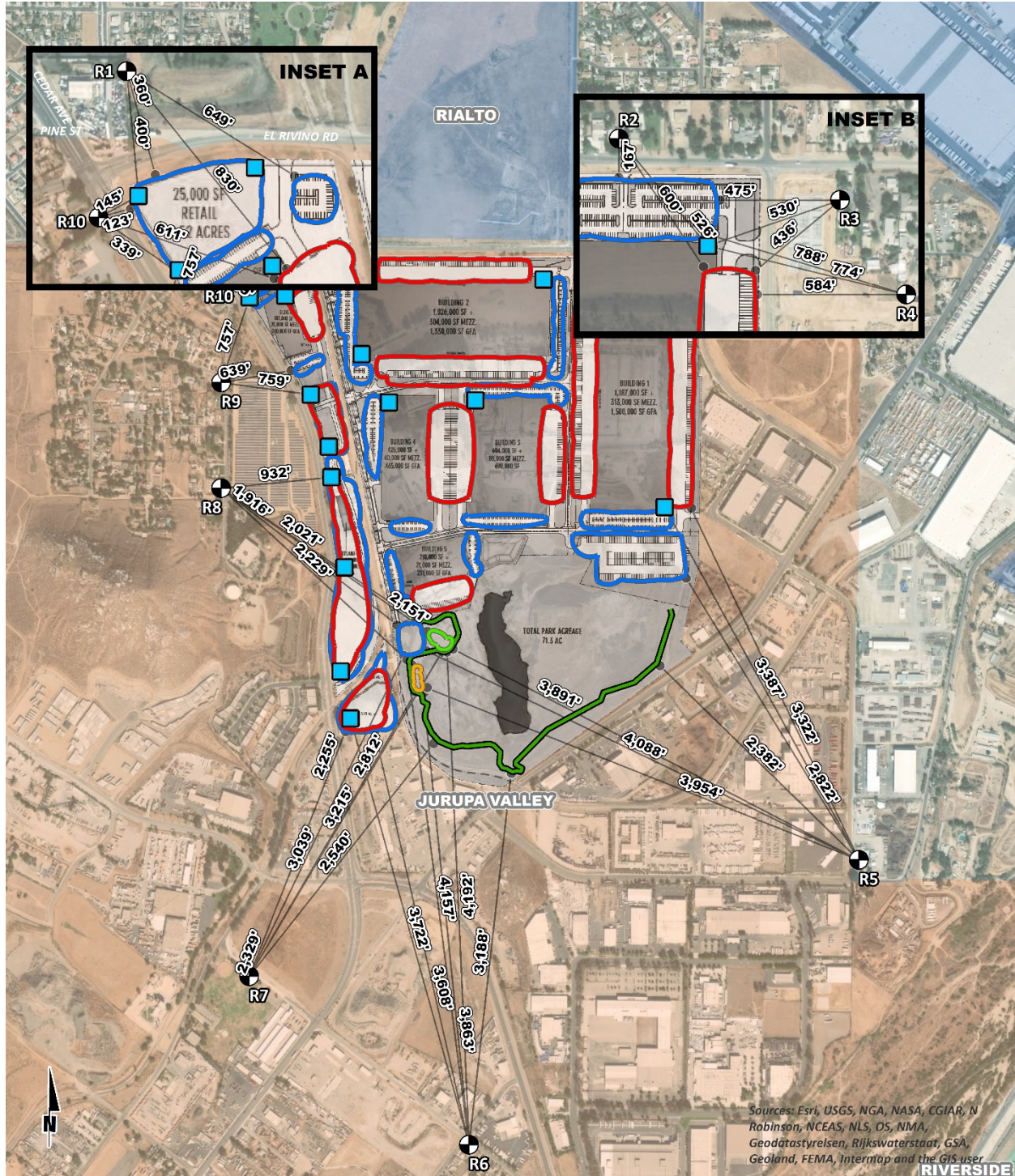
9.3 PROJECT OPERATIONAL (STATIONARY-SOURCE) NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playgrounds, a dog park, and trail activities), Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. The operational (stationary-source) noise level calculations, shown on Table 9-2, 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. Hard site conditions are used in the operational (stationary-source) 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. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 shows the individual operational (stationary-source) noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 9-2, the Project-only operational (stationary-source) noise levels will range from 27.6 to 44.6 dBA L_{eq} at the sensitive receiver locations.

EXHIBIT 9-A: OPERATIONAL (STATIONARY-SOURCE) NOISE SOURCE LOCATIONS



LEGEND:

- Receiver Locations
- Dog Park Activity
- Roof-Top Air Conditioning Unit
- Distribution/Warehouse Activity
- Playground Activity
- Distance from receiver to center of noise source (in feet)
- Parking Lot Vehicle Movements
- Park Trails

TABLE 9-2: UNMITIGATED PROJECT-ONLY OPERATIONAL NOISE LEVELS

Receiver Location ¹	Noise Source ²	Project Operational Noise Levels (dBA) ³					
		L _{eq} (E. Avg.)	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
R1	Air Conditioning Unit (Roof-Top)	37.2	34.4	36.1	37.4	37.7	38.2
	Parking Lot Vehicle Movements (Commercial)	32.2	28.8	32.8	35.8	39.2	51.6
	Parking Lot Vehicle Movements (Industrial)	25	21.8	22.8	27.8	33.8	44.7
	Truck Unloading/Docking Activity	38.4	35.4	38.4	43	46.8	51.2
	Combined Noise Level:	41.5	38.5	41.2	44.7	48.1	54.9
R2	Air Conditioning Unit (Roof-Top)	34.9	32.1	33.8	35.1	35.4	35.9
	Parking Lot Vehicle Movements (Industrial)	33.9	30.7	31.7	36.7	42.7	53.6
	Truck Unloading/Docking Activity	41.2	38.2	41.2	45.8	49.6	54
	Combined Noise Level:	42.7	39.7	42.3	46.6	50.5	56.8
R3	Air Conditioning Unit (Roof-Top)	34.8	32	33.7	35	35.3	35.8
	Parking Lot Vehicle Movements (Industrial)	27	23.8	24.8	29.8	35.8	46.7
	Truck Unloading/Docking Activity	44	41	44	48.6	52.4	56.8
	Combined Noise Level:	44.6	41.6	44.4	48.8	52.6	57.2
R4	Air Conditioning Unit (Roof-Top)	31.5	28.7	30.4	31.7	32	32.5
	Parking Lot Vehicle Movements (Industrial)	23.8	20.6	21.6	26.6	32.6	43.5
	Truck Unloading/Docking Activity	41.4	38.4	41.4	46	49.8	54.2
	Combined Noise Level:	41.9	38.9	41.8	46.2	50.0	54.6
R5	Air Conditioning Unit (Roof-Top)	18.7	15.9	17.6	18.9	19.2	19.7
	Dog Park Activities	4.8	0.5	3	7.2	14.6	20.6
	Park Trail Activities	22	17	21.1	23.3	23.4	34.2
	Parking Lot Vehicle Movements (Industrial)	15.4	12.2	13.2	18.2	24.2	35.1
	Parking Lot Vehicle Movements (Park)	11.7	9.5	12.5	15.7	18.5	22.4
	Playground Activities	5.6	3.9	6.3	9.2	11.9	16.1
	Truck Unloading/Docking Activity	26.3	23.3	26.3	30.9	34.7	39.1
	Combined Noise Level:	28.5	25.2	28.2	32.1	35.6	41.6
R6	Air Conditioning Unit (Roof-Top)	17.9	15.1	16.8	18.1	18.4	18.9
	Dog Park Activities	5	0.7	3.2	7.4	14.8	20.8
	Park Trail Activities	20.1	15.1	19.2	21.4	21.5	32.3
	Parking Lot Vehicle Movements (Industrial)	13.8	10.6	11.6	16.6	22.6	33.5
	Parking Lot Vehicle Movements (Park)	11.6	9.4	12.4	15.6	18.4	22.3
	Playground Activities	4.9	3.2	5.6	8.5	11.2	15.4
	Truck Unloading/Docking Activity	25.6	22.6	25.6	30.2	34	38.4
	Combined Noise Level:	27.6	24.3	27.3	31.3	34.8	40.5
R7	Air Conditioning Unit (Roof-Top)	21.9	19.1	20.8	22.1	22.4	22.9
	Dog Park Activities	7.8	3.5	6	10.2	17.6	23.6
	Park Trail Activities	21.6	16.6	20.7	22.9	23	33.8
	Parking Lot Vehicle Movements (Industrial)	16.9	13.7	14.7	19.7	25.7	36.6
	Parking Lot Vehicle Movements (Park)	13.6	11.4	14.4	17.6	20.4	24.3
	Playground Activities	7.2	5.5	7.9	10.8	13.5	17.7
	Truck Unloading/Docking Activity	29.7	26.7	29.7	34.3	38.1	42.5
	Combined Noise Level:	31.2	28.0	30.9	35.1	38.7	44.1
R8	Air Conditioning Unit (Roof-Top)	29.9	27.1	28.8	30.1	30.4	30.9
	Dog Park Activities	9.8	5.5	8	12.2	19.6	25.6
	Park Trail Activities	23.1	18.1	22.2	24.4	24.5	35.3

Receiver Location ¹	Noise Source ²	Project Operational Noise Levels (dBA) ³					
		Leq (E. Avg.)	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
	Parking Lot Vehicle Movements (Industrial)	22.7	19.5	20.5	25.5	31.5	42.4
	Parking Lot Vehicle Movements (Park)	16.6	14.4	17.4	20.6	23.4	27.3
	Playground Activities	10.7	9	11.4	14.3	17	21.2
	Truck Unloading/Docking Activity	37.4	34.4	37.4	42	45.8	50.2
	Combined Noise Level:	38.4	35.4	38.2	42.5	46.1	51.1
R9	Air Conditioning Unit (Roof-Top)	31.7	28.9	30.6	31.9	32.2	32.7
	Parking Lot Vehicle Movements (Commercial)	27.4	24	28	31	34.4	46.8
	Parking Lot Vehicle Movements (Industrial)	25.1	21.9	22.9	27.9	33.9	44.8
	Truck Unloading/Docking Activity	39.1	36.1	39.1	43.7	47.5	51.9
	Combined Noise Level:	40.2	37.2	40.0	44.3	48.0	53.7
R10	Air Conditioning Unit (Roof-Top)	37	34.2	35.9	37.2	37.5	38
	Parking Lot Vehicle Movements (Commercial)	39.2	35.8	39.8	42.8	46.2	58.6
	Parking Lot Vehicle Movements (Industrial)	29.2	26	27	32	38	48.9
	Truck Unloading/Docking Activity	41	38	41	45.6	49.4	53.8
	Combined Noise Level:	44.3	41.2	44.2	47.9	51.5	60.2

¹ See Exhibit 9-A for the receiver and noise source locations.

² Reference noise sources as shown on Table 9-1.

³ Operational noise level calculations are provided in Appendix 9.1.

Table 9-3 presents a summary of the combined total Project-only operational (stationary-source) noise level projections at the nearby sensitive receiver locations for a comparison with local jurisdiction exterior noise level standards. The Project operational (stationary-source) noise levels at the nearby sensitive receiver locations are shown to range from 27.6 to 44.6 dBA Leq. Based on the results of this analysis, the operational (stationary-source) noise levels associated with the Agua Mansa Commerce Park Specific Plan will satisfy the operational (stationary-source) exterior daytime and nighttime noise level standards at all nearby sensitive receiver locations. The operational (stationary-source) noise level calculations are included in Appendix 9.1.

TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Jurisdiction	Land Use	Noise Level at Receiver Locations (dBA) ²						Threshold Exceeded? ³
			Leq (E. Avg.)	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₅ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)	
Operational Noise Level Thresholds (Table 3-1)	County of San Bernardino	Residential	55	55	60	65	70	75	-
			45	45	50	55	60	65	-
	Jurupa Valley	Residential	65	-	-	-	-	-	-
			45	-	-	-	-	-	-
R1	County	Residential	41.5	38.5	41.2	44.7	48.1	54.9	No
R2	County	Residential	42.7	39.7	42.3	46.6	50.5	56.8	No
R3	Jurupa Valley	Residential	44.6						No
R4	Jurupa Valley	Residential	41.9						No
R5	County	Residential	28.5	25.2	28.2	32.1	35.6	41.6	No
R6	Jurupa Valley	Residential	27.6	-	-	-	-	-	No
R7	Jurupa Valley	Residential	31.2	-	-	-	-	-	No
R8	Jurupa Valley	Residential	38.4	-	-	-	-	-	No
R9	Jurupa Valley	Residential	40.2	-	-	-	-	-	No
R10	Jurupa Valley	Residential	44.3	-	-	-	-	-	No

¹ See Exhibit 9-A for the receiver and noise source locations.

² Estimated Project operational noise levels as shown on Table 9-2.

³ Do the estimated Project operational noise levels exceed the operational noise level standards (Table 3-1)?

"E. Avg." = Logarithmic (energy) average

9.4 PROJECT OPERATIONAL (STATIONARY-SOURCE) NOISE LEVEL CONTRIBUTIONS

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

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational (stationary-source) and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-4 and 9-5, respectively.

As indicated on Tables 9-4 and 9-5, the combined Project plus ambient noise levels are shown to remain below 65 dBA L_{eq} , and the Project daytime operational (stationary-source) noise level increase of up to 0.3 dBA L_{eq} and nighttime operational (stationary-source) noise level increase of up to 0.3 dBA L_{eq} are below the 3 dBA L_{eq} threshold. Since the Project-related operational (stationary-source) noise level contributions will satisfy the significance criteria discussed in Section 4, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts in these regards will be *less than significant*.

TABLE 9-4: PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	41.5	L1	61.6	61.6	0.0	No
R2	42.7	L2	59.6	59.7	0.1	No
R3	44.6	L3	60.8	60.9	0.1	No
R4	41.9	L3	60.8	60.9	0.1	No
R5	28.5	L5	63.7	63.7	0.0	No
R6	27.6	L7	64.2	64.2	0.0	No
R7	31.2	L8	62.3	62.3	0.0	No
R8	38.4	L9	50.6	50.9	0.3	No
R9	40.2	L10	59.2	59.3	0.1	No
R10	44.3	L10	59.2	59.3	0.1	No

¹ See Exhibit 9-A for the sensitive receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance Criteria as defined in Section 4.

TABLE 9-5: PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	41.5	L1	59.1	59.2	0.1	No
R2	42.7	L2	58.8	58.9	0.1	No
R3	44.6	L3	58.1	58.3	0.2	No
R4	41.9	L3	58.1	58.2	0.1	No
R5	28.5	L5	62.4	62.4	0.0	No
R6	27.6	L7	60.1	60.1	0.0	No
R7	31.2	L8	60.2	60.2	0.0	No
R8	38.4	L9	49.6	49.9	0.3	No
R9	40.2	L10	58.7	58.8	0.1	No
R10	44.3	L10	58.7	58.9	0.2	No

¹ See Exhibit 9-A for the sensitive receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance Criteria as defined in Section 4.

9.5 OPERATIONAL VIBRATION IMPACTS

To assess the potential vibration impacts from truck haul trips associated with operational activities the City of Jurupa Valley threshold for vibration of 0.2 in/sec PPV is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Agua Mansa Commerce Park Specific Plan heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV and 0.003 in/sec RMS at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment*. (3) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the 0.2 in/sec PPV threshold, and therefore, will be *less than significant*.

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10 CONSTRUCTION IMPACTS

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

10.1 CONSTRUCTION NOISE LEVELS

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

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

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. 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. The construction stages used in this analysis are consistent with the *Agua Mansa Commerce Park Specific Plan Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (28)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

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

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS



TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L _{eq})	Reference Noise Levels @ 50 Feet (dBA L _{eq}) ⁷
1	Truck Pass-Bys & Dozer Activity ¹	0:01:15	30'	63.6	59.2
2	Dozer Activity ¹	0:01:00	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities ²	0:01:00	30'	71.9	67.5
4	Foundation Trenching ²	0:01:01	30'	72.6	68.2
5	Rough Grading Activities ²	0:05:00	30'	77.9	73.5
6	Framing ³	0:02:00	30'	66.7	62.3
7	Water Truck Pass-By & Backup Alarm ⁴	0:00:45	30'	76.3	71.9
8	Dozer Pass-By ⁴	0:00:32	30'	84.0	79.6
9	Two Scrapers & Water Truck Pass-By ⁴	0:00:32	30'	83.4	79.0
10	Two Scrapers Pass-By ⁴	0:00:30	30'	83.7	79.3
11	Scraper, Water Truck, & Dozer Activity ⁴	0:30:00	30'	79.7	75.3
12	Concrete Mixer Truck Movements ⁵	0:01:00	50'	71.2	71.2
13	Concrete Paver Activities ⁵	0:01:00	30'	70.0	65.6
14	Concrete Mixer Pour & Paving Activities ⁵	0:01:00	30'	70.3	65.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	0:00:20	50'	71.6	71.6
16	Concrete Mixer Pour Activities ⁵	1:00:00	50'	67.7	67.7
17	Forklift, Jackhammer, & Metal Truck Bed ⁶	0:02:06	50'	67.7	67.7

¹ As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

² As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

³ As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ As measured by Urban Crossroads, Inc. on 9/9/2016 during demolition activities of an existing parking lot in Irvine.

⁷ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

The sample reference noise level measurements provided herein were taken by Urban Crossroads, Inc. in order to describe the noise levels from various construction activities at similar land use types. While other construction equipment reference noise levels are provided by the FTA and FHWA, each agency provides reference noise levels of outdated equipment, with the FTA (which cites Environmental Protection Agency noise levels) reference noise levels dating back to 1976, and the FHWA Roadway Construction Noise Model reference noise levels dating back to the early 1990s. (3) (29) As such, the FTA and FHWA reference noise levels represent construction equipment ranging from 20 to 40 years old that do not accurately reflect modern construction equipment noise level emissions. Therefore, Urban Crossroads collected the reference construction equipment and activity noise level measurements provided herein to

reflect modern construction equipment noise levels, with the oldest reference noise level measurement collected in 2015.

10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Tables 10-2 to 10-7 present the short-term construction noise levels for each stage of construction. **Table 10-8 provides a summary** of the construction noise levels by stage at the nearby noise-sensitive receiver locations. Based on the stages of construction, the noise impacts associated with the proposed Project are expected to create temporarily high noise levels at the nearby receiver locations. To assess the worst-case construction noise levels, this analysis shows the highest noise impacts when the equipment with the highest reference noise level is operating at the closest point from primary construction activity to each receiver location.

TABLE 10-2: DEMOLITION EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Water Truck Pass-By & Backup Alarm	71.9
Dozer Pass-By	79.6
Forklift, Jackhammer, & Metal Truck Bed Loading	67.9
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	62.0
R2	169	-10.6	0.0	69.0
R3	346	-16.8	0.0	62.8
R4	626	-22.0	0.0	57.6
R5	2,296	-33.2	0.0	46.3
R6	3,069	-35.8	0.0	43.8
R7	2,222	-33.0	0.0	46.6
R8	916	-25.3	0.0	54.3
R9	582	-21.3	0.0	58.2
R10	147	-9.4	0.0	70.2

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

TABLE 10-3: SITE PREPARATION EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Foundation Trenching	68.2
Water Truck Pass-By & Backup Alarm	71.9
Dozer Pass-By	79.6
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	62.0
R2	169	-10.6	0.0	69.0
R3	346	-16.8	0.0	62.8
R4	626	-22.0	0.0	57.6
R5	2,296	-33.2	0.0	46.3
R6	3,069	-35.8	0.0	43.8
R7	2,222	-33.0	0.0	46.6
R8	916	-25.3	0.0	54.3
R9	582	-21.3	0.0	58.2
R10	147	-9.4	0.0	70.2

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

TABLE 10-4: GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Water Truck Pass-By & Backup Alarm	71.9
Dozer Pass-By	79.6
Two Scrapers & Water Truck Pass-By	79.0
Two Scrapers Pass-By	79.3
Scraper, Water Truck, & Dozer Activity	75.3
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	62.0
R2	169	-10.6	0.0	69.0
R3	346	-16.8	0.0	62.8
R4	626	-22.0	0.0	57.6
R5	2,296	-33.2	0.0	46.3
R6	3,069	-35.8	0.0	43.8
R7	2,222	-33.0	0.0	46.6
R8	916	-25.3	0.0	54.3
R9	582	-21.3	0.0	58.2
R10	147	-9.4	0.0	70.2

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

TABLE 10-5: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	68.2

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	50.6
R2	169	-10.6	0.0	57.6
R3	346	-16.8	0.0	51.4
R4	626	-22.0	0.0	46.2
R5	2,296	-33.2	0.0	34.9
R6	3,069	-35.8	0.0	32.4
R7	2,222	-33.0	0.0	35.2
R8	916	-25.3	0.0	42.9
R9	582	-21.3	0.0	46.8
R10	147	-9.4	0.0	58.8

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

TABLE 10-6: PAVING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Concrete Mixer Backup Alarms & Air Brakes	71.6
Concrete Mixer Pour Activities	67.7
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	71.6

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	54.0
R2	169	-10.6	0.0	61.0
R3	346	-16.8	0.0	54.8
R4	626	-22.0	0.0	49.6
R5	2,296	-33.2	0.0	38.4
R6	3,069	-35.8	0.0	35.8
R7	2,222	-33.0	0.0	38.6
R8	916	-25.3	0.0	46.3
R9	582	-21.3	0.0	50.3
R10	147	-9.4	0.0	62.2

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

TABLE 10-7: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Construction Vehicle Maintenance Activities	67.5
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	67.5

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	378	-17.6	0.0	49.9
R2	169	-10.6	0.0	56.9
R3	346	-16.8	0.0	50.7
R4	626	-22.0	0.0	45.5
R5	2,296	-33.2	0.0	34.2
R6	3,069	-35.8	0.0	31.7
R7	2,222	-33.0	0.0	34.5
R8	916	-25.3	0.0	42.2
R9	582	-21.3	0.0	46.1
R10	147	-9.4	0.0	58.1

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ No barrier attenuation from existing barriers is included in the analysis.

10.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. As shown on Table 10-8, the unmitigated construction noise levels are expected to range from 43.8 to 70.2 dBA L_{eq} during the daytime hours and from 35.8 to 62.2 dBA L_{eq} during the nighttime hours at the nearby receiver locations. To evaluate whether the Project will generate potentially significant short-term noise levels at off-site sensitive receiver locations the City of Jurupa Valley 80 dBA L_{eq} daytime and 70 dBA L_{eq} nighttime thresholds for construction noise are used at the nearby sensitive receiver locations.

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA L_{eq})

Receiver Location ¹	Construction Noise Levels by Stage (dBA L _{eq})						
	Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Construction Noise Level ²
R1	62.0	62.0	62.0	50.6	54.0	49.9	62.0
R2	69.0	69.0	69.0	57.6	61.0	56.9	69.0
R3	62.8	62.8	62.8	51.4	54.8	50.7	62.8
R4	57.6	57.6	57.6	46.2	49.6	45.5	57.6
R5	46.3	46.3	46.3	34.9	38.4	34.2	46.3
R6	43.8	43.8	43.8	32.4	35.8	31.7	43.8
R7	46.6	46.6	46.6	35.2	38.6	34.5	46.6
R8	54.3	54.3	54.3	42.9	46.3	42.2	54.3
R9	58.2	58.2	58.2	46.8	50.3	46.1	58.2
R10	70.2	70.2	70.2	58.8	62.2	58.1	70.2

¹ Noise receiver locations are shown on Exhibit 10-A.

² Estimated construction noise levels during peak operating conditions.

Table 10-9 shows the highest construction noise levels at the potentially impacted receiver locations will satisfy the City of Jurupa Valley 80 dBA L_{eq} daytime and 70 dBA L_{eq} nighttime thresholds during temporary Project construction activities. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *less than significant* impact at all nearby sensitive receiver locations.

TABLE 10-9: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA L_{eq})

Receiver Location ¹	Construction Noise Levels (dBA L _{eq})					
	Highest Daytime Construction Noise Levels ²	Nighttime Construction Noise Levels (Concrete Pours)	Threshold ³		Threshold Exceeded? ⁴	
			Daytime	Nighttime	Daytime	Nighttime
R1	62.0	54.0	80	70	No	No
R2	69.0	61.0	80	70	No	No
R3	62.8	54.8	80	70	No	No
R4	57.6	49.6	80	70	No	No
R5	46.3	38.4	80	70	No	No
R6	43.8	35.8	80	70	No	No
R7	46.6	38.6	80	70	No	No
R8	54.3	46.3	80	70	No	No
R9	58.2	50.3	80	70	No	No
R10	70.2	62.2	80	70	No	No

¹ Noise receiver locations are shown on Exhibit 10-A.

² Estimated construction noise levels during worst-case operating conditions, as shown on Table 10-8. Nighttime construction noise levels based on reference concrete pour noise levels (Paving stage) shown on Table 10-8.

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

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

NIGHTTIME CONCRETE POUR NOISE LEVELS

The Project may require nighttime concrete pouring activities as a part of Project construction. The reference paving equipment activity noise levels, previously shown on Table 10-6, were collected during a nighttime concrete pour at an industrial construction site to represent these activities. As previously shown on Table 10-8, the concrete pouring equipment noise levels are expected to range from 35.8 to 62.2 dBA L_{eq} when equipment is operating at the closest point from the edge of Project construction activities to the nearby sensitive receiver locations. Based on the reference concrete pour equipment noise levels ranging from 35.8 to 62.2 dBA L_{eq}, Project nighttime concrete pour noise levels would satisfy the 70 dBA L_{eq} nighttime construction noise level threshold.

SOIL EXPORT TRUCK HAUL TRIPS

The soil export associated with Project construction is anticipated to require up to 18 truck haul trips per day. A doubling of the existing traffic volumes would be required to generate a 3 dBA CNEL increase and potentially exceed the City's off-site traffic noise level increase thresholds. However, the 18 daily Project construction soil export truck haul trips are not high enough to double the existing volumes on the study area roadway segments, and therefore, will not generate a barely perceptible noise level increase of 3 dBA CNEL at nearby sensitive land uses adjacent to study area roadways. (6) This is evident in the existing volumes previously shown on Table 6-2 for the study area roadway segments which are all in the thousands. As such, due to

the low traffic volumes generated by the Project truck haul activities, the off-site traffic noise level impacts during soil export are considered to be *less than significant* and no further analysis is required.

10.5 CONSTRUCTION VIBRATION IMPACTS

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

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-13 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-12 presents the expected Project related vibration levels at the nearby receiver locations.

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. At distances ranging from 147 to 3,069 feet from Project construction activities, construction vibration velocity levels are expected to approach 0.015 in/sec PPV, which is below the vibration standard of 0.2 in/sec PPV at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. In addition, at the time of this analysis, no pile driving activity was planned as part of Project construction.

SOIL EXPORT TRUCK HAUL TRIPS

The Project site will require up to 20,000 cubic yards of soil export during the construction process and up to 18 daily truck haul trips. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Agua Mansa Commerce Park Specific Plan heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV and 0.003 in/sec RMS at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment*. (3) Truck deliveries transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration levels at nearby homes will remain below the 0.2 in/sec PPV threshold.

TABLE 10-12: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver ¹	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec) ²						Thresholds by Jurisdiction	
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Vibratory Roller	Highest Vibration Level	Vibration Level	Exceeded ³
R1	378'	0.000	0.001	0.001	0.002	0.004	0.004	0.2	No
R2	169'	0.000	0.002	0.004	0.005	0.012	0.012	0.2	No
R3	346'	0.000	0.001	0.001	0.002	0.004	0.004	0.2	No
R4	626'	0.000	0.000	0.001	0.001	0.002	0.002	0.2	No
R5	2,296'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R6	3,069'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R7	2,222'	0.000	0.000	0.000	0.000	0.000	0.000	0.2	No
R8	916'	0.000	0.000	0.000	0.000	0.001	0.001	0.2	No
R9	582'	0.000	0.000	0.001	0.001	0.002	0.002	0.2	No
R10	147'	0.000	0.002	0.005	0.006	0.015	0.015	0.2	No

¹ Receiver locations are shown on Exhibit 10-A.

² Based on the Vibration Source Levels of Construction Equipment included on Table 6-13.

³ Does the peak vibration exceed the acceptable vibration threshold?

"ppv" = Peak Particle Velocity

11 REFERENCES

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19. **City of Jurupa Valley Planning Department.** *Noise Thresholds of Significance Guidance (MA16170, Project: Agua Mansa Commerce Park Specific Plan, Noise Comment 2).* December 19, 2018.
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21. **County of San Bernardino.** *Code of Ordinances, Title 8 Development Code, Chapter 83.01 General Performance Standards.*
22. **Counties of San Bernardino & Riverside, and the Cities of Colton and Rialto.** *Agua Mansa Industrial Corridor Specific Plan.* July 1986.
23. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.

24. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
25. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
26. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calven REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
27. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
28. **Urban Crossroads, Inc.** *Agua Mansa Commerce Park Specific Plan Air Quality Impact Analysis.* January 2019.
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30. **California Department of Transportation.** *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects.* May 2011.

12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Agua Mansa Commerce Park Specific Plan 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) 336-5979.

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EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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

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APPENDIX 3.1:

CITY OF JURUPA VALLEY CEQA THRESHOLDS GUIDANCE

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Noise Impact Analysis October 30, 2018		Comment
		increase and, if appropriate, the project's contribution to a potentially significant cumulative traffic noise increase.
2	Global	<p>Sec. 11.05.010 of the Municipal Code states in part: "...<i>This chapter is intended to establish city-wide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act (Pub. Resources Code Section 21000 et seq.) and no such thresholds are established...</i>"</p> <p>Please use the following standards for CEQA significance thresholds and revise report throughout:</p> <ul style="list-style-type: none"> • Construction Noise: For sensitive residential land uses nearby, the daytime and nighttime 8-hour standards are 80 dBA Leq and 70 dBA Leq, respectively (FTA Transit Noise and Vibration Impact Assessment). • Operational Noise (stationary): During operation of the Project, a significant noise-related impact would occur if Project operational noise at a noise-sensitive receptor exceeds: <ul style="list-style-type: none"> ○ 65 dBA Leq (10 minutes) between 7:00 a.m. and 10:00 p.m., or ○ 45 dBA Leq (10 min) between 10:00 p.m. and 7:00 a.m. • Operational Noise (traffic): Project-related traffic increases the noise level at a: <ul style="list-style-type: none"> ○ Residential land use by 3 dBA or more to 65 dBA CNEL or above; or ○ Commercial land use by 3 dBA or more to 70 dBA CNEL or above. • Vibration: A significant vibration-related impact would occur if the Project would expose a vibration-sensitive receptor to vibration levels that exceed 0.2 in/sec PPV during either long-term operation or construction of the Project <p><i>Note: The Municipal Code noise standards may be used for planning purposes only (i.e. to demonstrate that the project meets the City code requirements for site plan approval).</i></p>
3	Page 23	Construction exemptions for San Bernardino County are not discussed and are contained in Section 83.01.080(g) (3), i.e., 7 am – 7pm, except Sundays and federal holidays.
4	Page 24 and global	Policy NE 4.4 is intended for train operation but is being used to assess projects. Please convert this RMS level to VdB so that it can

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APPENDIX 3.2:

COUNTY OF SAN BERNARDINO DEVELOPMENT CODE

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San Bernardino County, CA Code of Ordinances

DIVISION 3: COUNTYWIDE DEVELOPMENT STANDARDS**CHAPTER 83.01: GENERAL PERFORMANCE STANDARDS**

Section

- 83.01.010 Purpose.
- 83.01.020 Applicability.
- 83.01.030 Modification of Standards.
- 83.01.040 Air Quality.
- 83.01.050 Electrical Disturbances.
- 83.01.060 Fire Hazards.
- 83.01.070 Heat.
- 83.01.080 Noise.
- 83.01.090 Vibration.
- 83.01.100 Waste Disposal.
- 83.01.110 External Commercial or Industrial Activity on Private Property.

§ 83.01.010 Purpose.

The purpose of this Chapter is to establish uniform performance standards for development within the County that promotes compatibility with surrounding areas and land uses.

Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include air quality, glare, heat, noise, runoff control, and waste disposal. These general performance standards are intended to protect the health and safety of businesses, nearby residents, and workers and to prevent damaging effects to surrounding properties.

(Ord. 4011, passed - -2007)

§ 83.01.020 Applicability.

(a) *New and Existing Uses in All Land Use Zoning Districts.* The provisions of this Chapter apply to all new and existing uses in all land use zoning districts. The standards of this Chapter elaborate upon and otherwise augment the development standards specified for individual land use zoning districts in Division 2 (Land Use Zoning Districts and Allowed Land Uses) and in Division 4 (Standards for Specific Land Uses and Activities).

(b) *Compliance of Alterations or Modifications.* Uses of the land that existed on the effective date of this Division shall not be altered or modified so as to conflict with, or further conflict with, these standards.

(c) *Evidence of Compliance with Standards.* If requested by the Director or the Review Authority, applicants shall provide evidence to the Director that the proposed development is in compliance with the standards in this Division and other applicable standards in this Development Code before the issuance of a Building Permit or business license.

(Ord. 4011, passed - -2007)

§ 83.01.030 Modification of Standards.

(a) *Modification by Specific Reference.* The provisions of this Division shall prevail should they conflict with the provisions of a land use zoning district or specific plan, unless the land use zoning district or plan standard specifically overrides or modifies the provisions of this Division by specific reference.

(b) *Modification by Establishment of Overlay or Approval of Planned Development or Variance.* An overlay, approved Planned Development, or approved Variance may modify the provisions of this Division.

(Ord. 4011, passed - -2007)

§ 83.01.040 Air Quality.

(a) *Equipment Permit and Inspection Requirements.* Required permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment for equipment that may cause air pollution. Before the equipment may be constructed, plans and specifications shall be submitted to the appropriate District for approval

(b) *Permits from Air Quality Management Districts.* Permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment. If requested by the Director, uses, activities, or processes that require Air Quality Management District approval to operate shall file a copy of the permit with the Department within 30 days of its approval.

(c) *Diesel Exhaust Emissions Control Measures.* The following emissions control measures shall apply to all discretionary land use projects approved by the County on or after January 15, 2009:

(1) *On-Road Diesel Vehicles.* On-road diesel vehicles are regulated by the State of California Air Resources Board.

(2) *Off-Road Diesel Vehicle/Equipment Operations.* All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during their operations in order to reduce diesel particulate matter emissions from diesel-fueled engines:

(A) Off-road vehicles/equipment shall not be left idling on site for periods in excess of five minutes. The idling limit does not apply to:

(I) Idling when queuing;

(II) Idling to verify that the vehicle is in safe operating condition;

(III) Idling for testing, servicing, repairing or diagnostic purposes;

(IV) Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane);

(V) Idling required to bring the machine system to operating temperature; and

(VI) Idling necessary to ensure safe operation of the vehicle.

(B) Use reformulated ultra low-sulfur diesel fuel in equipment and use equipment certified by the U.S. Environmental Protection Agency (EPA) or that pre-dates EPA regulations.

(C) Maintain engines in good working order to reduce emissions.

(D) Signs shall be posted requiring vehicle drivers to turn off engines when parked.

(E) Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Desert Air Quality Management District or the California Air Resources Board.

(F) Provide temporary traffic control during all phases of construction.

(G) On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.

(H) Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.

(I) Contractors shall use ultra low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District (AQMD) Rules 431.1 and 431.2 to reduce the release of undesirable emissions.

(J) Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.

(3) *Project Design.* Distribution centers, warehouses, truck stops and other facilities with loading docks where diesel trucks may reside overnight or for periods in excess of three hours shall be designed to enable any vehicle using these facilities to utilize on-site electrical connections to power the heating and air conditioning of the cabs of such trucks, and any refrigeration unit(s) of any trailer being pulled by the trucks, instead of operating the diesel engines and diesel refrigeration units of such trucks and trailers for these purposes. This requirement shall also apply to Recreational Vehicle Parks (as defined in § 810.01.200(k) of this title) and other development projects where diesel engines may reasonably be expected to operate on other than an occasional basis.

(Ord. 4011, passed - -2007; Am. Ord. 4065, passed - -2008)

§ 83.01.050 Electrical Disturbances.

No activity, land use, or process shall cause electrical disturbance that adversely affects persons or the operation of equipment across lot lines and that does not conform to the regulations of the Federal Communications Commission. Existing or proposed uses that generate electrical disturbances that are considered hazardous or a public nuisance shall be contained, modified, or shielded to prevent disturbances.

(Ord. 4011, passed - -2007)

§ 83.01.060 Fire Hazards.

This Section establishes standards for storage of solid materials susceptible to fire hazards and flammable liquids and gases where allowed in compliance with Division 2 (Land Use Zoning Districts and Allowed

Land Uses).

(a) *Combustible Solids*. Land uses that include the storage of solid materials susceptible to fire hazards shall be subject to the following storage standards in the indicated land use zoning districts.

(1) *Regional Industrial (IR) Land Use Zoning District*.

(A) *Inside Storage*. A structure utilized for the storage, manufacture, or use of flammable solid materials shall be located no less than 40 feet from any lot line and any other on-site structures or shall adhere to standards specified in Subdivision (2) below.

(B) *Outdoor Storage*. Outdoor storage of flammable solid materials shall be no less than 50 feet from any lot line and any other on-site structures.

(2) *All Other Manufacturing or Industrial Uses Legally Established Within Any Other Land Use Zoning District*. The storage, manufacture, or use of highly flammable solid materials shall take place in enclosed spaces having fire resistance of no less than two hours and protected with an automatic fire extinguishing system.

(b) *Flammable Liquids and Gases*. Land uses that involve the storage of flammable liquids and gases shall be subject to the following standards when established within the land use zoning districts indicated.

(1) *Setbacks*. County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials) shall establish setback requirements for flammable liquids and gases.

(2) *Storage capacity*. The total storage capacity of flammable liquids and gases on a parcel shall not exceed the quantities indicated in Table 83-1 (Storage Standards for Flammable Liquids and Gases).

Table 83-1		
Storage Standards for Flammable Liquids and Gases		
Stored Substance	Land Use Zoning District	Maximum Capacity
<i>SCF = Standard cubic feet at 60°F and 29.92" Hg (i.e., mercury)</i>		
Liquids	Regional Industrial District (IR)	120,000 gallons
	All other manufacturing or industrial uses legally established within any other land use zoning district	60,000 gallons
Liquefied Petroleum Gas (LPG)	All manufacturing or industrial uses established in any land zoning use district	Per County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials)
	All commercial uses legally established in any land use zoning district	15,000 gal./tank 20,000 gallons maximum aggregate total
	All agricultural uses legally established in any land use zoning district and aggregate total	15,000 gal./tank and aggregate total
Gases other than liquefied petroleum gas	Regional Industrial District (IR)	300,000 SCF above ground 600,000 SCF below ground
	All other manufacturing or industrial uses legally	150,000 SCF above ground 300,000 SCF below ground

	established within any other land use zoning district	
--	--	--

(c) *Liquefied Petroleum Gas (LPG).*

(1) *General Requirements.*

(A) *Agricultural, Commercial, Industrial, or Manufacturing Uses and Land Use Zoning Districts.* Liquefied petroleum gas (LPG) storage and distribution facilities for agricultural, commercial, industrial, or manufacturing uses shall be allowed subject to a Use Permit in compliance with Division 2 (Land Use Zoning Districts and Allowed Land Uses). The location, installation, operation, and maintenance of LPG storage and distribution facilities shall be subject to:

(I) The standards in this Subdivision.

(II) The conditions, requirements, and standards imposed by the Review Authority in compliance with this Chapter.

(B) *Residential Uses and Land Use Zoning Districts.* County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials) shall establish standards for residential uses and residential land use zoning districts for LPG storage.

(C) *Conflict Between Land Use District and Use Permit Requirements.* In the event of a conflict between the provisions of this § 83.01.060(c) (Liquefied Petroleum Gas [LPG]) and the provisions of a land use zoning district, including the requirement for Use Permit, the provisions of this Section shall prevail and control.

(2) *Fire Protection Requirements for All Parcels.*

(A) Setbacks for LPG storage and distribution facilities from structures and property lines shall be those specified by County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) LPG storage tanks shall be centrally located on the parcel to the satisfaction of the Fire Department.

(3) *Additional Fire Protection Requirements for Specific Types of Parcels.* For parcels that have no more than one occupied structure less than 5,000 square feet in size and where the water system provides substandard flows per International Standards Organization (ISO) standards for structure protection, additional fire protection requirements shall be as follows:

(A) *Where Parcel Size Is Ten Acres or More.* Fire flow shall be calculated for exposures only in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) *Where Parcel Size Is at Least Five Acres but less than Ten Acres.*

(I) A one hour approved protective coating shall be applied to the LPG storage tank.

(II) Fire flow shall be calculated for exposures only, in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(C) *Where Parcel Size Is at Least Two and One-half Acres, but less than Five Acres.*

(I) A two hour approved protective coating shall be applied to the tank.

(II) Fire flow shall be calculated for exposures only, in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(4) *Additional Fire Protection Requirements for Any Parcel with Adequate Fire Flow Available per ISO Standards.*

(A) Fire hydrant(s) shall serve the parcel in compliance with County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(B) Fire flow shall provide for exposure protection (ISO Calculation) and LPG storage tank protection/suppression.

(I) Sprinklers shall use calculations, as adopted by County Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(II) Hose lines shall use the formula: GPM = five times the square root of the tank capacity.

(C) Additional protection.

(I) Where the Fire Chief determines that water can be applied to the tank or exposures by the Fire Department in required amounts in eight minutes or less, no additional protection shall be required.

(II) Where the Fire Chief determines that water cannot be applied to the tank or exposures by the Fire Department in required amounts in eight minutes or less, one of the following protection measures shall be required:

(i) One hour approved protective coating shall be applied to the LPG storage tank; or

(ii) A fixed spray water system shall be installed as approved by the Fire Department.

(5) Additional fire protection requirements for any parcel not included in either Subdivisions (C)(III) or (C)(IV), above:

(A) Either a one-hour or more protective coating shall be applied to the LPG storage tank, as required by the Fire Department, or a fixed spray water system shall be installed instead of coating the tank.

(B) Fire flow shall be calculated for exposure only, in compliance with the San Bernardino Code Title 2, Division 3 (Fire Protection and Explosives and Hazardous Materials).

(Ord. 4011, passed - -2007)

§ 83.01.070 Heat.

Land uses in industrial districts shall not emit heat that would cause a temperature increase on any adjacent property in excess of ten degrees Fahrenheit, whether the change is in the air, on the ground, or in a structure.

(Ord. 4011, passed - -2007)

§ 83.01.080 Noise.

This Section establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.

(a) *Noise Measurement.* Noise shall be measured:

(1) At the property line of the nearest site that is occupied by, and/or zoned or designated to allow the development of noise-sensitive land uses;

(2) With a sound level meter that meets the standards of the American National Standards Institute (ANSI § SI4 1979, Type 1 or Type 2);

(3) Using the “A” weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A).

(b) *Noise Impacted Areas.* Areas within the County shall be designated as “noise-impacted” if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.

(c) *Noise Standards for Stationary Noise Sources.*

(1) *Noise Standards.* Table 83-2 (Noise Standards for Stationary Noise Sources) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

Table 83-2		
Noise Standards for Stationary Noise Sources		
<i>Affected Land Uses (Receiving Noise)</i>	<i>7:00 a.m. - 10:00 p.m. Leq</i>	<i>10:00 p.m. - 7:00 a.m. Leq</i>
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)
Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.		
dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.		
Ldn = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10:00 p.m. to 7:00 a.m.). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.		

(2) *Noise Limit Categories.* No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

(A) The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour.

(B) The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour.

(C) The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour.

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

(E) The noise standard plus 20 dB(A) for any period of time.

(d) *Noise Standards for Adjacent Mobile Noise Sources.* Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 (Noise Standards for Adjacent Mobile Noise Sources).

Table 83-3			
Noise Standards for Adjacent Mobile Noise Sources			
Land Use		Ldn (or CNEL) dB(A)	
Categories	Uses	Interior ⁽¹⁾	Exterior ⁽²⁾
Residential	Single and multi-family, duplex, mobile homes	45	60 ⁽³⁾
Commercial	Hotel, motel, transient housing	45	60 ⁽³⁾
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65
Notes:			
(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.			
(2) The outdoor environment shall be limited to: <ul style="list-style-type: none"> · Hospital/office building patios · Hotel and motel recreation areas · Mobile home parks · Multi-family private patios or balconies · Park picnic areas · Private yard of single-family dwellings · School playgrounds 			
(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.			
CNEL = (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound			

levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m.

(e) *Increases in Allowable Noise Levels.* If the measured ambient level exceeds any of the first four noise limit categories in Subdivision (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subdivision (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(f) *Reductions in Allowable Noise Levels.* If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by five dB(A).

(g) *Exempt Noise.* The following sources of noise shall be exempt from the regulations of this Section:

- (1) Motor vehicles not under the control of the commercial or industrial use.
- (2) Emergency equipment, vehicles, and devices.

(3) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

(h) *Noise Standards for Other Structures.* All other structures shall be sound attenuated against the combined input of all present and projected exterior noise to not exceed the criteria.

Table 83-4

Noise Standards for Other Structures

<i>Typical Uses</i>	<i>12-Hour Equivalent Sound Level (Interior) in dBA Ldn</i>
Educational, institutions, libraries, meeting facilities, etc.	45
General office, reception, etc.	50
Retail stores, restaurants, etc.	55
Other areas for manufacturing, assembly, testing, warehousing, etc.	65

In addition, the average of the maximum levels on the loudest of intrusive sounds occurring during a 24-hour period shall not exceed 65 dBA interior.

(Ord. 4011, passed - -2007; Am. Ord. 4245, passed - -2014)

§ 83.01.090 Vibration.

(a) *Vibration Standard.* No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths inches per second measured at or beyond the lot line.

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

(c) *Exempt Vibrations.* The following sources of vibration shall be exempt from the regulations of this Section.

(1) Motor vehicles not under the control of the subject use.

(2) Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

(Ord. 4011, passed - -2007)

§ 83.01.100 Waste Disposal.

(a) *Liquid Waste Disposal and Runoff Control.* No liquids of any kind shall be discharged into a public or private sewage or drainage system, watercourse, body of water, or into the ground, except in compliance with applicable regulations of the County Code, Title 23 (Waters) of the California Code of Regulations, the California Water Code, and related Federal regulations.

(b) *Hazardous Waste.* Refer to Chapter 84.11 (Hazardous Waste Facilities) for regulations relative to hazardous waste facilities.

(c) *Solid Waste Disposal.* Refer to Chapter 84.24 (Solid Waste/Recyclable Materials Storage) for regulations relative to solid waste disposal.

(Ord. 4011, passed - -2007)

§ 83.01.110 External Commercial or Industrial Activity on Private Property.

There shall be no unpermitted external or industrial activity on properties subject to the County's jurisdiction between the hours of 9:00 p.m. and 7:00 a.m. that shall at any time impair the quiet enjoyment of neighboring property owners or residents or in any manner disturb the public peace.

(Ord. 4245, passed - -2014)

APPENDIX 5.1:

STUDY AREA PHOTOS

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JN:11215 Agua Mansa Study Area Photos



L1_E
34, 2' 10.130000", 117, 23' 39.650000"



L1_N
34, 2' 10.110000", 117, 23' 39.650000"



L1_S
34, 2' 10.340000", 117, 23' 39.710000"



L1_W
34, 2' 10.160000", 117, 23' 39.650000"



L2_E
34, 2' 1.480000", 117, 22' 49.280000"



L2_N
34, 2' 1.390000", 117, 22' 49.120000"

JN:11215 Agua Mansa Study Area Photos



L2_S
34, 2' 1.470000", 117, 22' 49.280000"



L2_W
34, 2' 1.390000", 117, 22' 49.120000"



L3_E
34, 2' 2.140000", 117, 22' 29.670000"



L3_N
34, 2' 2.140000", 117, 22' 29.670000"



L3_S
34, 2' 2.170000", 117, 22' 29.700000"



L3-W
34, 2' 2.150000", 117, 22' 29.730000"

JN:11215 Agua Mansa Study Area Photos



L4_N

34, 1' 29.480000", 117, 22' 45.410000"



L4_S

34, 1' 29.480000", 117, 22' 45.440000"



L4_W

34, 1' 29.480000", 117, 22' 45.440000"



L4_E

34, 1' 29.480000", 117, 22' 45.440000"



L5_E

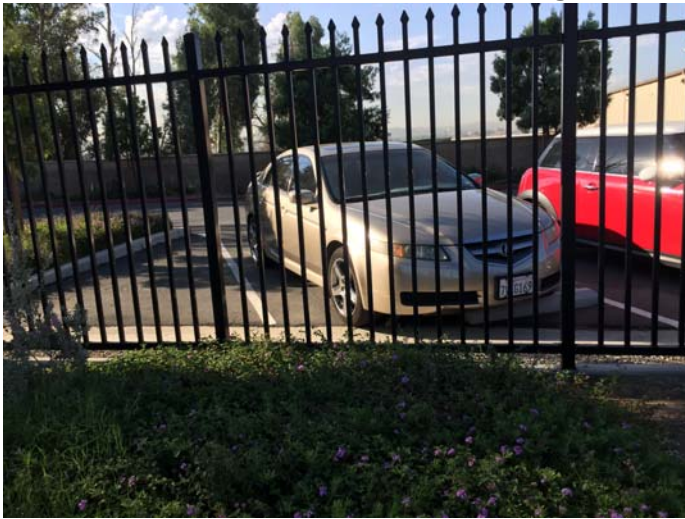
34, 1' 9.430000", 117, 22' 31.870000"



L5_N

34, 1' 9.430000", 117, 22' 31.870000"

JN:11215 Agua Mansa Study Area Photos



L5_S
34, 1' 9.420000", 117, 22' 31.900000"



L5_W
34, 1' 9.470000", 117, 22' 31.840000"



L6_N
34, 1' 16.680000", 117, 23' 6.720000"



L6_S
34, 1' 16.630000", 117, 23' 6.470000"



L6_W
34, 1' 16.680000", 117, 23' 6.720000"



L6-E
34, 1' 16.600000", 117, 23' 6.390000"

JN:11215 Agua Mansa Study Area Photos



L7_E
34, 0' 45.370000", 117, 23' 11.470000"



L7_N
34, 0' 45.410000", 117, 23' 11.500000"



L7_S
34, 0' 45.390000", 117, 23' 11.470000"



L7_W
34, 0' 45.410000", 117, 23' 11.500000"



L8_E
34, 1' 1.110000", 117, 23' 29.190000"



L8_N
34, 1' 1.080000", 117, 23' 29.190000"

JN:11215 Agua Mansa Study Area Photos



L8_S
34, 1' 1.110000", 117, 23' 29.130000"



L8_W
34, 1' 1.110000", 117, 23' 29.190000"



L9_E
34, 1' 40.870000", 117, 23' 35.400000"



L9_N
34, 1' 40.910000", 117, 23' 35.400000"



L9_S
34, 1' 40.790000", 117, 23' 35.450000"



L9_W
34, 1' 40.800000", 117, 23' 35.370000"

JN:11215 Agua Mansa Study Area Photos



L10_E
34, 1' 54.240000", 117, 23' 33.780000"



L10_N
34, 1' 54.150000", 117, 23' 33.670000"



L10_S
34, 1' 54.230000", 117, 23' 33.780000"



L10_W
34, 1' 54.290000", 117, 23' 33.780000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

24-Hour

Analyst: A. Wolfe

Energy Average Leq

Day

Night

CNEL

Location: L1- Located near existing residential homes northwest of the Project site.

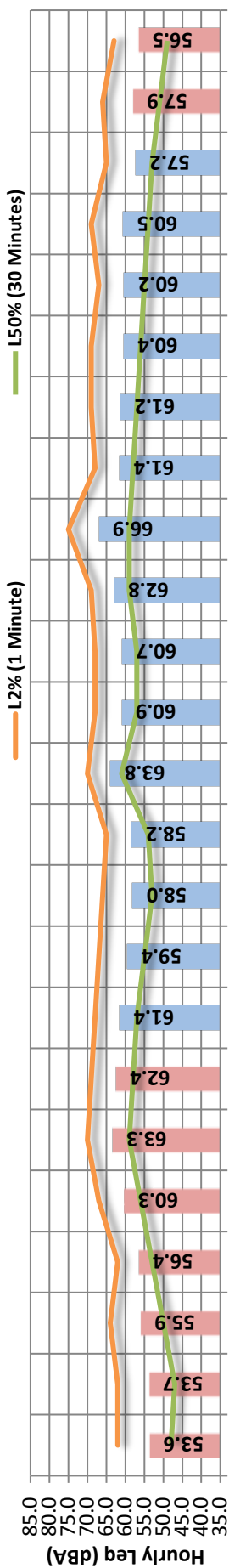
Date: 8/30/2017

61.6

59.1

66.2

Hourly Leq dBA Readings (unadjusted)



Hour Beginning

Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	57.2	72.4	39.3	67.0	65.0	61.0	60.0	55.0	53.0	45.0	43.0	41.0
	Max	66.9	85.0	46.2	75.0	75.0	74.0	74.0	64.0	61.0	52.0	50.0	48.0
	Energy Average:	61.6	Average:	Average:	69.9	68.2	65.4	64.2	59.9	56.3	49.4	47.5	44.8
Night	Min	53.6	71.8	43.4	64.0	62.0	59.0	56.0	50.0	47.0	45.0	44.0	44.0
	Max	63.3	85.4	50.7	72.0	70.0	67.0	66.0	62.0	59.0	54.0	53.0	51.0
	Energy Average:	59.1	Average:	Average:	67.8	65.0	61.8	59.7	55.4	52.3	48.4	47.7	46.6

Hourly Summary

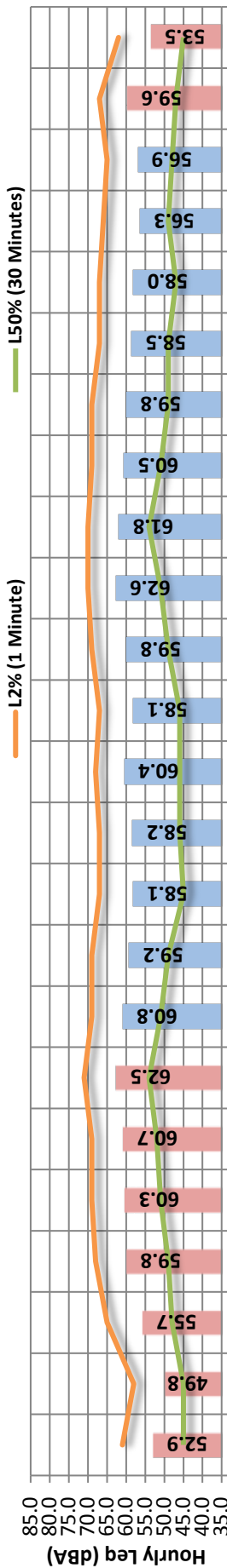
Night	0	53.6	71.8	43.9	65.0	62.0	59.0	56.0	51.0	48.0	45.0	45.0	44.0
	1	53.7	74.9	43.4	65.0	62.0	59.0	56.0	50.0	47.0	45.0	44.0	44.0
	2	55.9	75.7	44.7	67.0	62.0	61.0	58.0	54.0	50.0	46.0	45.0	45.0
	3	56.4	75.8	47.0	64.0	62.0	60.0	59.0	56.0	53.0	49.0	48.0	47.0
	4	60.3	82.2	48.1	70.0	67.0	64.0	62.0	59.0	56.0	51.0	50.0	48.0
	5	63.3	85.4	50.5	72.0	70.0	67.0	66.0	62.0	59.0	54.0	53.0	51.0
	6	62.4	83.1	50.7	72.0	69.0	66.0	64.0	61.0	58.0	53.0	53.0	51.0
Day	7	61.4	81.5	46.2	69.0	68.0	64.0	64.0	60.0	57.0	50.0	49.0	48.0
	8	59.4	75.6	43.8	68.0	67.0	64.0	63.0	59.0	55.0	48.0	47.0	45.0
	9	58.0	77.7	39.3	68.0	66.0	63.0	61.0	57.0	53.0	45.0	43.0	41.0
	10	58.2	72.4	39.3	67.0	65.0	63.0	62.0	58.0	54.0	48.0	45.0	42.0
	11	63.8	85.0	43.9	72.0	70.0	66.0	65.0	64.0	61.0	51.0	48.0	45.0
	12	60.9	80.7	42.1	69.0	68.0	66.0	65.0	61.0	57.0	49.0	46.0	43.0
	13	60.7	80.6	43.9	69.0	68.0	65.0	64.0	61.0	57.0	51.0	49.0	45.0
	14	62.8	80.3	43.5	72.0	69.0	67.0	66.0	63.0	59.0	51.0	49.0	45.0
	15	66.9	80.9	44.0	75.0	75.0	74.0	74.0	64.0	59.0	52.0	50.0	46.0
	16	61.4	76.3	44.1	70.0	68.0	66.0	65.0	61.0	58.0	51.0	49.0	46.0
	17	61.2	81.9	43.4	70.0	69.0	66.0	65.0	60.0	57.0	50.0	48.0	44.0
	18	60.4	79.5	43.6	70.0	69.0	65.0	64.0	59.0	56.0	49.0	47.0	45.0
	19	60.2	81.5	44.1	69.0	67.0	65.0	63.0	59.0	55.0	49.0	47.0	45.0
	20	60.5	81.7	44.8	73.0	69.0	64.0	62.0	57.0	54.0	49.0	48.0	46.0
	21	57.2	78.4	45.7	67.0	65.0	61.0	60.0	55.0	53.0	48.0	48.0	46.0
Night	22	57.9	82.5	44.6	69.0	66.0	61.0	59.0	54.0	51.0	47.0	46.0	45.0
	23	56.5	84.5	44.1	66.0	63.0	59.0	57.0	52.0	49.0	46.0	45.0	44.0



24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan		JN: 11215		24-Hour	
Location: L2- Located near existing residential homes on El Rivino Road north of the Project site.		Analyst: A. Wolfe		Energy Average Leq	
		Date: 8/30/2017		Day	Night
				59.6	58.8
				CNEL	
				65.5	

Hourly Leq dBA Readings (unadjusted)



Hour Beginning

Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.3	78.4	40.0	67.0	65.0	60.0	57.0	50.0	45.0	41.0	41.0	40.0
	Max	62.6	87.0	47.0	73.0	70.0	67.0	65.0	60.0	54.0	48.0	48.0	47.0
	Energy Average:	59.6	Average:	Average:	70.2	67.9	64.6	62.6	54.7	48.7	44.7	44.3	43.3
Night	Min	49.8	70.4	42.2	61.0	58.0	52.0	49.0	46.0	45.0	43.0	43.0	42.0
	Max	62.5	88.6	49.1	73.0	71.0	68.0	67.0	60.0	54.0	50.0	50.0	49.0
	Energy Average:	58.8	Average:	Average:	68.4	65.6	61.0	57.8	51.0	48.4	46.6	46.1	45.4

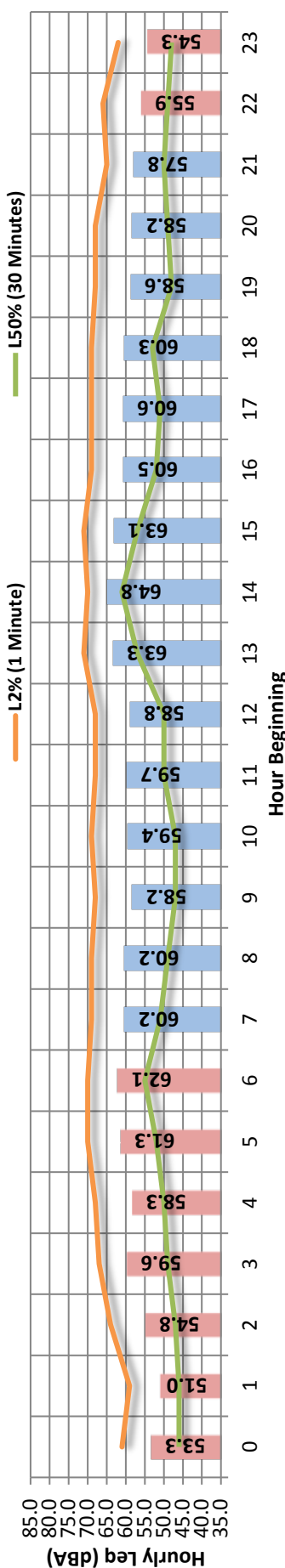
Hourly Summary

Night	0	52.9	60.8	42.2	65.0	61.0	55.0	51.0	46.0	45.0	43.0	43.0	42.0
	1	49.8	70.4	42.2	61.0	58.0	52.0	49.0	46.0	45.0	43.0	43.0	43.0
	2	55.7	80.2	44.9	68.0	65.0	60.0	56.0	49.0	48.0	46.0	46.0	45.0
	3	59.8	88.6	46.4	70.0	68.0	63.0	60.0	52.0	49.0	48.0	47.0	47.0
	4	60.3	82.5	46.1	72.0	69.0	66.0	63.0	54.0	51.0	49.0	48.0	47.0
	5	60.7	85.3	49.1	71.0	69.0	67.0	64.0	56.0	52.0	50.0	50.0	49.0
	6	62.5	84.0	48.1	73.0	71.0	68.0	67.0	60.0	54.0	50.0	49.0	49.0
Day	7	60.8	86.3	47.0	71.0	69.0	66.0	64.0	56.0	51.0	48.0	48.0	47.0
	8	59.2	79.3	42.4	71.0	69.0	66.0	63.0	55.0	49.0	45.0	44.0	43.0
	9	58.1	83.4	40.0	69.0	67.0	64.0	62.0	51.0	45.0	41.0	41.0	40.0
	10	58.2	79.4	40.1	70.0	67.0	64.0	62.0	53.0	46.0	42.0	41.0	41.0
	11	60.4	86.7	40.2	71.0	68.0	64.0	63.0	55.0	46.0	41.0	41.0	40.0
	12	58.1	79.2	40.2	69.0	67.0	64.0	62.0	54.0	46.0	42.0	42.0	41.0
	13	59.8	81.5	42.3	71.0	69.0	65.0	63.0	56.0	49.0	45.0	44.0	43.0
	14	62.6	87.0	43.7	73.0	70.0	67.0	65.0	58.0	51.0	46.0	46.0	45.0
	15	61.8	82.5	45.2	73.0	70.0	67.0	65.0	60.0	54.0	48.0	48.0	46.0
	16	60.5	82.8	42.2	71.0	69.0	66.0	65.0	58.0	51.0	46.0	45.0	43.0
	17	59.8	78.4	43.1	71.0	69.0	66.0	65.0	57.0	49.0	45.0	44.0	43.0
	18	58.5	80.7	44.2	69.0	67.0	64.0	62.0	54.0	49.0	45.0	45.0	44.0
	19	58.0	79.4	42.9	69.0	67.0	64.0	62.0	52.0	47.0	45.0	45.0	44.0
	20	56.3	78.4	44.2	68.0	66.0	62.0	59.0	51.0	49.0	46.0	45.0	44.0
	21	56.9	84.7	44.8	67.0	65.0	60.0	57.0	50.0	48.0	46.0	46.0	45.0
Night	22	59.6	87.2	43.4	70.0	67.0	63.0	59.0	49.0	47.0	45.0	45.0	44.0
	23	53.5	75.6	43.3	66.0	62.0	55.0	51.0	47.0	45.0	44.0	44.0	43.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan		JN: 11215		24-Hour	
Location: L3- Located near existing residential homes on El Rivino Road northeast of the Project site.		Analyst: A. Wolfe		Energy Average Leq	
		Date: 8/30/2017		Day	Night
				60.8	58.1
				CNEL	
				65.3	

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	57.8	75.1	39.6	67.0	65.0	62.0	59.0	52.0	47.0	42.0	41.0	40.0
	Max	64.8	85.7	46.0	73.0	71.0	69.0	68.0	65.0	61.0	55.0	51.0	48.0
	Energy Average:	60.8	Average:	Average:	70.3	68.7	66.3	64.5	56.9	51.5	46.3	45.3	43.9
Night	Min	51.0	70.6	42.5	63.0	59.0	54.0	51.0	47.0	46.0	44.0	43.0	43.0
	Max	62.1	86.7	48.1	72.0	70.0	68.0	66.1	60.0	55.0	50.0	50.0	49.0
	Energy Average:	58.1	Average:	Average:	68.3	65.2	60.4	57.6	51.4	49.1	46.9	46.6	45.9

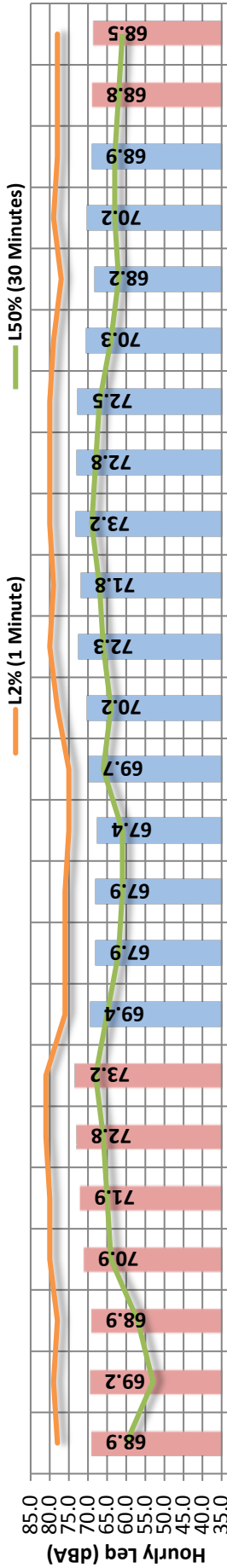
Hourly Summary

Night	0	53.3	77.1	42.5	65.0	61.0	54.0	51.0	47.0	46.0	44.0	43.0	43.0
	1	51.0	70.6	43.8	63.0	59.0	54.0	51.0	47.0	46.0	45.0	44.0	44.0
	2	54.8	77.8	43.9	68.0	69.0	57.0	53.0	49.0	47.0	45.0	45.0	44.0
	3	59.6	86.7	46.3	70.0	67.0	63.0	59.0	51.0	49.0	47.0	47.0	46.0
	4	58.3	77.5	46.9	71.0	68.0	65.0	62.0	52.0	50.0	48.0	48.0	47.0
	5	61.3	84.5	48.0	72.0	70.0	67.0	66.0	57.0	52.0	50.0	50.0	49.0
	6	62.1	81.4	48.1	72.0	70.0	68.0	66.1	60.0	55.0	50.0	49.0	49.0
Day	7	60.2	78.6	45.3	71.0	69.0	67.0	65.0	56.0	51.0	48.0	47.0	46.0
	8	60.2	81.9	42.7	71.0	69.0	67.0	64.0	55.0	49.0	45.0	45.0	43.0
	9	58.2	76.6	39.6	70.0	68.0	65.0	63.0	52.0	47.0	42.0	41.0	40.0
	10	59.4	75.5	39.7	70.0	69.0	66.0	64.0	56.0	47.0	42.0	40.0	40.0
	11	59.7	79.8	41.0	69.0	68.0	66.0	65.0	57.0	50.0	43.0	42.0	41.0
	12	58.8	76.8	42.4	69.0	68.0	65.0	64.0	55.0	50.0	45.0	44.0	43.0
	13	63.3	78.7	45.3	73.0	71.0	69.0	68.0	63.0	57.0	49.0	49.0	46.0
	14	64.8	85.6	46.0	72.0	70.0	69.0	68.0	65.0	61.0	55.0	51.0	48.0
	15	63.1	84.0	45.0	73.0	71.0	69.0	67.0	62.0	57.0	49.0	48.0	46.0
	16	60.5	78.0	44.0	71.0	69.0	67.0	66.0	58.0	52.0	47.0	46.0	45.0
	17	60.6	83.7	42.7	70.0	69.0	67.0	66.0	58.0	51.0	46.0	45.0	44.0
	18	60.3	75.1	42.7	70.0	69.0	67.0	65.0	59.0	53.0	46.0	45.0	43.0
	19	58.6	83.7	42.7	69.0	68.0	65.0	63.0	53.0	48.0	45.0	44.0	43.0
	20	58.2	78.6	42.6	70.0	68.0	64.0	61.0	52.0	49.0	44.0	44.0	43.0
	21	57.8	85.7	45.8	67.0	65.0	62.0	59.0	53.0	50.0	48.0	47.0	47.0
Night	22	55.9	76.9	45.4	68.0	66.0	60.0	57.0	51.0	49.0	47.0	46.0	46.0
	23	54.3	77.7	44.6	66.0	62.0	56.0	53.0	49.0	48.0	46.0	46.0	45.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan			JN: 11215		24-Hour	
Location: L4- Located on Agua Mansa Road east of the Project site near existing industrial uses.			Analyst: A. Wolfe		Energy Average Leq	
Date: 8/30/2017					Day	Night
					70.6	70.7
					CNEL	
					77.3	

Hourly Leq dBA Readings (unadjusted)



Hour Beginning

Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	67.4	81.8	48.4	77.0	75.0	73.0	72.0	65.0	61.0	52.0	52.0	50.0
	Max	73.2	91.3	61.5	82.0	80.0	78.0	77.0	73.0	69.0	63.0	62.0	62.0
	Energy Average:	70.6	Average:	Average:	79.5	77.9	75.8	74.5	69.3	64.5	57.8	56.5	55.4
Night	Min	68.5	83.9	45.8	79.0	78.0	75.0	72.0	63.0	53.0	48.0	47.0	47.0
	Max	73.2	89.9	61.1	82.0	81.0	79.0	78.0	73.0	68.0	64.0	63.0	61.0
	Energy Average:	70.7	Average:	Average:	80.7	79.2	76.9	75.0	67.3	61.8	57.3	54.6	53.1

Hourly Summary

Night	0	68.9	84.6	53.4	79.0	78.0	77.0	76.0	64.0	60.0	54.0	54.0	53.0
	1	69.2	88.4	45.8	81.0	79.0	76.0	73.0	63.0	53.0	48.0	47.0	47.0
	2	68.9	83.9	46.0	80.0	78.0	76.0	74.0	66.0	57.0	48.0	48.0	47.0
	3	70.9	86.3	51.1	81.0	80.0	77.0	75.0	69.0	64.0	63.0	55.0	52.0
	4	71.9	86.1	61.1	82.0	80.0	78.0	77.0	71.0	65.0	62.0	62.0	61.0
	5	72.8	88.6	58.1	82.0	81.0	79.0	77.0	72.0	66.0	62.0	60.0	59.0
	6	73.2	89.9	58.2	82.0	81.0	79.0	78.0	73.0	68.0	64.0	63.0	59.0
Day	7	69.4	83.1	56.4	77.0	76.0	75.0	74.0	70.0	65.0	58.0	57.0	57.0
	8	67.9	81.8	49.2	77.0	76.0	74.0	73.0	68.0	62.0	54.0	52.0	50.0
	9	67.9	82.8	55.0	78.0	76.0	74.0	72.0	67.0	61.0	56.0	56.0	55.0
	10	67.4	82.1	54.6	77.0	75.0	73.0	72.0	67.0	61.0	56.0	55.0	55.0
	11	69.7	89.7	48.4	77.0	75.0	74.0	73.0	71.0	66.0	56.0	55.0	50.0
	12	70.2	85.7	54.8	79.0	78.0	76.0	75.0	69.0	64.0	60.0	57.0	55.0
	13	72.3	91.3	51.8	82.0	80.0	78.0	76.0	72.0	66.0	57.0	55.0	53.0
	14	71.8	84.7	51.7	81.0	79.0	77.0	76.0	72.0	67.0	56.0	54.0	53.0
	15	73.2	88.0	60.8	82.0	80.0	78.0	77.0	73.0	69.0	63.0	62.0	62.0
	16	72.8	86.7	51.8	82.0	80.0	78.0	77.0	73.0	68.0	56.0	54.0	52.0
	17	72.5	88.5	61.5	81.0	80.0	78.0	77.0	73.0	67.0	62.0	62.0	62.0
	18	70.3	88.4	59.2	80.0	79.0	76.0	75.0	69.0	64.0	62.0	61.0	61.0
	19	68.2	87.4	51.6	79.0	77.0	75.0	73.0	65.0	62.0	52.0	52.0	52.0
	20	70.2	90.5	52.5	81.0	79.0	76.0	74.0	66.0	63.0	58.0	54.0	53.0
	21	68.9	86.9	59.7	80.0	78.0	75.0	73.0	65.0	63.0	61.0	61.0	61.0
Night	22	68.8	89.8	49.8	79.0	78.0	75.0	73.0	65.0	62.0	60.0	51.0	50.0
	23	68.5	88.0	49.4	80.0	78.0	75.0	72.0	63.0	61.0	55.0	51.0	50.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

Analyst: A. Wolfe

Location: L5- Located on Wilson Street near an existing residential home and industrial uses.

Date: 8/30/2017

Energy Average Leq

Day

Night

24-Hour

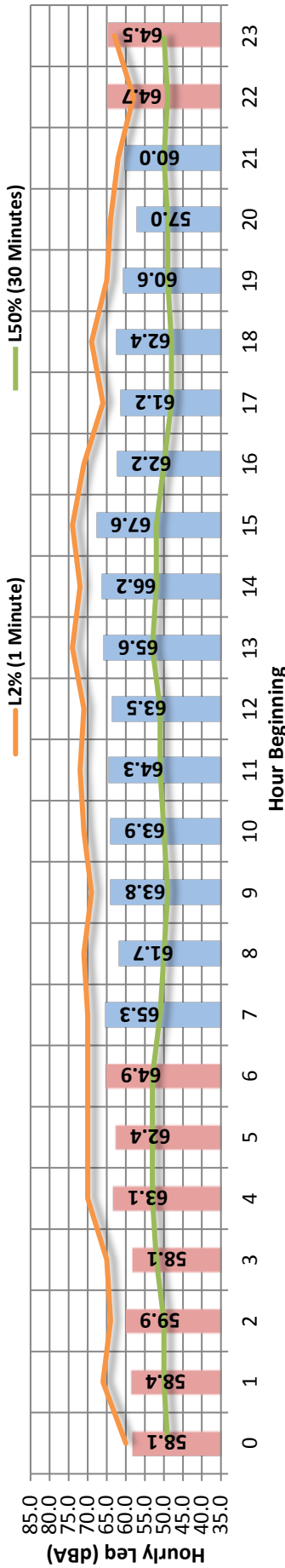
CNEL

63.7

62.4

69.1

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	57.0	83.2	45.1	65.0	62.0	56.0	54.0	50.0	48.0	45.0	45.0	44.0
	Max	67.6	90.5	48.4	77.0	74.0	70.0	67.0	58.0	53.0	49.0	49.0	48.0
	Energy Average:	63.7		Average:	72.4	69.4	64.3	61.3	53.9	50.2	47.4	47.0	46.3
Night	Min	58.1	78.4	46.3	62.0	58.0	54.0	53.0	51.0	49.0	48.0	47.0	47.0
	Max	64.9	94.1	51.4	73.0	70.0	66.0	64.0	57.0	53.0	51.0	51.0	50.0
	Energy Average:	62.4		Average:	68.6	65.1	60.1	57.8	53.2	51.0	49.2	48.8	48.2

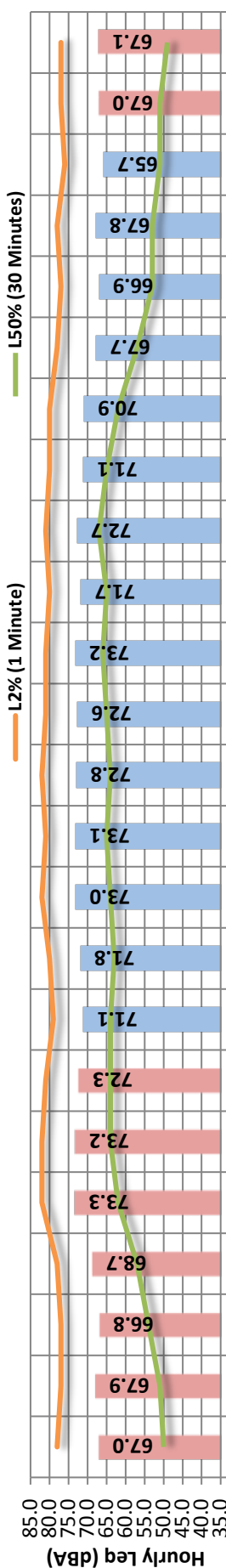
Hourly Summary

Night	0	58.1	81.2	47.0	65.0	60.0	55.0	53.0	51.0	49.0	48.0	47.0	47.0
	1	58.4	83.5	46.3	69.0	66.0	61.0	57.0	52.0	50.0	48.0	47.0	47.0
	2	59.9	79.2	47.5	67.0	64.0	59.0	57.0	53.0	50.0	49.0	48.0	48.0
	3	58.1	78.4	47.6	68.0	65.0	60.0	58.0	53.0	52.0	50.0	49.0	48.0
	4	63.1	85.0	48.8	73.0	70.0	66.0	63.0	57.0	53.0	51.0	51.0	50.0
	5	62.4	83.7	50.6	73.0	70.0	63.0	60.0	55.0	53.0	51.0	51.0	50.0
	6	64.9	87.9	51.4	73.0	70.0	66.0	64.0	56.0	53.0	50.0	50.0	50.0
Day	7	65.3	86.8	48.4	72.0	70.0	65.0	62.0	55.0	51.0	49.0	49.0	48.0
	8	61.7	83.5	46.1	73.0	71.0	67.0	64.0	55.0	50.0	46.0	46.0	45.0
	9	63.8	86.3	45.9	72.0	69.0	64.0	61.0	53.0	49.0	45.0	45.0	44.0
	10	63.9	83.5	45.1	76.0	71.0	66.0	63.0	54.0	50.0	46.0	46.0	45.0
	11	64.3	86.7	45.3	76.0	72.0	68.0	65.0	56.0	51.0	47.0	47.0	46.0
	12	63.5	85.3	45.4	75.0	71.0	68.0	65.0	56.0	51.0	47.0	46.0	45.0
	13	65.6	88.0	47.5	77.0	74.0	70.0	67.0	58.0	53.0	49.0	48.0	47.0
	14	66.2	83.9	48.0	74.0	72.0	69.0	66.0	57.0	52.0	48.0	48.0	47.0
	15	67.6	90.5	47.8	76.0	74.0	68.0	65.0	57.0	52.0	48.0	47.0	47.0
	16	62.2	84.7	45.9	74.0	71.0	65.0	62.0	53.0	50.0	47.0	47.0	46.0
	17	61.2	83.2	46.2	69.0	66.0	59.0	56.0	50.0	48.0	46.0	46.0	46.0
	18	62.4	85.9	46.7	72.0	69.0	63.0	59.0	51.0	48.0	47.0	47.0	46.0
	19	60.6	85.1	46.8	68.0	65.0	60.0	56.0	51.0	49.0	48.0	47.0	47.0
	20	57.0	83.4	47.2	67.0	64.0	57.0	55.0	51.0	49.0	48.0	47.0	47.0
	21	60.0	84.1	48.4	65.0	62.0	56.0	54.0	51.0	50.0	48.0	48.0	48.0
Night	22	64.7	85.6	46.7	62.0	58.0	54.0	53.0	51.0	49.0	48.0	48.0	47.0
	23	64.5	94.1	47.4	67.0	63.0	57.0	55.0	51.0	50.0	48.0	47.0	47.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan			JN: 11215		24-Hour	
Location: L6- Located on Agua Mansa Road south of the Project site near existing industrial uses.			Analyst: A. Wolfe		Energy Average Leq	
					Day	Night
Date: 8/30/2017					71.4	70.1
					CNEL	
					76.9	

Hourly Leq dBA Readings (unadjusted)



Hour Beginning

Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	65.7	87.1	42.8	78.0	76.0	72.0	70.0	59.0	51.0	46.0	45.0	43.0
	Max	73.2	93.6	48.2	84.0	82.0	79.0	77.0	72.0	67.0	56.0	53.0	50.0
	Energy Average:	71.4	Average:	Average:	81.7	79.7	76.7	74.8	67.9	61.6	51.3	49.4	46.9
Night	Min	66.8	86.6	39.4	79.0	77.0	73.0	69.0	57.0	49.0	43.0	42.0	41.0
	Max	73.3	95.4	51.1	85.0	82.0	79.0	77.0	71.0	64.0	54.0	53.0	52.0
	Energy Average:	70.1	Average:	Average:	81.2	78.8	75.0	72.6	63.2	55.8	47.7	46.7	45.6

Hourly Summary

Night	0	67.0	87.0	42.3	80.0	78.0	73.0	69.0	57.0	50.0	44.0	44.0	43.0
	1	67.9	92.1	42.4	80.0	77.0	73.0	71.0	59.0	51.0	44.0	43.0	43.0
	2	66.8	86.6	42.4	79.0	77.0	73.0	70.0	62.0	54.0	46.0	44.0	43.0
	3	68.7	89.0	46.3	80.0	78.0	75.0	73.0	65.0	57.0	49.0	48.0	47.0
	4	73.3	95.4	46.5	84.0	82.0	79.0	77.0	69.0	62.0	52.0	51.0	49.0
	5	73.2	91.0	51.1	85.0	82.0	79.0	77.0	71.0	64.0	54.0	53.0	52.0
	6	72.3	92.2	49.5	84.0	81.0	77.0	75.0	70.0	64.0	53.0	52.0	50.0
Day	7	71.1	91.8	47.7	81.0	79.0	77.0	75.0	70.0	64.0	52.0	50.0	48.0
	8	71.8	93.6	44.5	82.0	80.0	78.0	76.0	69.0	63.0	50.0	49.0	47.0
	9	73.0	91.5	44.6	84.0	82.0	79.0	77.0	71.0	64.0	52.0	49.0	46.0
	10	73.1	90.7	45.6	84.0	81.0	79.0	77.0	71.0	65.0	52.0	50.0	48.0
	11	72.8	92.3	44.8	84.0	82.0	79.0	77.0	70.0	64.0	52.0	50.0	46.0
	12	72.6	90.1	44.8	83.0	81.0	78.0	77.0	71.0	65.0	53.0	51.0	47.0
	13	73.2	93.0	47.3	84.0	81.0	79.0	77.0	72.0	66.0	55.0	52.0	49.0
	14	71.7	90.4	46.6	81.0	80.0	77.0	76.0	71.0	65.0	55.0	53.0	50.0
	15	72.7	91.5	48.2	83.0	81.0	78.0	77.0	71.0	67.0	56.0	53.0	50.0
	16	71.1	89.3	47.1	82.0	80.0	77.0	75.0	70.0	65.0	53.0	51.0	48.0
	17	70.9	89.9	45.8	81.0	80.0	77.0	75.0	69.0	62.0	52.0	50.0	48.0
	18	67.7	87.1	43.8	79.0	78.0	74.0	72.0	64.0	57.0	48.0	47.0	45.0
	19	66.9	89.7	44.1	79.0	77.0	73.0	70.0	60.0	53.0	47.0	46.0	45.0
	20	67.8	88.5	42.8	80.0	78.0	74.0	71.0	61.0	53.0	46.0	45.0	43.0
	21	65.7	87.3	43.4	78.0	76.0	72.0	70.0	59.0	51.0	46.0	45.0	44.0
Night	22	67.0	90.1	41.7	79.0	77.0	73.0	71.0	59.0	51.0	44.0	43.0	42.0
	23	67.1	89.6	39.4	80.0	77.0	73.0	70.0	57.0	49.0	43.0	42.0	41.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

24-Hour

Location: L7- Located on Hall Avenue near existing residential homes south of the Project site.

Analyst: A. Wolfe

Energy Average Leq

Day

Night

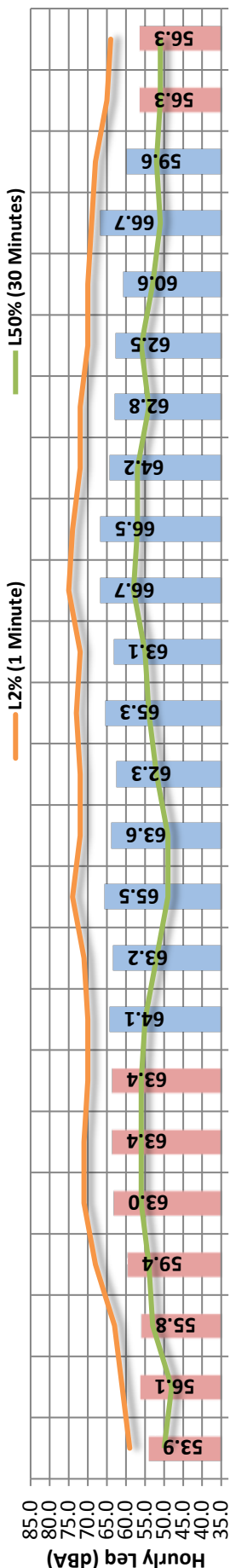
CNEL

64.2

60.1

67.8

Hourly Leq dBA Readings (unadjusted)



Hour Beginning

Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	59.6	79.2	44.2	71.0	68.0	63.0	60.0	53.0	49.0	46.0	46.0	44.0
	Max	66.7	99.6	51.8	78.0	75.0	70.0	68.0	63.0	58.0	54.0	54.0	53.0
	Energy Average:	64.2	Average:	Average:	74.4	71.6	67.5	65.3	57.9	53.6	50.2	49.9	48.9
Night	Min	53.9	75.0	44.9	65.0	59.0	53.0	51.0	50.0	48.0	46.0	46.0	45.0
	Max	63.4	87.7	52.9	73.0	71.0	67.0	65.0	59.0	56.0	54.0	54.0	54.0
	Energy Average:	60.1	Average:	Average:	69.0	65.8	60.9	58.6	54.7	52.8	50.2	49.7	48.9

Hourly Summary

Night	0	53.9	75.2	46.2	65.0	59.0	54.0	53.0	51.0	50.0	48.0	48.0	47.0
	1	56.1	86.7	44.9	65.0	61.0	53.0	51.0	50.0	48.0	46.0	46.0	45.0
	2	55.8	75.0	45.5	67.0	63.0	57.0	56.0	54.0	53.0	49.0	47.0	46.0
	3	59.4	79.4	50.2	71.0	68.0	64.0	60.0	56.0	54.0	51.0	51.0	50.0
	4	63.0	87.5	49.8	73.0	71.0	67.0	63.0	58.0	56.0	53.0	52.0	51.0
	5	63.4	87.7	52.9	73.0	71.0	67.0	65.0	58.0	56.0	54.0	54.0	54.0
	6	64.1	90.9	49.5	73.0	70.0	67.0	65.0	59.0	56.0	54.0	53.0	53.0
Day	7	64.1	90.9	49.5	72.0	70.0	67.0	65.0	58.0	55.0	51.0	51.0	50.0
	8	63.2	88.5	46.5	74.0	71.0	67.0	64.0	55.0	52.0	49.0	48.0	47.0
	9	65.5	90.7	44.5	78.0	74.0	68.0	65.0	56.0	49.0	46.0	46.0	45.0
	10	63.6	86.9	44.2	75.0	72.0	68.0	66.0	55.0	49.0	46.0	46.0	44.0
	11	62.3	83.4	46.7	74.0	72.0	68.0	66.0	57.0	52.0	48.0	48.0	47.0
	12	65.3	93.6	48.6	76.0	73.0	68.0	66.0	58.0	54.0	51.0	50.0	49.0
	13	63.1	84.2	49.9	75.0	72.0	68.0	66.0	58.0	55.0	52.0	52.0	51.0
	14	66.7	90.2	51.7	78.0	75.0	70.0	68.0	63.0	58.0	54.0	54.0	53.0
	15	66.5	91.5	51.8	78.0	74.0	70.0	68.0	62.0	57.0	54.0	54.0	53.0
	16	64.2	83.4	50.6	74.0	72.0	70.0	68.0	63.0	57.0	52.0	52.0	51.0
	17	62.8	82.2	49.2	74.0	72.0	69.0	67.0	58.0	54.0	51.0	50.0	50.0
	18	62.5	85.2	49.4	73.0	70.0	67.0	65.0	60.0	56.0	52.0	51.0	50.0
	19	60.6	79.2	48.2	72.0	70.0	66.0	64.0	58.0	53.0	50.0	49.0	48.0
	20	66.7	99.6	45.8	72.0	69.0	64.0	62.0	53.0	51.0	47.0	47.0	46.0
	21	59.6	82.9	47.4	71.0	68.0	63.0	60.0	55.0	52.0	50.0	50.0	49.0
	22	56.3	78.0	46.9	67.0	65.0	60.0	57.0	53.0	51.0	49.0	48.0	47.0
	23	56.3	77.8	46.6	67.0	64.0	59.0	57.0	53.0	51.0	48.0	48.0	47.0



24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

24-Hour

Analyst: A. Wolfe

Energy Average Leq

Day

Night

CNEL

Location: L8- Located on 24th Street near Avalon Park south of the Project site.

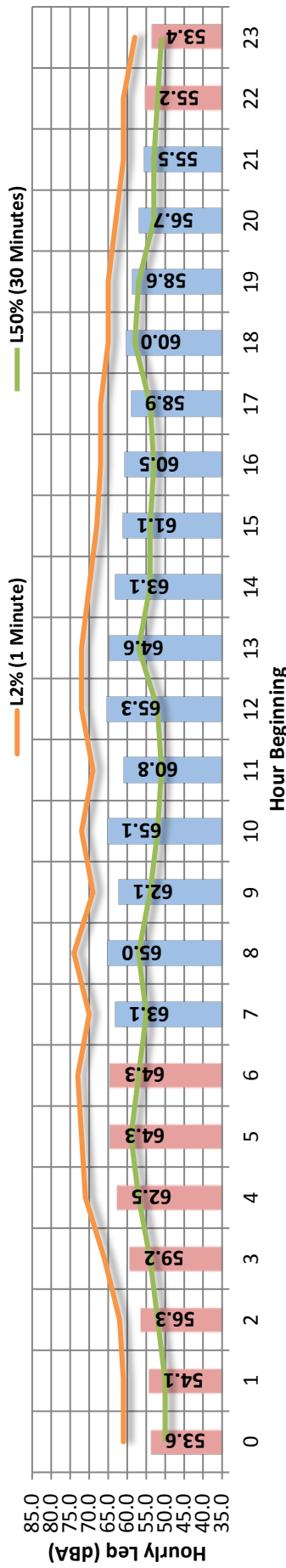
Date: 8/30/2017

62.3

60.2

67.1

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	55.5	73.0	46.2	63.0	61.0	59.0	58.0	54.0	51.0	48.0	47.0	47.0
	Max	65.3	92.0	56.5	77.0	74.0	71.0	69.0	62.0	58.0	57.0	57.0	57.0
	Energy Average:	62.3	Average:		71.8	68.3	62.9	60.7	56.6	54.3	50.8	50.4	49.3
Night	Min	53.4	70.9	44.8	59.0	58.0	57.0	56.0	52.0	50.0	46.0	46.0	45.0
	Max	64.3	89.1	53.9	76.0	73.0	66.0	64.0	61.0	59.0	56.0	56.0	54.0
	Energy Average:	60.2	Average:		67.6	65.0	61.0	59.6	56.1	53.6	50.4	50.0	49.0

Hourly Summary

Night	0	53.6	73.0	45.5	62.0	61.0	58.0	57.0	52.0	50.0	47.0	47.0	46.0
	1	54.1	77.8	44.8	63.0	61.0	59.0	57.0	53.0	50.0	46.0	46.0	45.0
	2	56.3	79.2	45.9	64.0	62.0	59.0	58.0	55.0	52.0	48.0	47.0	46.0
	3	59.2	81.2	49.4	70.0	66.0	61.0	60.0	57.0	54.0	51.0	50.0	50.0
	4	62.5	86.0	51.0	75.0	71.0	64.0	63.0	59.0	57.0	54.0	53.0	52.0
	5	64.3	86.5	53.9	76.0	72.0	66.0	64.0	61.0	59.0	56.0	56.0	54.0
Day	6	64.3	89.1	52.9	76.0	73.0	66.0	63.0	59.0	57.0	54.0	54.0	53.0
	7	63.1	86.4	50.3	75.0	70.0	63.0	61.0	57.0	55.0	53.0	52.0	51.0
	8	65.0	83.3	48.6	77.0	74.0	71.0	69.0	62.0	57.0	51.0	50.0	49.0
	9	62.1	88.5	46.9	74.0	69.0	64.0	61.0	57.0	54.0	49.0	49.0	47.0
	10	65.1	92.0	46.7	77.0	72.0	63.0	60.0	55.0	52.0	49.0	49.0	47.0
	11	60.8	88.8	46.2	72.0	69.0	61.0	59.0	54.0	51.0	48.0	48.0	47.0
	12	65.3	90.3	47.1	77.0	72.0	66.0	62.0	54.0	52.0	49.0	49.0	48.0
	13	64.6	90.4	48.8	76.0	72.0	67.0	64.0	58.0	57.0	52.0	51.0	50.0
	14	63.1	88.0	49.2	74.0	70.0	64.0	60.0	56.0	54.0	52.0	51.0	50.0
	15	61.1	84.1	49.2	72.0	68.0	62.0	59.0	56.0	54.0	51.0	51.0	50.0
	16	60.5	86.6	48.3	70.0	67.0	61.0	60.0	55.0	53.0	51.0	50.0	49.0
	17	58.9	78.6	47.7	70.0	67.0	62.0	60.0	58.0	54.0	50.0	50.0	49.0
	18	60.0	78.0	56.5	67.0	65.0	61.0	60.0	59.0	58.0	57.0	57.0	57.0
	19	58.6	76.7	48.2	67.0	65.0	61.0	60.0	58.0	57.0	50.0	50.0	49.0
	20	56.7	78.5	47.4	66.0	63.0	59.0	58.0	55.0	53.0	50.0	49.0	48.0
	21	55.5	73.0	48.4	63.0	61.0	59.0	58.0	55.0	53.0	50.0	50.0	49.0
Night	22	55.2	73.4	46.6	63.0	61.0	59.0	58.0	55.0	52.0	49.0	49.0	48.0
	23	53.4	70.9	45.7	59.0	58.0	57.0	56.0	54.0	51.0	48.0	48.0	47.0



24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

24-Hour

Location: L9- Located on Andalusia Avenue west of the Project site near existing residential homes.

Analyst: A. Wolfe

Energy Average Leq

Day

CNEL

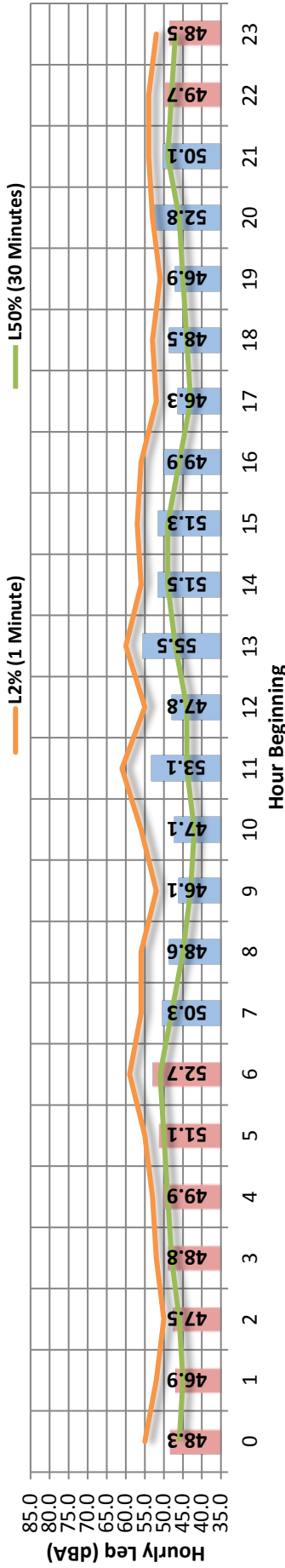
Date: 8/30/2017

50.6

49.6

56.5

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	46.1	65.7	37.6	52.0	51.0	47.0	46.0	44.0	42.0	40.0	40.0	39.0
	Max	55.5	86.1	43.7	64.0	61.0	58.0	55.0	51.0	49.0	46.0	46.0	45.0
	Energy Average:	50.6	Average:	Average:	57.5	55.2	51.8	50.3	47.3	45.6	43.5	42.9	42.1
Night	Min	46.9	63.0	42.7	52.0	50.0	48.0	47.0	46.0	45.0	44.0	44.0	43.0
	Max	52.7	75.3	46.8	61.0	59.0	55.0	54.0	52.0	51.0	49.0	49.0	48.0
	Energy Average:	49.6	Average:	Average:	55.4	53.6	51.2	50.3	49.0	47.8	46.2	45.8	45.2

Hourly Summary

Night	0	48.3	68.6	43.3	58.0	55.0	50.0	48.0	47.0	46.0	45.0	44.0	44.0
	1	46.9	63.3	42.7	56.0	52.0	48.0	47.0	46.0	45.0	43.0	44.0	43.0
	2	47.5	63.0	43.1	52.0	50.0	49.0	49.0	47.0	46.0	45.0	44.0	44.0
	3	48.8	68.4	44.7	53.0	52.0	51.0	50.0	49.0	48.0	46.0	46.0	46.0
	4	49.9	66.0	45.0	54.0	53.0	51.0	51.0	50.0	49.0	47.0	47.0	46.0
	5	51.1	68.0	46.1	57.0	55.0	53.0	52.0	51.0	50.0	48.0	48.0	47.0
	6	52.7	70.4	46.8	61.0	59.0	55.0	54.0	52.0	51.0	49.0	49.0	48.0
Day	7	50.3	69.4	43.3	58.0	56.0	53.0	52.0	50.0	48.0	46.0	46.0	45.0
	8	48.6	68.2	39.3	58.0	56.0	52.0	50.0	47.0	45.0	43.0	42.0	41.0
	9	46.1	72.0	38.9	56.0	52.0	47.0	46.0	44.0	43.0	41.0	41.0	40.0
	10	47.1	70.0	38.1	59.0	56.0	50.0	49.0	44.0	42.0	41.0	40.0	39.0
	11	53.1	84.1	37.6	63.0	61.0	58.0	55.0	48.0	44.0	40.0	40.0	39.0
	12	47.8	68.9	38.7	57.0	55.0	51.0	50.0	46.0	44.0	42.0	41.0	40.0
	13	55.5	86.1	41.1	64.0	60.0	56.0	53.0	49.0	47.0	44.0	43.0	42.0
	14	51.5	78.1	42.2	58.0	56.0	54.0	53.0	50.0	49.0	46.0	45.0	44.0
	15	51.3	71.9	42.7	59.0	57.0	54.0	54.0	51.0	49.0	45.0	45.0	44.0
	16	49.9	73.1	41.1	60.0	56.0	52.0	50.0	47.0	46.0	44.0	43.0	42.0
	17	46.3	68.3	39.7	54.0	52.0	49.0	47.0	44.0	43.0	42.0	41.0	41.0
	18	48.5	74.6	41.3	56.0	53.0	49.0	48.0	46.0	44.0	43.0	42.0	42.0
	19	46.9	67.5	42.2	52.0	51.0	49.0	48.0	46.0	45.0	44.0	44.0	43.0
	20	52.8	84.2	43.7	54.0	53.0	50.0	49.0	47.0	46.0	45.0	45.0	44.0
	21	50.1	65.7	43.0	55.0	54.0	53.0	52.0	51.0	49.0	46.0	46.0	45.0
Night	22	49.7	64.4	43.7	55.0	54.0	53.0	52.0	50.0	48.0	46.0	45.0	45.0
	23	48.5	75.3	43.6	53.0	52.0	51.0	50.0	49.0	47.0	46.0	45.0	44.0

24-Hour Noise Level Measurement Summary

Project Name: Agua Mansa Commerce Park Specific Plan

JN: 11215

24-Hour

Location: L10- Located on Castellano Road west of the Project site near existing residential homes.

Analyst: A. Wolfe

Energy Average Leq

Day

Night

CNEL

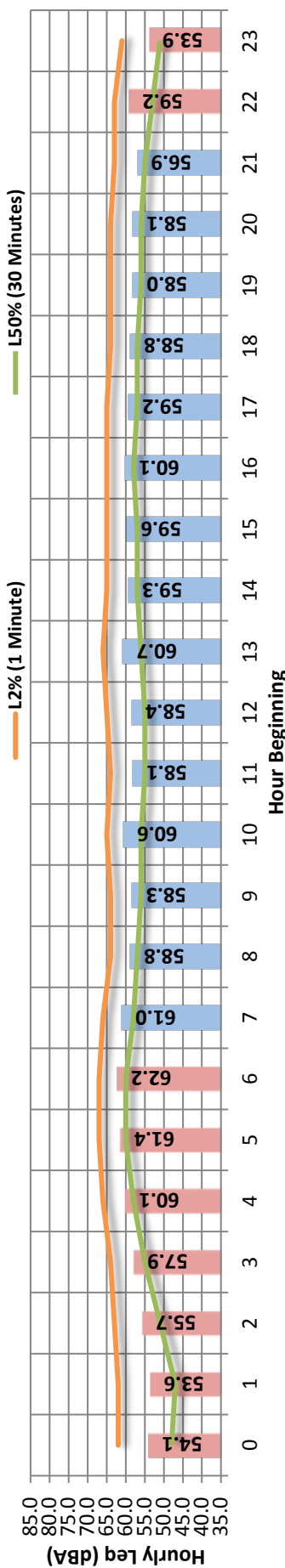
Date: 8/30/2017

59.2

58.7

65.4

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.9	70.1	40.5	64.0	63.0	61.0	60.0	57.0	55.0	48.0	45.0	42.0
	Max	61.0	88.2	46.0	70.0	66.0	64.0	64.0	61.0	58.0	52.0	51.0	48.0
	Energy Average:	59.2		Average:	66.1	64.6	62.7	61.9	59.0	56.4	49.9	48.0	45.0
Night	Min	53.6	68.9	42.1	62.0	61.0	59.0	57.0	52.0	47.0	43.0	43.0	42.0
	Max	62.2	86.6	50.2	69.0	67.0	66.0	65.0	62.0	60.0	55.0	53.0	51.0
	Energy Average:	58.7		Average:	65.2	63.9	61.9	60.7	57.1	53.7	48.6	47.3	46.3

Hourly Summary

Night	0	54.1	68.9	43.5	64.0	62.0	60.0	58.0	53.0	48.0	45.0	44.0	44.0
	1	53.6	73.0	42.1	64.0	62.0	59.0	57.0	52.0	47.0	43.0	43.0	42.0
	2	55.7	69.8	44.3	64.0	63.0	61.0	60.0	56.0	51.0	46.0	45.0	45.0
	3	57.9	72.3	45.7	65.0	64.0	62.0	61.0	58.0	55.0	49.0	48.0	47.0
	4	60.1	76.7	47.2	67.0	66.0	64.0	63.0	61.0	58.0	51.0	49.0	48.0
	5	61.4	74.5	48.9	67.0	67.0	65.0	64.0	62.0	60.0	54.0	53.0	51.0
	6	62.2	77.6	50.2	69.0	67.0	66.0	65.0	62.0	60.0	55.0	53.0	51.0
Day	7	61.0	84.7	44.8	67.0	66.0	64.0	64.0	61.0	58.0	51.0	50.0	47.0
	8	58.8	73.0	43.0	65.0	64.0	63.0	62.0	59.0	57.0	51.0	48.0	44.0
	9	58.3	78.8	41.9	65.0	64.0	62.0	61.0	59.0	56.0	49.0	47.0	44.0
	10	60.6	88.2	40.6	67.0	65.0	63.0	62.0	59.0	56.0	48.0	46.0	42.0
	11	58.1	80.0	40.5	66.0	64.0	62.0	61.0	58.0	55.0	48.0	45.0	42.0
	12	58.4	78.5	40.5	66.0	65.0	63.0	62.0	58.0	55.0	48.0	46.0	43.0
	13	60.7	82.4	43.0	70.0	66.0	64.0	62.0	59.0	56.0	50.9	49.0	46.0
	14	59.3	76.3	46.0	66.0	65.0	63.0	62.0	60.0	57.0	52.0	50.0	48.0
	15	59.6	76.3	44.9	67.0	65.0	64.0	63.0	60.0	57.0	52.0	51.0	48.0
	16	60.1	81.5	44.0	66.0	65.0	63.0	63.0	60.0	58.0	52.0	50.0	47.0
	17	59.2	71.8	41.8	66.0	65.0	63.0	63.0	60.0	57.0	50.0	48.0	44.0
	18	58.8	79.4	42.2	65.0	64.0	62.0	61.0	59.0	57.0	50.0	48.0	45.0
	19	58.0	74.0	42.1	66.0	64.0	62.0	61.0	58.0	56.0	48.0	46.0	44.0
	20	58.1	77.1	42.7	65.0	64.0	62.0	61.0	58.0	56.0	49.0	47.0	44.0
	21	56.9	70.1	45.6	64.0	63.0	61.0	60.0	57.0	55.0	50.0	49.0	47.0
Night	22	59.2	86.6	44.6	65.0	63.0	61.0	60.0	56.0	53.0	48.0	46.0	45.0
	23	53.9	68.9	43.4	62.0	61.0	59.0	58.0	54.0	51.0	46.0	45.0	44.0

APPENDIX 6.1:

PCE TO ACTUAL VEHICLE TRAFFIC VOLUMES

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Existing Without

inputs
results
Calculations

SegmentID	Roadway	Segment	PCE from TIA	PCE Segment Vols	PM Peak Hour Mix			100.00%		Peak Split Back to PCE Check	PCE Factors				Actual ADT Volumes
					Auto	2 Axle	3 Axle	4 Axle	Auto		2 Axle	3 Axle	4 Axle		
														0.899	
1	Cedar Av.	n/o I-10 Fwy.	42.7	42,700	38,387	1,068	982	2,263	42,700	38,387	712	491	754	40,344	
2	Cedar Av.	s/o I-10 Fwy.	29.5	29,500	26,521	738	679	1,564	29,500	26,521	492	339	521	27,873	
3	Cedar Av.	s/o Slover Av.	24.9	24,900	22,385	623	573	1,320	24,900	22,385	415	286	440	23,526	
4	Cedar Av.	s/o Santa Ana Av.	25.1	25,100	22,565	628	577	1,330	25,100	22,565	418	289	443	23,715	
5	Cedar Av.	s/o Jurupa Av.	22.1	22,100	19,868	553	508	1,171	22,100	19,868	368	254	390	20,881	
6	Rubidoux Bl.	s/o El Rivino Rd.	22.3	22,300	20,048	558	513	1,182	22,300	20,048	372	256	394	21,070	
7	Rubidoux Bl.	s/o Production Cir.	22.0	22,000	19,778	550	506	1,166	22,000	19,778	367	253	389	20,786	
8	Rubidoux Bl.	s/o 20th St.	18.6	18,600	16,721	465	428	986	18,600	16,721	310	214	329	17,574	
9	Rubidoux Bl.	s/o 24th St.	19.6	19,600	17,620	490	451	1,039	19,600	17,620	327	225	346	18,519	
10	Rubidoux Bl.	s/o 26th St.	20.2	20,200	18,160	505	465	1,071	20,200	18,160	337	232	357	19,086	
11	Rubidoux Bl.	s/o 28th St.	21.8	21,800	19,598	545	501	1,155	21,800	19,598	363	251	385	20,597	
12	Rubidoux Bl.	s/o SR-60 Fwy.	25.2	25,200	22,655	630	580	1,336	25,200	22,655	420	290	445	23,810	
13	Rubidoux Bl.	s/o 34th St.	19.2	19,200	17,261	480	442	1,018	19,200	17,261	320	221	339	18,141	
14	Cactus Av.	n/o El Rivino Rd.	3.1	3,100	2,787	78	71	164	3,100	2,787	52	36	55	2,929	
15	Rivera St.	n/o Market St.	9.2	9,200	8,271	230	212	488	9,200	8,271	153	106	163	8,692	
16	Riverside Av.	n/o I-10 Fwy.	39.8	39,800	35,780	995	915	2,109	39,800	35,780	663	458	703	37,604	
17	Riverside Av.	s/o I-10 Fwy.	41.0	41,000	36,859	1,025	943	2,173	41,000	36,859	683	472	724	38,738	
18	Riverside Av.	s/o Slover Av.	38.2	38,200	34,342	955	879	2,025	38,200	34,342	637	439	675	36,093	
19	Riverside Av.	s/o Santa Ana Av.	29.6	29,600	26,610	740	681	1,569	29,600	26,610	493	340	523	27,967	
20	Riverside Av.	s/o Jurupa Av.	34.6	34,600	31,105	865	796	1,834	34,600	31,105	577	398	611	32,691	
21	Rancho Av.	n/o Agua Mansa Rd.	18.8	18,800	16,901	470	432	996	18,800	16,901	313	216	332	17,763	
22	Rancho Av.	s/o Agua Mansa Rd.	13.4	13,400	12,047	335	308	710	13,400	12,047	223	154	237	12,661	
23	Slover Av.	w/o Cedar Av.	11.6	11,600	10,428	290	267	615	11,600	10,428	193	133	205	10,960	
24	Slover Av.	w/o Riverside Av.	10.6	10,600	9,529	265	244	562	10,600	9,529	177	122	187	10,015	
25	Santa Ana Av.	w/o Cedar Av.	6.7	6,700	6,023	168	154	355	6,700	6,023	112	77	118	6,330	
26	Santa Ana Av.	w/o Riverside Av.	4.2	4,200	3,776	105	97	223	4,200	3,776	70	48	74	3,968	
27	Jurupa Av.	w/o Cedar Av.	5.4	5,400	4,855	135	124	286	5,400	4,855	90	62	95	5,102	
28	El Rivino Rd.	e/o Cedar Av.	4.3	4,300	3,866	108	99	228	4,300	3,866	72	49	76	4,063	
29	El Rivino Rd.	e/o Cactus Av.	4.0	4,000	3,596	100	92	212	4,000	3,596	67	46	71	3,779	
30	El Rivino Rd.	e/o Hall Av.	3.1	3,100	2,787	78	71	164	3,100	2,787	52	36	55	2,929	
31	Agua Mansa Rd.	e/o 20th St.	11.3	11,300	10,159	283	260	599	11,300	10,159	188	130	200	10,677	
32	Agua Mansa Rd.	w/o Brown Av.	11.3	11,300	10,159	283	260	599	11,300	10,159	188	130	200	10,677	
33	Agua Mansa Rd.	w/o Holly St.	12.8	12,800	11,507	320	294	678	12,800	11,507	213	147	226	12,094	
34	Agua Mansa Rd.	e/o Holly St.	12.8	12,800	11,507	320	294	678	12,800	11,507	213	147	226	12,094	
35	Agua Mansa Rd.	e/o El Rivino Rd.	15.2	15,200	13,665	380	350	806	15,200	13,665	253	175	269	14,361	
36	Agua Mansa Rd.	e/o Riverside Av.	7.7	7,700	6,922	193	177	408	7,700	6,922	128	89	136	7,275	
37	20th St.	e/o Rubidoux Bl.	22.2	22,200	19,958	555	511	1,177	22,200	19,958	370	255	392	20,975	
38	20th St.	e/o Agua Mansa Rd.	17.0	17,000	15,283	425	391	901	17,000	15,283	283	196	300	16,062	
39	Market St.	e/o Hall Av.	23.6	23,600	21,216	590	543	1,251	23,600	21,216	393	271	417	22,298	
40	Market St.	e/o Rivera St.	28.3	28,300	25,442	708	651	1,500	28,300	25,442	472	325	500	26,739	

Opening Year 2020 Without

inputs
results
Calculations

SegmentID	Roadway	Segment	PCE from TIA	PCE Segment Vols	PM Peak Hour Mix			100.00%		Peak Split Back to PCE Check	PCE Factors				Actual ADT Volumes
					Auto	2 Axle	3 Axle	4 Axle	Auto		2 Axle	3 Axle	4 Axle		
														0.899	
1	Cedar Av.	n/o I-10 Fwy.	46.6	46,600	41,893	1,165	1,072	2,470		46,600	777	536	823	44,029	
2	Cedar Av.	s/o I-10 Fwy.	39.9	39,900	35,870	998	918	2,115		39,900	665	459	705	37,699	
3	Cedar Av.	s/o Slover Av.	32.3	32,300	29,038	808	743	1,712		32,300	538	371	571	30,518	
4	Cedar Av.	s/o Santa Ana Av.	32.5	32,500	29,218	813	748	1,723		32,500	542	374	574	30,707	
5	Cedar Av.	s/o Jurupa Av.	29.5	29,500	26,521	738	679	1,564		29,500	492	339	521	27,873	
6	Rubidoux Bl.	s/o El Rivino Rd.	30.1	30,100	27,060	753	692	1,595		30,100	502	346	532	28,439	
7	Rubidoux Bl.	s/o Production Cir.	29.8	29,800	26,790	745	685	1,579		29,800	497	343	526	28,156	
8	Rubidoux Bl.	s/o 20th St.	25.0	25,000	22,475	625	575	1,325		25,000	417	288	442	23,621	
9	Rubidoux Bl.	s/o 24th St.	25.8	25,800	23,194	645	593	1,367		25,800	430	297	456	24,377	
10	Rubidoux Bl.	s/o 26th St.	26.7	26,700	24,003	668	614	1,415		26,700	445	307	472	25,227	
11	Rubidoux Bl.	s/o 28th St.	28.1	28,100	25,262	703	646	1,489		28,100	468	323	496	26,550	
12	Rubidoux Bl.	s/o SR-60 Fwy.	28.9	28,900	25,981	723	665	1,532		28,900	482	332	511	27,306	
13	Rubidoux Bl.	s/o 34th St.	21.7	21,700	19,508	543	499	1,150		21,700	362	250	383	20,503	
14	Cactus Av.	n/o El Rivino Rd.	7.9	7,900	7,102	198	182	419		7,900	132	91	140	7,464	
15	Rivera St.	n/o Market St.	10.7	10,700	9,619	268	246	567		10,700	178	123	189	10,110	
16	Riverside Av.	n/o I-10 Fwy.	42.8	42,800	38,477	1,070	984	2,268		42,800	713	492	756	40,439	
17	Riverside Av.	s/o I-10 Fwy.	47.8	47,800	42,972	1,195	1,099	2,533		47,800	797	550	844	45,163	
18	Riverside Av.	s/o Slover Av.	44.2	44,200	39,736	1,105	1,017	2,343		44,200	737	508	781	41,762	
19	Riverside Av.	s/o Santa Ana Av.	35.3	35,300	31,735	883	812	1,871		35,300	588	406	624	33,353	
20	Riverside Av.	s/o Jurupa Av.	40.4	40,400	36,320	1,010	929	2,141		40,400	673	465	714	38,171	
21	Rancho Av.	n/o Agua Mansa Rd.	21.4	21,400	19,239	535	492	1,134		21,400	357	246	378	20,219	
22	Rancho Av.	s/o Agua Mansa Rd.	15.5	15,500	13,935	388	357	822		15,500	258	178	274	14,645	
23	Slover Av.	w/o Cedar Av.	14.6	14,600	13,125	365	336	774		14,600	243	168	258	13,795	
24	Slover Av.	w/o Riverside Av.	12.0	12,000	10,788	300	276	636		12,000	200	138	212	11,338	
25	Santa Ana Av.	w/o Cedar Av.	8.5	8,500	7,642	213	196	451		8,500	142	98	150	8,031	
26	Santa Ana Av.	w/o Riverside Av.	5.4	5,400	4,855	135	124	286		5,400	90	62	95	5,102	
27	Jurupa Av.	w/o Cedar Av.	7.6	7,600	6,832	190	175	403		7,600	127	87	134	7,181	
28	El Rivino Rd.	e/o Cedar Av.	10.1	10,100	9,080	253	232	535		10,100	168	116	178	9,543	
29	El Rivino Rd.	e/o Cactus Av.	6.0	6,000	5,394	150	138	318		6,000	100	69	106	5,669	
30	El Rivino Rd.	e/o Hall Av.	4.1	4,100	3,686	103	94	217		4,100	68	47	72	3,874	
31	Agua Mansa Rd.	e/o 20th St.	15.6	15,600	14,024	390	359	827		15,600	260	179	276	14,739	
32	Agua Mansa Rd.	w/o Brown Av.	15.6	15,600	14,024	390	359	827		15,600	260	179	276	14,739	
33	Agua Mansa Rd.	w/o Holly St.	15.9	15,900	14,294	398	366	843		15,900	265	183	281	15,023	
34	Agua Mansa Rd.	e/o Holly St.	15.9	15,900	14,294	398	366	843		15,900	265	183	281	15,023	
35	Agua Mansa Rd.	e/o El Rivino Rd.	19.4	19,400	17,441	485	446	1,028		19,400	323	223	343	18,330	
36	Agua Mansa Rd.	e/o Riverside Av.	10.2	10,200	9,170	255	235	541		10,200	170	117	180	9,637	
37	20th St.	e/o Rubidoux Bl.	29.7	29,700	26,700	743	683	1,574		29,700	495	342	525	28,062	
38	20th St.	e/o Agua Mansa Rd.	25.7	25,700	23,104	643	591	1,362		25,700	428	296	454	24,282	
39	Market St.	e/o Hall Av.	35.0	35,000	31,465	875	805	1,855		35,000	583	403	618	33,069	
40	Market St.	e/o Rivera St.	38.9	38,900	34,971	973	895	2,062		38,900	648	447	687	36,754	

Year 2035 Without

inputs
results
Calculations

SegmentID	Roadway	Segment	PCE from TIA	PCE Segment Vols	PM Peak Hour Mix			100.00%		Peak Split Back to PCE Check	PCE Factors				Actual ADT Volumes
					Auto	2 Axle	3 Axle	4 Axle	Auto		2 Axle	3 Axle	4 Axle		
														0.899	
1	Cedar Av.	n/o I-10 Fwy.	49.0	49,000	44,051	1,225	1,127	2,597	49,000	44,051	817	564	866	46,297	
2	Cedar Av.	s/o I-10 Fwy.	39.9	39,900	35,870	998	918	2,115	39,900	35,870	665	459	705	37,699	
3	Cedar Av.	s/o Slover Av.	32.3	32,300	29,038	808	743	1,712	32,300	29,038	538	371	571	30,518	
4	Cedar Av.	s/o Santa Ana Av.	32.5	32,500	29,218	813	748	1,723	32,500	29,218	542	374	574	30,707	
5	Cedar Av.	s/o Jurupa Av.	29.5	29,500	26,521	738	679	1,564	29,500	26,521	492	339	521	27,873	
6	Rubidoux Bl.	s/o El Rivino Rd.	30.1	30,100	27,060	753	692	1,595	30,100	27,060	502	346	532	28,439	
7	Rubidoux Bl.	s/o Production Cir.	29.8	29,800	26,790	745	685	1,579	29,800	26,790	497	343	526	28,156	
8	Rubidoux Bl.	s/o 20th St.	25.0	25,000	22,475	625	575	1,325	25,000	22,475	417	288	442	23,621	
9	Rubidoux Bl.	s/o 24th St.	25.8	25,800	23,194	645	593	1,367	25,800	23,194	430	297	456	24,377	
10	Rubidoux Bl.	s/o 26th St.	26.7	26,700	24,003	668	614	1,415	26,700	24,003	445	307	472	25,227	
11	Rubidoux Bl.	s/o 28th St.	29.0	29,000	26,071	725	667	1,537	29,000	26,071	483	334	512	27,400	
12	Rubidoux Bl.	s/o SR-60 Fwy.	29.4	29,400	26,431	735	676	1,558	29,400	26,431	490	338	519	27,778	
13	Rubidoux Bl.	s/o 34th St.	21.7	21,700	19,508	543	499	1,150	21,700	19,508	362	250	383	20,503	
14	Cactus Av.	n/o El Rivino Rd.	7.9	7,900	7,102	198	182	419	7,900	7,102	132	91	140	7,464	
15	Rivera St.	n/o Market St.	10.7	10,700	9,619	268	246	567	10,700	9,619	178	123	189	10,110	
16	Riverside Av.	n/o I-10 Fwy.	52.5	52,500	47,198	1,313	1,208	2,783	52,500	47,198	875	604	928	49,604	
17	Riverside Av.	s/o I-10 Fwy.	58.2	58,200	52,322	1,455	1,339	3,085	58,200	52,322	970	669	1,028	54,989	
18	Riverside Av.	s/o Slover Av.	54.0	54,000	48,546	1,350	1,242	2,862	54,000	48,546	900	621	954	51,021	
19	Riverside Av.	s/o Santa Ana Av.	46.2	46,200	41,534	1,155	1,063	2,449	46,200	41,534	770	531	816	43,651	
20	Riverside Av.	s/o Jurupa Av.	46.2	46,200	41,534	1,155	1,063	2,449	46,200	41,534	770	531	816	43,651	
21	Rancho Av.	n/o Agua Mansa Rd.	24.5	24,500	22,026	613	564	1,299	24,500	22,026	408	282	433	23,148	
22	Rancho Av.	s/o Agua Mansa Rd.	19.9	19,900	17,890	498	458	1,055	19,900	17,890	332	229	352	18,802	
23	Slover Av.	w/o Cedar Av.	17.8	17,800	16,002	445	409	943	17,800	16,002	297	205	314	16,818	
24	Slover Av.	w/o Riverside Av.	12.3	12,300	11,058	308	283	652	12,300	11,058	205	141	217	11,621	
25	Santa Ana Av.	w/o Cedar Av.	9.3	9,300	8,361	233	214	493	9,300	8,361	155	107	164	8,787	
26	Santa Ana Av.	w/o Riverside Av.	5.4	5,400	4,855	135	124	286	5,400	4,855	90	62	95	5,102	
27	Jurupa Av.	w/o Cedar Av.	7.8	7,800	7,012	195	179	413	7,800	7,012	130	90	138	7,370	
28	El Rivino Rd.	e/o Cedar Av.	11.4	11,400	10,249	285	262	604	11,400	10,249	190	131	201	10,771	
29	El Rivino Rd.	e/o Cactus Av.	6.6	6,600	5,933	165	152	350	6,600	5,933	110	76	117	6,236	
30	El Rivino Rd.	e/o Hall Av.	4.1	4,100	3,686	103	94	217	4,100	3,686	68	47	72	3,874	
31	Agua Mansa Rd.	e/o 20th St.	19.9	19,900	17,890	498	458	1,055	19,900	17,890	332	229	352	18,802	
32	Agua Mansa Rd.	w/o Brown Av.	19.9	19,900	17,890	498	458	1,055	19,900	17,890	332	229	352	18,802	
33	Agua Mansa Rd.	w/o Holly St.	19.6	19,600	17,620	490	451	1,039	19,600	17,620	327	225	346	18,519	
34	Agua Mansa Rd.	e/o Holly St.	19.6	19,600	17,620	490	451	1,039	19,600	17,620	327	225	346	18,519	
35	Agua Mansa Rd.	e/o El Rivino Rd.	23.9	23,900	21,486	598	550	1,267	23,900	21,486	398	275	422	22,582	
36	Agua Mansa Rd.	e/o Riverside Av.	11.0	11,000	9,889	275	253	583	11,000	9,889	183	127	194	10,393	
37	20th St.	e/o Rubidoux Bl.	29.8	29,800	26,790	745	685	1,579	29,800	26,790	497	343	526	28,156	
38	20th St.	e/o Agua Mansa Rd.	25.7	25,700	23,104	643	591	1,362	25,700	23,104	428	296	454	24,282	
39	Market St.	e/o Hall Av.	35.0	35,000	31,465	875	805	1,855	35,000	31,465	583	403	618	33,069	
40	Market St.	e/o Rivera St.	43.6	43,600	39,196	1,090	1,003	2,311	43,600	39,196	727	501	770	41,195	

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,344 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,034 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph				Vehicle Mix				
Near/Far Lane Distance: 48 feet				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 52.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet				Autos: 46.400				
Road Grade: 0.0%				Medium Trucks: 46.209				
Left View: -90.0 degrees				Heavy Trucks: 46.228				
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos: 66.51 4.27 0.38 -1.20 -4.66 0.000 0.000								
Medium Trucks: 77.72 -11.29 0.41 -1.20 -4.87 0.000 0.000								
Heavy Trucks: 82.99 -6.46 0.41 -1.20 -5.41 0.000 0.000								
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos: 70.0 67.8 64.3 63.1 70.4 70.7								
Medium Trucks: 65.6 64.0 56.7 57.5 65.4 65.5								
Heavy Trucks: 75.7 73.8 67.0 69.1 76.3 76.5								
Vehicle Noise: 77.1 75.1 69.1 70.3 77.6 77.8								
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				167	360	776	1,671	
CNEL:				171	369	795	1,714	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,873 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,787 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 2.66 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -12.89 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -8.07 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.4 66.2 62.7 61.5 68.8 69.1									
Medium Trucks: 64.0 62.4 55.1 55.9 63.8 63.9									
Heavy Trucks: 74.1 72.2 65.4 67.5 74.7 74.9									
Vehicle Noise: 75.5 73.5 67.5 68.7 76.0 76.2									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				131	281	606	1,306		
CNEL:				134	289	622	1,339		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Cedar Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,526 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,353 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu		
Autos:	66.51	1.93	0.38	-1.20	-4.66	0.000	0.000	0.000	
Medium Trucks:	77.72	-13.63	0.41	-1.20	-4.87	0.000	0.000	0.000	
Heavy Trucks:	82.99	-8.80	0.41	-1.20	-5.41	0.000	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.6	65.5	61.9	60.8	68.1	68.4			
Medium Trucks:	63.3	61.7	54.4	55.2	63.0	63.2			
Heavy Trucks:	73.4	71.4	64.6	66.8	74.0	74.1			
Vehicle Noise:	74.7	72.8	66.8	68.0	75.3	75.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				117	251	541	1,167		
CNEL:				120	258	555	1,196		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,715 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,372 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 1.96 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -13.60 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -8.77 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 67.7 65.5 62.0 60.8 68.1 68.4									
Medium Trucks: 63.3 61.7 54.4 55.2 63.1 63.2									
Heavy Trucks: 73.4 71.5 64.7 66.8 74.0 74.2									
Vehicle Noise: 74.8 72.8 66.8 68.0 75.3 75.5									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			117	253	544	1,173			
CNEL:			120	259	558	1,202			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Cedar Av. Road Segment: s/o Jurupa Av.			Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,881 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,088 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data			Vehicle Mix				
			VehicleType	Day	Evening	Night	Daily
			Autos: 73.2% 8.1% 18.6% 89.90%				
			Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
			Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			Noise Source Elevations (in feet)				
			Autos: 0.000				
			Medium Trucks: 2.297				
			Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			Lane Equivalent Distance (in feet)				
			Autos: 46.400				
			Medium Trucks: 46.209				
			Heavy Trucks: 46.228				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.44	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-15.12	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-10.29	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.7	64.2	63.0	70.3	70.6
Medium Trucks:	65.1	63.4	56.2	57.0	64.8	65.0
Heavy Trucks:	74.3	72.3	65.5	67.7	74.9	75.0
Vehicle Noise:	76.0	74.0	68.2	69.2	76.5	76.7
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		141	304	655	1,410	
CNEL:		145	312	672	1,448	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,070 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,107 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.90%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	0.48	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-15.08	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-10.25	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	66.7	63.2	62.0	69.3	69.6
Medium Trucks:	64.1	62.5	55.2	56.0	63.9	64.0
Heavy Trucks:	73.3	71.4	64.6	66.7	73.9	74.1
Vehicle Noise:	75.0	73.0	67.2	68.2	75.5	75.7
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		138	297	640	1,379	
CNEL:		142	305	657	1,415	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o Production Circle					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,786 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,079 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.42	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.14	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.31	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.7	63.1	62.0	69.3	69.6
Medium Trucks:	64.1	62.4	55.1	56.0	63.8	64.0
Heavy Trucks:	73.3	71.3	64.5	66.6	73.9	74.0
Vehicle Noise:	75.0	73.0	67.2	68.2	75.5	75.6
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		137	294	634	1,366	
CNEL:		140	302	651	1,403	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 17,574 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,757 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
FHWA Noise Model Calculations				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982			
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.31	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.87	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-11.04	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	65.9	62.4	61.2	68.5	68.8
Medium Trucks:	63.3	61.7	54.4	55.2	63.1	63.2
Heavy Trucks:	72.5	70.6	63.8	65.9	73.1	73.3
Vehicle Noise:	74.2	72.3	66.4	67.4	74.7	74.9
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		122	263	567	1,222	
CNEL:		125	270	582	1,254	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o 24th St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,519 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,852 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
				Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		59.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		59.0 feet							
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%							
Left View:		-90.0 degrees		Autos:		54.129			
Right View:		90.0 degrees		Medium Trucks:		53.966			
				Heavy Trucks:		53.982			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-0.08	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.64	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.81	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.2	62.6	61.5	68.8	69.1
Medium Trucks:	63.6	61.9	54.6	55.5	63.3	63.5
Heavy Trucks:	72.8	70.8	64.0	66.1	73.4	73.5
Vehicle Noise:	74.5	72.5	66.7	67.7	75.0	75.1
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			127	273	587	1,265
CNEL:			130	280	603	1,299

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o 26th St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,086 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,909 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	0.05	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-15.51	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-10.68	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.3	62.8	61.6	68.9	69.2
Medium Trucks:	63.7	62.0	54.8	55.6	63.4	63.6
Heavy Trucks:	72.9	70.9	64.1	66.3	73.5	73.6
Vehicle Noise:	74.6	72.6	66.8	67.8	75.1	75.3
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			129	278	599	1,291
CNEL:			132	285	615	1,325

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o 28th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 20,597 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,060 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				Vehicle Type	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.38	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.18	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.35	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.6	63.1	61.9	69.2	69.5
Medium Trucks:	64.0	62.4	55.1	55.9	63.8	63.9
Heavy Trucks:	73.2	71.3	64.5	66.6	73.8	74.0
Vehicle Noise:	74.9	72.9	67.1	68.1	75.4	75.6
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			136	293	630	1,358
CNEL:			139	300	647	1,394

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 23,810 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,381 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90%			
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%			
				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.01	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.55	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.72	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.3	63.7	62.6	69.9	70.1
Medium Trucks:	64.7	63.0	55.7	56.6	64.4	64.5
Heavy Trucks:	73.9	71.9	65.1	67.2	74.5	74.6
Vehicle Noise:	75.6	73.6	67.8	68.8	76.1	76.2
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			150	322	694	1,496
CNEL:			154	331	713	1,535

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rubidoux Bl. Road Segment: s/o 34th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,141 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,814 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)				
					Autos:	54.129			
					Medium Trucks:	53.966			
					Heavy Trucks:	53.982			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-0.17	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.73	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.90	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.1	62.5	61.4	68.7	69.0			
Medium Trucks:	63.5	61.8	54.6	55.4	63.2	63.4			
Heavy Trucks:	72.7	70.7	63.9	66.0	73.3	73.4			
Vehicle Noise:	74.4	72.4	66.6	67.6	74.9	75.0			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	125	269	579	1,248					
CNEL:	128	276	595	1,281					

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 2,929 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 293 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 11 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 30.0 feet					Lane Equivalent Distance (in feet)				
Centerline Dist. to Observer: 30.0 feet					Autos: 29.912				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 29.615				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 29.644				
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-7.12	3.24	-1.20	-4.49	0.000	0.000		
Medium Trucks:	77.72	-22.68	3.31	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	82.99	-17.85	3.30	-1.20	-5.77	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	61.4	59.3	55.8	54.6	61.9	62.2			
Medium Trucks:	57.1	55.5	48.2	49.1	56.9	57.0			
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0			
Vehicle Noise:	68.6	66.6	60.6	61.8	69.1	69.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				26	56	121	261		
CNEL:				27	58	124	268		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,692 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 869 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 12 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 33.0 feet Centerline Dist. to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 32.833				
					Medium Trucks: 32.562				
					Heavy Trucks: 32.589				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	-1.15	2.64	-1.20	-4.52	0.000	0.000		
Medium Trucks:	73.48	-16.71	2.69	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	79.92	-11.88	2.69	-1.20	-5.69	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.0	59.9	56.4	55.2	62.5	62.8			
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.2			
Heavy Trucks:	69.5	67.6	60.8	62.9	70.1	70.3			
Vehicle Noise:	70.5	68.5	62.3	63.8	71.0	71.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				39	83	180	388		
CNEL:				40	86	184	397		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,604 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,760 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.772				
					Medium Trucks: 54.610				
					Heavy Trucks: 54.626				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.96	-0.70	-1.20	-4.69	0.000	0.000		
Medium Trucks:	77.72	-11.59	-0.68	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-6.77	-0.68	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.6	66.4	62.9	61.7	69.1	69.3			
Medium Trucks:	64.2	62.6	55.3	56.2	64.0	64.1			
Heavy Trucks:	74.3	72.4	65.6	67.7	75.0	75.1			
Vehicle Noise:	75.7	73.7	67.7	68.9	76.2	76.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				156	336	723	1,557		
CNEL:				160	344	741	1,597		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		38,738 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,874 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Mix					
Barrier Height:		0.0 feet		VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2%	8.1%	18.6%	89.90%
Centerline Dist. to Barrier:		60.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Observer:		60.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees		Autos:		54.772			
Right View:		90.0 degrees		Medium Trucks:		54.610			
				Heavy Trucks:		54.626			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.12	-0.70	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.43	-0.68	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.61	-0.68	-1.20	-5.34	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.3	65.8	64.6	71.9	72.2
Medium Trucks:	66.7	65.0	57.8	58.6	66.4	66.6
Heavy Trucks:	75.9	73.9	67.1	69.3	76.5	76.6
Vehicle Noise:	77.6	75.6	69.8	70.8	78.1	78.3
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			208	448	965	2,080
CNEL:			213	460	991	2,135

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Riverside Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,093 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,609 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 45.310				
Road Grade: 0.0%					Medium Trucks: 45.114				
Left View: -90.0 degrees					Heavy Trucks: 45.133				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.82	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-12.74	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-7.91	0.56	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.4	70.2	66.7	65.5	72.8	73.1
Medium Trucks:	67.6	66.0	58.7	59.5	67.4	67.5
Heavy Trucks:	76.8	74.9	68.1	70.2	77.4	77.6
Vehicle Noise:	78.5	76.5	70.7	71.7	79.0	79.2
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			208	448	966	2,080
CNEL:			214	460	991	2,135

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,967 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,797 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 71.78 1.30 0.54 -1.20 -4.66 0.000 0.000									
Medium Trucks: 82.40 -14.26 0.57 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 86.40 -9.43 0.56 -1.20 -5.41 0.000 0.000									

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.4	70.3	66.7	65.6	72.9	73.2
Medium Trucks:	67.5	65.9	58.6	59.4	67.2	67.4
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1
Vehicle Noise:	78.2	76.2	70.5	71.4	78.7	78.9
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			198	426	917	1,976
CNEL:			203	437	942	2,029

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 32,691 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,269 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.97	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	82.40	-13.59	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	86.40	-8.76	0.56	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.1	70.9	67.4	66.3	73.6	73.8
Medium Trucks:	68.2	66.5	59.3	60.1	67.9	68.1
Heavy Trucks:	77.0	75.0	68.2	70.4	77.6	77.7
Vehicle Noise:	78.9	76.9	71.2	72.1	79.4	79.5
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			219	472	1,018	2,192
CNEL:			225	485	1,045	2,251

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,763 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,776 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 52.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees									
Right View: 90.0 degrees					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 0.71 0.54 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -14.85 0.57 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -10.02 0.56 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos: 66.6 64.4 60.9 59.7 67.0 67.3									
Medium Trucks: 62.2 60.6 53.3 54.1 62.0 62.1									
Heavy Trucks: 72.3 70.4 63.6 65.7 72.9 73.1									
Vehicle Noise: 73.7 71.7 65.7 66.9 74.2 74.4									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				99	213	460	991		
CNEL:				102	219	471	1,016		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,661 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,266 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.76	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-16.32	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-11.49	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.1	62.9	59.4	58.2	65.6	65.8			
Medium Trucks:	60.8	59.1	51.8	52.7	60.5	60.7			
Heavy Trucks:	70.9	68.9	62.1	64.2	71.5	71.6			
Vehicle Noise:	72.2	70.2	64.2	65.4	72.7	72.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				79	170	367	790		
CNEL:				81	175	376	810		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,960 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,096 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.36	0.38	-1.20	-4.66	0.000	0.000	0.000	
Medium Trucks:	81.00	-17.92	0.41	-1.20	-4.87	0.000	0.000	0.000	
Heavy Trucks:	85.38	-13.09	0.41	-1.20	-5.41	0.000	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.0	64.9	61.4	60.2	67.5	67.8			
Medium Trucks:	62.3	60.6	53.4	54.2	62.0	62.2			
Heavy Trucks:	71.5	69.5	62.7	64.9	72.1	72.2			
Vehicle Noise:	73.2	71.2	65.4	66.4	73.7	73.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				92	198	426	918		
CNEL:				94	203	437	942		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,015 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,002 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.75	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-18.31	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-13.48	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.6	64.5	61.0	59.8	67.1	67.4			
Medium Trucks:	61.9	60.3	53.0	53.8	61.6	61.8			
Heavy Trucks:	71.1	69.1	62.3	64.5	71.7	71.8			
Vehicle Noise:	72.8	70.8	65.0	66.0	73.3	73.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			86	186	401	864			
CNEL:			89	191	412	887			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 6,330 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 633 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 44.0 feet					Daily				
Centerline Dist. to Observer: 44.0 feet					Autos: 73.2%				
Barrier Distance to Observer: 0.0 feet					8.1%				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 82.2%				
Pad Elevation: 0.0 feet					3.9%				
Road Elevation: 0.0 feet					14.0%				
Road Grade: 0.0%					2.50%				
Left View: -90.0 degrees					Heavy Trucks: 76.5%				
Right View: 90.0 degrees					4.0%				
					19.5%				
					7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004				
					Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-3.77	1.28	-1.20	-4.61	0.000	0.000		0.000
Medium Trucks:	77.72	-19.33	1.31	-1.20	-4.87	0.000	0.000		0.000
Heavy Trucks:	82.99	-14.50	1.31	-1.20	-5.50	0.000	0.000		0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.8	60.7	57.1	56.0	63.3	63.6			
Medium Trucks:	58.5	56.8	49.6	50.4	58.2	58.4			
Heavy Trucks:	68.6	66.6	59.8	62.0	69.2	69.3			
Vehicle Noise:	69.9	68.0	62.0	63.2	70.5	70.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				47	102	219	472		
CNEL:				48	104	225	484		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,968 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 397 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -5.80 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 77.72 -21.36 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -16.53 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 60.8 58.6 55.1 53.9 61.3 61.5									
Medium Trucks: 56.5 54.8 47.5 48.4 56.2 56.4									
Heavy Trucks: 66.6 64.6 57.8 59.9 67.2 67.3									
Vehicle Noise: 67.9 65.9 59.9 61.1 68.4 68.6									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				35	75	161	346		
CNEL:				35	76	165	355		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,102 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		510 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.50%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 7.60%					
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		46.400			
Road Grade:		0.0%			Medium Trucks:		46.209			
Left View:		-90.0 degrees			Heavy Trucks:		46.228			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu			
Autos:		66.51	-4.71	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:		77.72	-20.27	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:		82.99	-15.44	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:		61.0	58.8	55.3	54.1	61.5	61.7			
Medium Trucks:		56.7	55.0	47.7	48.6	56.4	56.5			
Heavy Trucks:		66.8	64.8	58.0	60.1	67.4	67.5			
Vehicle Noise:		68.1	66.1	60.1	61.3	68.6	68.8			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				42	91	195	421			
CNEL:				43	93	200	432			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,063 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 406 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 -6.21 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 79.45 -21.77 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -16.94 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 62.3 60.2 56.7 55.5 62.8 63.1									
Medium Trucks: 57.8 56.1 48.9 49.7 57.5 57.7									
Heavy Trucks: 67.4 65.5 58.7 60.8 68.0 68.2									
Vehicle Noise: 68.9 67.0 61.1 62.2 69.5 69.6									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			40	87	188	404			
CNEL:			41	89	193	415			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,779 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 378 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 44.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 44.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 40.460				
Road Grade: 0.0%					Medium Trucks: 40.241				
Left View: -90.0 degrees					Heavy Trucks: 40.262				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-6.53	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-22.08	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.26	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.0	59.9	56.3	55.2	62.5	62.8			
Medium Trucks:	57.5	55.8	48.6	49.4	57.2	57.4			
Heavy Trucks:	67.1	65.1	58.3	60.5	67.7	67.8			
Vehicle Noise:	68.6	66.7	60.7	61.8	69.1	69.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				39	83	179	385		
CNEL:				40	85	184	395		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		2,929 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		293 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		44.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		44.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004			
Pad Elevation:		0.0 feet			Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		40.460			
Left View:		-90.0 degrees			Medium Trucks:		40.241			
Right View:		90.0 degrees			Heavy Trucks:		40.262			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-7.63	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:	79.45	-23.19	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-18.36	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	60.9	58.8	55.2	54.1	61.4	61.7				
Medium Trucks:	56.4	54.7	47.5	48.3	56.1	56.3				
Heavy Trucks:	66.0	64.0	57.2	59.4	66.6	66.7				
Vehicle Noise:	67.5	65.5	59.6	60.7	68.0	68.2				
Centerline Distance to Noise Contour (in feet)										
	70 dBA		65 dBA		60 dBA		55 dBA			
Ldn:	33		70		151		325			
CNEL:	33		72		155		334			
Wednesday, October 17, 2018										

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,677 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,068 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.02	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-17.57	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-12.75	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.6	63.4	59.9	58.7	66.0	66.3			
Medium Trucks:	61.0	59.4	52.1	52.9	60.7	60.9			
Heavy Trucks:	70.6	68.7	61.9	64.0	71.2	71.4			
Vehicle Noise:	72.2	70.2	64.3	65.4	72.7	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				75	162	350	754		
CNEL:				77	167	359	774		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data Average Daily Traffic (Adt): 10,677 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,068 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Site Conditions (Hard = 10, Soft = 15)				
					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.02	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-17.57	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-12.75	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.6	63.4	59.9	58.7	66.0	66.3			
Medium Trucks:	61.0	59.4	52.1	52.9	60.7	60.9			
Heavy Trucks:	70.6	68.7	61.9	64.0	71.2	71.4			
Vehicle Noise:	72.2	70.2	64.3	65.4	72.7	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			75	162	350	754			
CNEL:			77	167	359	774			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,094 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,209 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph							
Near/Far Lane Distance:		48 feet		Vehicle Mix					
Site Data				Vehicle Type		Day	Evening	Night	Daily
				Autos:		73.2%	8.1%	18.6%	89.90%
				Medium Trucks:		82.2%	3.9%	14.0%	2.50%
				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004		Grade Adjustment: 0.0	
								Lane Equivalent Distance (in feet)	
Autos:		46.400							
Medium Trucks:		46.209							
Heavy Trucks:		46.228							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		68.46	-1.47	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:		79.45	-17.03	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		84.25	-12.20	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		66.2	64.0	60.5	59.3	66.6	66.9		
Medium Trucks:		61.6	60.0	52.7	53.5	61.4	61.5		
Heavy Trucks:		71.3	69.3	62.5	64.6	71.9	72.0		
Vehicle Noise:		72.8	70.8	64.9	66.0	73.3	73.5		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				86	186	400	862		
CNEL:				88	190	410	884		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.				Project Name: Agua Mansa Job Number: 11215						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt):		12,094 vehicles		Autos:		15				
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15				
Peak Hour Volume:		1,209 vehicles		Heavy Trucks (3+ Axles):		15				
Vehicle Speed:		45 mph		Vehicle Mix						
Near/Far Lane Distance:		48 feet		VehicleType	Day	Evening	Night	Daily		
Site Data				Autos:		73.2%		8.1%	18.6%	89.90%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%		3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%		4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)						
Centerline Dist. to Observer:		52.0 feet		Autos:		0.000				
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297				
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)						
Road Elevation:		0.0 feet		Autos:		46.400				
Road Grade:		0.0%		Medium Trucks:		46.209				
Left View:		-90.0 degrees		Heavy Trucks:		46.228				
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-1.47	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	79.45	-17.03	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-12.20	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.2	64.0	60.5	59.3	66.6	66.9				
Medium Trucks:	61.6	60.0	52.7	53.5	61.4	61.5				
Heavy Trucks:	71.3	69.3	62.5	64.6	71.9	72.0				
Vehicle Noise:	72.8	70.8	64.9	66.0	73.3	73.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				86	186	400	862			
CNEL:				88	190	410	884			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,361 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,436 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 60.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 60.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 44.091				
Left View: -90.0 degrees					Medium Trucks: 43.890				
Right View: 90.0 degrees					Heavy Trucks: 43.909				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.73	0.72	-1.20	-4.69	0.000		0.000	
Medium Trucks:	79.45	-16.29	0.75	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	84.25	-11.46	0.74	-1.20	-5.34	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.1	61.6	60.4	67.7	68.0			
Medium Trucks:	62.7	61.1	53.8	54.6	62.4	62.6			
Heavy Trucks:	72.3	70.4	63.6	65.7	72.9	73.1			
Vehicle Noise:	73.9	71.9	66.0	67.1	74.4	74.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			117	253	545	1,174			
CNEL:			120	259	559	1,204			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		7,275 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		728 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		45 mph		Vehicle Mix			
Near/Far Lane Distance:		82 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	
Centerline Dist. to Barrier:		60.0 feet		Heavy Trucks:		76.5%	
Centerline Dist. to Observer:		60.0 feet		Grade Adjustment: 0.0			
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees		Autos:		44.091	
Right View:		90.0 degrees		Medium Trucks:		43.890	
				Heavy Trucks:		43.909	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.68	0.72	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-19.24	0.75	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.41	0.74	-1.20	-5.34	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.3	62.2	58.6	57.5	64.8	65.0	
Medium Trucks:	59.8	58.1	50.8	51.7	59.5	59.6	
Heavy Trucks:	69.4	67.4	60.6	62.8	70.0	70.1	
Vehicle Noise:	70.9	68.9	63.0	64.1	71.4	71.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			75	161	346	746	
CNEL:			77	165	355	765	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: 20th St. Road Segment: e/o Rubidoux Bl.			Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,975 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,098 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data			Vehicle Mix				
			VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
			Noise Source Elevations (in feet)				
			Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			Lane Equivalent Distance (in feet)				
			Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.92	0.31	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-14.64	0.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-9.81	0.34	-1.20	-5.43	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.5	66.3	62.8	61.6	69.0	69.2	
Medium Trucks:	63.9	62.3	55.0	55.9	63.7	63.8	
Heavy Trucks:	73.6	71.6	64.8	66.9	74.2	74.3	
Vehicle Noise:	75.1	73.1	67.2	68.3	75.6	75.8	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	118	255	549	1,183			
CNEL:	121	261	563	1,214			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,062 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,606 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.24	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-15.80	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.97	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.3	65.2	61.7	60.5	67.8	68.1			
Medium Trucks:	62.8	61.1	53.9	54.7	62.5	62.7			
Heavy Trucks:	72.4	70.5	63.7	65.8	73.0	73.2			
Vehicle Noise:	73.9	72.0	66.1	67.2	74.5	74.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				99	213	460	990		
CNEL:				102	219	471	1,016		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data Average Daily Traffic (Adt): 22,298 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,230 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Site Conditions (Hard = 10, Soft = 15)				
					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.18	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-14.38	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.55	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.8	66.6	63.1	61.9	69.2	69.5			
Medium Trucks:	64.2	62.6	55.3	56.1	63.9	64.1			
Heavy Trucks:	73.8	71.9	65.1	67.2	74.4	74.6			
Vehicle Noise:	75.4	73.4	67.5	68.6	75.9	76.0			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	123		265		572		1,232		
CNEL:	126		272		587		1,264		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Market St. Road Segment: e/o Rivera St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,739 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,674 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.147				
Road Grade: 0.0%					Medium Trucks: 43.947				
Left View: -90.0 degrees					Heavy Trucks: 43.966				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.97	0.71	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.59	0.74	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-8.76	0.73	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.9	67.8	64.3	63.1	70.4	70.7			
Medium Trucks:	65.4	63.8	56.5	57.3	65.1	65.3			
Heavy Trucks:	75.0	73.1	66.3	68.4	75.6	75.8			
Vehicle Noise:	76.5	74.6	68.7	69.8	77.1	77.2			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	148		319		686		1,478		
CNEL:	152		327		704		1,517		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,346 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,935 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		73.2%	8.1%	18.6%	89.07%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.61%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	8.32%
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		46.400			
Road Grade:		0.0%		Medium Trucks:		46.209			
Left View:		-90.0 degrees		Heavy Trucks:		46.228			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu		
Autos:		66.51	2.85	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:		77.72	-12.48	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		82.99	-7.45	0.41	-1.20	-5.41	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.4	62.9	61.7	69.0	69.3:
Medium Trucks:	64.4	62.8	55.5	56.4	64.2	64.3:
Heavy Trucks:	74.8	72.8	66.0	68.1	75.4	75.5:
Vehicle Noise:	76.0	74.0	68.0	69.2	76.5	76.7:
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	142	305	657	1,416		
CNEL:	145	313	673	1,451		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,820 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axes): 15				
Peak Hour Volume: 2,582 vehicles					Heavy Trucks (3+ Axes): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 48 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Vehicle Type	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0					Autos: 73.2% 8.1% 18.6% 88.72%				
Centerline Dist. to Barrier: 52.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Centerline Dist. to Observer: 52.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.62%				
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 46.400				
Right View: 90.0 degrees					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.27	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.97	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.85	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	68.0	65.8	62.3	61.1	68.4		68.7		
Medium Trucks:	64.0	62.3	55.0	55.9	63.7		63.8		
Heavy Trucks:	74.4	72.4	65.6	67.7	75.0		75.1		
Vehicle Noise:	75.6	73.6	67.5	68.8	76.1		76.2		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			132	285	615		1,324		
CNEL:			136	292	630		1,357		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Cedar Av. Road Segment: s/o Jurupa Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,181 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,318 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 88.68%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.68%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
Heavy Trucks: 46.228									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.83	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-14.41	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-9.26	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.2	68.1	64.5	63.4	70.7	71.0			
Medium Trucks:	65.8	64.2	56.9	57.7	65.5	65.7			
Heavy Trucks:	75.3	73.4	66.6	68.7	75.9	76.1			
Vehicle Noise:	76.8	74.9	69.0	70.1	77.4	77.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				161	347	747	1,610		
CNEL:				165	356	767	1,652		
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,138 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,414 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 86.40%				
					Medium Trucks: 82.2% 3.9% 14.0% 3.04%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.56%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
Autos: 54.129									
Medium Trucks: 53.966									
Heavy Trucks: 53.982									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 0.90 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -13.65 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -8.23 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.3 67.1 63.6 62.4 69.8 70.0									
Medium Trucks: 65.6 63.9 56.6 57.5 65.3 65.4									
Heavy Trucks: 75.3 73.4 66.6 68.7 75.9 76.1									
Vehicle Noise: 76.7 74.7 68.6 69.9 77.2 77.3									
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	177	382	824	1,775					
CNEL:	182	392	844	1,819					
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o Production Circle					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,469 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,547 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 59.0 feet					Daily				
Centerline Dist. to Observer: 59.0 feet					Autos: 73.2% 8.1% 18.6% 87.23%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.85%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 9.92%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEI	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.17	-0.62	-1.20	-4.69	0.000			0.000
Medium Trucks:	81.00	-13.69	-0.60	-1.20	-4.88	0.000			0.000
Heavy Trucks:	85.38	-8.27	-0.60	-1.20	-5.35	0.000			0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.5	63.9	56.6	57.4	65.2	65.4			
Heavy Trucks:	75.3	73.4	66.6	68.7	75.9	76.0			
Vehicle Noise:	76.7	74.7	68.7	69.9	77.2	77.4			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	178	384	826	1,781					
CNEL:	183	393	847	1,826					
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,118 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,012 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.37%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.69%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.95%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 0.20 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -14.97 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -9.74 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.6 66.4 62.9 61.7 69.1 69.3									
Medium Trucks: 64.2 62.6 55.3 56.1 64.0 64.1									
Heavy Trucks: 73.8 71.9 65.1 67.2 74.4 74.6									
Vehicle Noise: 75.3 73.3 67.4 68.5 75.8 76.0									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				144	311	671	1,445		
CNEL:				148	319	688	1,482		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 24th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 20,815 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,082 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
Site Data				Day			
Barrier Height: 0.0 feet				Evening			
Barrier Type (0-Wall, 1-Berm): 0.0				Night			
Centerline Dist. to Barrier: 59.0 feet				Daily			
Centerline Dist. to Observer: 59.0 feet				Autos: 73.2%			
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 82.2%			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 76.5%			
Pad Elevation: 0.0 feet				Grade Adjustment: 0.0			
Road Elevation: 0.0 feet				Noise Source Elevations (in feet)			
Road Grade: 0.0%				Autos: 0.000			
Left View: -90.0 degrees				Medium Trucks: 2.297			
Right View: 90.0 degrees				Heavy Trucks: 8.004			
FHWA Noise Model Calculations				Lane Equivalent Distance (in feet)			
VehicleType				Autos: 54.129			
REMED				Medium Trucks: 53.966			
Traffic Flow				Heavy Trucks: 53.982			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20			
Autos: 70.20				Medium Trucks: 81.00			
Medium Trucks: 81.00				Heavy Trucks: 85.38			
Heavy Trucks: 85.38				Traffic Flow			
Traffic Flow				Distance			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 70.20</			

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.6	63.1	61.9	69.2	69.5
Medium Trucks:	64.4	62.8	55.5	56.3	64.2	64.3
Heavy Trucks:	74.0	72.0	65.2	67.4	74.6	74.7
Vehicle Noise:	75.5	73.5	67.6	68.7	76.0	76.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		148	319	688	1,482	
CNEL:		152	328	706	1,520	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 26th St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		21,382 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,138 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos:		73.2%	8.1%	18.6%	88.34%
				Medium Trucks:		82.2%	3.9%	14.0%	2.70%
				Heavy Trucks:		76.5%	4.0%	19.5%	8.95%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Medium Trucks:		2.297							
Heavy Trucks:		8.004		Grade Adjustment: 0.0					
Lane Equivalent Distance (in feet)									
Autos:		54.129							
Medium Trucks:		53.966							
Heavy Trucks:		53.982							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.67	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.47	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	66.7	63.2	62.0	69.3	69.6
Medium Trucks:	64.5	62.9	55.6	56.4	64.3	64.4
Heavy Trucks:	74.1	72.1	65.3	67.5	74.7	74.8
Vehicle Noise:	75.6	73.6	67.7	68.8	76.1	76.3
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		151	324	699	1,506	
CNEL:		154	333	717	1,545	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 28th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		22,868 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,287 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.43%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.69%	
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.87%	
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		54.129	
				Medium Trucks:		53.966	
				Heavy Trucks:		53.982	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.76	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.40	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.22	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.0	63.5	62.3	69.6	69.9
Medium Trucks:	64.8	63.2	55.9	56.7	64.5	64.7
Heavy Trucks:	74.4	72.4	65.6	67.7	75.0	75.1
Vehicle Noise:	75.9	73.9	68.0	69.1	76.4	76.5
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		157	338	728	1,568	
CNEL:		161	347	747	1,608	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,340 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,434 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.82% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.69%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129				
				Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.10	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-14.45	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-9.58	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.3	63.8	62.6	70.0	70.2
Medium Trucks:	64.7	63.1	55.8	56.7	64.5	64.6
Heavy Trucks:	74.0	72.0	65.2	67.4	74.6	74.7
Vehicle Noise:	75.7	73.7	67.9	68.9	76.2	76.4
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		153	329	708	1,526	
CNEL:		157	337	727	1,566	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 34th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,671 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,867 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.79%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.71%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEI	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-0.05	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.61	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.71	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.2	62.7	61.5	68.8	69.1			
Medium Trucks:	63.6	61.9	54.7	55.5	63.3	63.5			
Heavy Trucks:	72.9	70.9	64.1	66.2	73.5	73.6			
Vehicle Noise:	74.5	72.6	66.7	67.8	75.0	75.2			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	128		276		594		1,280		
CNEL:	131		283		610		1,314		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		3,215 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		322 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		11 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.80%				
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.28%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 6.92%				
Centerline Dist. to Barrier:		30.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		30.0 feet			Autos: 0.000				
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		Grade Adjustment: 0.0
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos: 29.912				
Road Grade:		0.0%			Medium Trucks: 29.615				
Left View:		-90.0 degrees			Heavy Trucks: 29.644				
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	-6.67	3.24	-1.20	-4.49	0.000	0.000	
Medium Trucks:		77.72	-22.68	3.31	-1.20	-4.86	0.000	0.000	
Heavy Trucks:		82.99	-17.85	3.30	-1.20	-5.77	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:		61.9	59.7	56.2	55.0	62.4	62.6		
Medium Trucks:		57.1	55.5	48.2	49.1	56.9	57.0		
Heavy Trucks:		67.2	65.3	58.5	60.6	67.8	68.0		
Vehicle Noise:		68.7	66.7	60.8	61.9	69.2	69.4		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				27	57	123	265		
CNEL:				27	59	126	272		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,797 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 880 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 30 mph									
Near/Far Lane Distance: 12 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 90.02%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.47%				
Centerline Dist. to Barrier: 33.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.51%				
Centerline Dist. to Observer: 33.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 32.833				
Right View: 90.0 degrees					Medium Trucks: 32.562				
					Heavy Trucks: 32.589				
FHWA Noise Model Calculations									
VehicleType	RECEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	-1.09	2.64	-1.20	-4.52	0.000	0.000		
Medium Trucks:	73.48	-16.71	2.69	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	79.92	-11.88	2.69	-1.20	-5.69	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.1	60.0	56.4	55.3	62.6	62.8			
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.2			
Heavy Trucks:	69.5	67.6	60.8	62.9	70.1	70.3			
Vehicle Noise:	70.5	68.6	62.4	63.8	71.1	71.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			39	84	180	388			
CNEL:			40	86	184	397			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,978 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,798 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.80%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.51%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.69%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.772				
					Medium Trucks: 54.610				
					Heavy Trucks: 54.626				
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	4.00	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:		77.72	-11.53	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:		82.99	-6.67	-0.68	-1.20	-5.34	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		68.6	66.5	62.9	61.8	69.1	69.4		
Medium Trucks:		64.3	62.7	55.4	56.2	64.0	64.2		
Heavy Trucks:		74.4	72.5	65.7	67.8	75.0	75.2		
Vehicle Noise:		75.8	73.8	67.8	69.0	76.3	76.5		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				158	340	732	1,577		
CNEL:				162	348	750	1,616		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Riverside Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,295 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,729 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleTypeDayEveningNightDaily				
Site Data					Autos: 73.2% 8.1% 18.6% 89.24%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.60%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.17%				
					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet					Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 2.297				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Centerline Dist. to Observer: 52.0 feet					Lane Equivalent Distance (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 45.310				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 45.114				
Pad Elevation: 0.0 feet					Heavy Trucks: 45.133				
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Att'n	Berm Att'n		
Autos:	70.20	2.93	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-12.43	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-7.46	0.56	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.3	68.6	65.6	72.9	73.2
Medium Trucks:	67.9	66.3	59.0	59.8	67.7	67.8
Heavy Trucks:	77.3	75.3	68.5	70.7	77.9	78.0
Vehicle Noise:	78.9	76.9	71.0	72.1	79.4	79.6

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	220	474	1,021	2,200
CNEL:	226	486	1,048	2,258

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Riverside Av. Road Segment: s/o Jurupa Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		33,946 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		3,395 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		55 mph							
Near/Far Lane Distance:		52 feet							
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6% 89.19%
Barrier Type (0=Wall, 1=Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0% 2.60%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%	4.0%	19.5% 8.21%
Centerline Dist. to Observer:		52.0 feet							
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet			Autos:		0.000		
Pad Elevation:		0.0 feet			Medium Trucks:		2.297		
Road Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees			Autos:		45.310		
Right View:		90.0 degrees			Medium Trucks:		45.114		
					Heavy Trucks:		45.133		
FHWA Noise Model Calculations									
VehicleType	REML	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		71.78	2.10	0.54	-1.20	-4.66	0.000	0.000	
Medium Trucks:		82.40	-13.25	0.57	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		86.40	-8.26	0.56	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:		73.2	71.1	67.5	66.4	73.7	74.0		
Medium Trucks:		68.5	66.9	59.6	60.4	68.3	68.4		
Heavy Trucks:		77.5	75.5	68.7	70.9	78.1	78.2		
Vehicle Noise:		79.3	77.3	71.5	72.5	79.8	79.9		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				233	502	1,081	2,329		
CNEL:				239	515	1,110	2,391		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL															
Scenario: Existing With Alt 1 Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.				Project Name: Agua Mansa Job Number: 11215											
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS											
Highway Data				Site Conditions (Hard = 10, Soft = 15)											
Average Daily Traffic (Adt):		18,148 vehicles		Autos:		15									
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15									
Peak Hour Volume:		1,815 vehicles		Heavy Trucks (3+ Axles):		15									
Vehicle Speed:		40 mph		Vehicle Mix											
Near/Far Lane Distance:		52 feet		Vehicle Type											
Site Data				Day		Evening		Night		Daily					
				Autos:		73.2%		8.1%		18.6%		89.57%			
				Medium Trucks:		82.2%		3.9%		14.0%		2.55%			
				Heavy Trucks:		76.5%		4.0%		19.5%		7.88%			
				Noise Source Elevations (in feet)		Autos:		0.000							
Barrier Height:		0.0 feet		Medium Trucks:		2.297									
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		8.004		Grade Adjustment: 0.0							
Centerline Dist. to Barrier:		52.0 feet		Lane Equivalent Distance (in feet)		Autos:		45.310							
Centerline Dist. to Observer:		52.0 feet				Medium Trucks:		45.114							
Barrier Distance to Observer:		0.0 feet				Heavy Trucks:		45.133							
Observer Height (Above Pad):		5.0 feet													
Pad Elevation:		0.0 feet													
Road Elevation:		0.0 feet													
Road Grade:		0.0%													
Left View:		-90.0 degrees													
Right View:		90.0 degrees													
FHWA Noise Model Calculations															
Vehicle Type		REMEL		Traffic Flow		Distance		Finite Road		Fresnel		Barrier Atten		Berm Atten	
Autos:		66.51		0.78		0.54		-1.20		-4.66		0.000		0.000	
Medium Trucks:		77.72		-14.68		0.57		-1.20		-4.87		0.000		0.000	
Heavy Trucks:		82.99		-9.77		0.56		-1.20		-5.41		0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)															
Vehicle Type		Leq Peak Hour		Leq Day		Leq Evening		Leq Night		Ldn		CNEL			
Autos:		66.6		64.5		61.0		59.8		67.1		67.4			
Medium Trucks:		62.4		60.8		53.5		54.3		62.1		62.3			
Heavy Trucks:		72.6		70.6		63.8		66.0		73.2		73.3			
Vehicle Noise:		73.9		71.9		65.9		67.1		74.4		74.6			
Centerline Distance to Noise Contour (in feet)															
						70 dBA		65 dBA		60 dBA		55 dBA			
Ldn:						102		221		475		1,024			
CNEL:						105		226		487		1,050			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,918 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,292 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 52.0 feet					Daily				
Centerline Dist. to Observer: 52.0 feet					Autos: 73.2% 8.1% 18.6% 89.72%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.52%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.76%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.69	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-11.32	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	65.2	63.0	59.5	58.3	65.6		65.9		
Medium Trucks:	60.9	59.2	52.0	52.8	60.6		60.8		
Heavy Trucks:	71.0	69.1	62.3	64.4	71.6		71.8		
Vehicle Noise:	72.4	70.4	64.4	65.6	72.9		73.0		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				81	174	376	809		
CNEL:				83	179	385	830		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1 Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 11,181 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,118 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph					Vehicle Mix					
Near/Far Lane Distance: 48 feet										
Site Data					Vehicle Type		Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 90.10%					
					Medium Trucks: 82.2% 3.9% 14.0% 2.45%					
					Heavy Trucks: 76.5% 4.0% 19.5% 7.45%					
					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 46.400					
Medium Trucks: 46.209										
Heavy Trucks: 46.228										
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-2.26	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	81.00	-17.92	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	85.38	-13.09	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	67.1	65.0	61.5	60.3	67.6	67.9				
Medium Trucks:	62.3	60.6	53.4	54.2	62.0	62.2				
Heavy Trucks:	71.5	69.5	62.7	64.9	72.1	72.2				
Vehicle Noise:	73.2	71.2	65.4	66.4	73.7	73.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			92	198	427	921				
CNEL:			95	204	439	945				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,067 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,007 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.95%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.49%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.56%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.73	0.38	-1.20	-4.66	0.000		0.000	
Medium Trucks:	81.00	-18.31	0.41	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	85.38	-13.48	0.41	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	66.7	64.5	61.0	59.8	67.1		67.4		
Medium Trucks:	61.9	60.3	53.0	53.8	61.6		61.8		
Heavy Trucks:	71.1	69.1	62.3	64.5	71.7		71.8		
Vehicle Noise:	72.8	70.8	65.0	66.0	73.3		73.5		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				86	186	401	865		
CNEL:				89	191	412	888		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		6,664 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		666 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet		Vehicle Mix					
Site Data				Vehicle Type	Day	Evening	Night	Daily	
				Autos:		73.2%	8.1%	18.6%	88.92%
				Medium Trucks:		82.2%	3.9%	14.0%	2.65%
				Heavy Trucks:		76.5%	4.0%	19.5%	8.44%
				Noise Source Elevations (in feet)					
Barrier Height:		0.0 feet		Autos:		0.000			
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		2.297			
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		8.004			
Centerline Dist. to Observer:		44.0 feet		Grade Adjustment: 0.0					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-3.60	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	77.72	-18.86	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-13.83	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.0	60.8	57.3	56.1	63.5	63.7			
Medium Trucks:	59.0	57.3	50.0	50.9	58.7	58.9			
Heavy Trucks:	69.3	67.3	60.5	62.6	69.9	70.0			
Vehicle Noise:	70.5	68.5	62.5	63.7	71.0	71.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	239	516			
CNEL:			53	114	245	528			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1 Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,284 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		528 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	90.25%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.41%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.34%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		46.400			
Left View:		-90.0 degrees			Medium Trucks:		46.209			
Right View:		90.0 degrees			Heavy Trucks:		46.228			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.54	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	77.72	-20.27	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.44	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.2	59.0	55.5	54.3	61.6	61.9				
Medium Trucks:	56.7	55.0	47.7	48.6	56.4	56.5				
Heavy Trucks:	66.8	64.8	58.0	60.1	67.4	67.5				
Vehicle Noise:	68.1	66.2	60.2	61.4	68.7	68.8				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				42	91	196	423			
CNEL:				43	93	201	434			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,020 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 402 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 90.03%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.47%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.50%				
					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -5.74 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 77.72 -21.36 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -16.53 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 60.8 58.7 55.2 54.0 61.3 61.6									
Medium Trucks: 56.5 54.8 47.5 48.4 56.2 56.4									
Heavy Trucks: 66.6 64.6 57.8 59.9 67.2 67.3									
Vehicle Noise: 67.9 66.0 60.0 61.2 68.4 68.6									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				35	75	161	347		
CNEL:				36	77	165	355		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 6,301 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 630 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.58% Medium Trucks: 82.2% 3.9% 14.0% 2.31% Heavy Trucks: 76.5% 4.0% 19.5% 8.11%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-4.32	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-20.21	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-14.76	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.2	62.1	58.5	57.4	64.7	65.0			
Medium Trucks:	59.4	57.7	50.4	51.3	59.1	59.2			
Heavy Trucks:	69.6	67.6	60.8	63.0	70.2	70.3			
Vehicle Noise:	71.0	69.0	63.1	64.3	71.5	71.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				56	120	259	557		
CNEL:				57	123	265	571		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,849 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		585 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph							
Near/Far Lane Distance:		36 feet		Vehicle Mix					
				Vehicle Type	Day	Evening	Night	Daily	
				Autos:		73.2%	8.1%	18.6%	85.92%
				Medium Trucks:		82.2%	3.9%	14.0%	2.97%
				Heavy Trucks:		76.5%	4.0%	19.5%	11.12%
Site Data				Noise Source Elevations (in feet)					
Barrier Height:		0.0 feet		Autos:		0.000			
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		2.297			
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Centerline Dist. to Observer:		44.0 feet							
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
				Lane Equivalent Distance (in feet)					
				Autos:		40.460			
				Medium Trucks:		40.241			
				Heavy Trucks:		40.262			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-4.83	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-19.44	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-13.71	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.7	61.6	58.0	56.9	64.2	64.5			
Medium Trucks:	60.1	58.5	51.2	52.0	59.8	60.0			
Heavy Trucks:	70.7	68.7	61.9	64.0	71.3	71.4			
Vehicle Noise:	71.8	69.8	63.6	65.0	72.3	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			63	135	290	625			
CNEL:			64	138	297	641			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		4,257 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		426 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph								
Near/Far Lane Distance:		36 feet			Vehicle Mix					
Site Data					VehicleType		Day	Evening	Night	Daily
					Autos:		73.2%	8.1%	18.6%	93.05%
					Medium Trucks:		82.2%	3.9%	14.0%	1.72%
					Heavy Trucks:		76.5%	4.0%	19.5%	5.23%
					Noise Source Elevations (in feet)					
Barrier Height:		0.0 feet			Autos:		0.000			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		2.297			
Centerline Dist. to Barrier:		44.0 feet			Heavy Trucks:		8.004			
Centerline Dist. to Observer:		44.0 feet			Grade Adjustment:		0.0			
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-5.86	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:	79.45	-23.19	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-18.36	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.5	57.0	55.8	63.2	63.4				
Medium Trucks:	56.4	54.7	47.5	48.3	56.1	56.3				
Heavy Trucks:	66.0	64.0	57.2	59.4	66.6	66.7				
Vehicle Noise:	68.0	66.0	60.4	61.2	68.5	68.7				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			35	75	162	348				
CNEL:			36	77	166	358				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 11,509 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,151 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph					Vehicle Mix					
Near/Far Lane Distance: 36 feet										
Site Data					Vehicle Type		Day	Evening	Night	Daily
Barrier Height: 0.0 feet					Autos:		73.2%	8.1%	18.6%	88.49%
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks:		82.2%	3.9%	14.0%	2.70%
Centerline Dist. to Barrier: 50.0 feet					Heavy Trucks:		76.5%	4.0%	19.5%	8.81%
Centerline Dist. to Observer: 50.0 feet					Noise Source Elevations (in feet)					
Barrier Distance to Observer: 0.0 feet										
Observer Height (Above Pad): 5.0 feet					Autos:		0.000			
Pad Elevation: 0.0 feet					Medium Trucks:		2.297			
Road Elevation: 0.0 feet					Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Road Grade: 0.0%					Lane Equivalent Distance (in feet)					
Left View: -90.0 degrees										
Right View: 90.0 degrees					Autos:		46.915			
					Medium Trucks:		46.726			
					Heavy Trucks:		46.744			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-1.76	0.31	-1.20	-4.65	0.000	0.000			
Medium Trucks:	79.45	-16.91	0.34	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-11.78	0.34	-1.20	-5.43	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.8	63.7	60.1	59.0	66.3	66.6				
Medium Trucks:	61.7	60.0	52.8	53.6	61.4	61.6				
Heavy Trucks:	71.6	69.7	62.9	65.0	72.2	72.3				
Vehicle Noise:	73.0	71.0	65.0	66.2	73.5	73.6				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			85	184	396	853				
CNEL:			87	188	406	875				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,378 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,138 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 36 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 88.36%				
Barrier Height: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.73%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 76.5% 4.0% 19.5% 8.91%				
Centerline Dist. to Barrier: 50.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet				Autos: 46.915				
Road Grade: 0.0%				Medium Trucks: 46.726				
Left View: -90.0 degrees				Heavy Trucks: 46.744				
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-1.81	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-16.91	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-11.78	0.34	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	65.8	63.6	60.1	58.9	66.2	66.5		
Medium Trucks:	61.7	60.0	52.8	53.6	61.4	61.6		
Heavy Trucks:	71.6	69.7	62.9	65.0	72.2	72.3		
Vehicle Noise:	72.9	71.0	65.0	66.2	73.5	73.6		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			85	183	395	852		
CNEL:			87	188	405	873		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		12,730 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		1,273 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		45 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.47%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.72%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.81%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
FHWA Noise Model Calculations				Autos: 46.400			
				Medium Trucks: 46.209			
				Heavy Trucks: 46.228			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.32	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-16.44	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-11.34	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.2	60.6	59.5	66.8	67.1
Medium Trucks:	62.2	60.6	53.3	54.1	62.0	62.1
Heavy Trucks:	72.1	70.2	63.4	65.5	72.7	72.9
Vehicle Noise:	73.5	71.5	65.5	66.7	74.0	74.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		96	207	445	960	
CNEL:		98	212	457	984	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,282 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,228 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph				Vehicle Mix				
Near/Far Lane Distance: 48 feet								
Site Data				VehicleType				
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 89.05%				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.64%				
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 8.31%				
Centerline Dist. to Observer: 52.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 46.400				
Left View: -90.0 degrees				Medium Trucks: 46.209				
Right View: 90.0 degrees				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-1.45	0.38	-1.20	-4.66	0.000		0.000
Medium Trucks:	79.45	-16.73	0.41	-1.20	-4.87	0.000		0.000
Heavy Trucks:	84.25	-11.75	0.41	-1.20	-5.41	0.000		0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.2	64.1	60.5	59.4	66.7	66.9
Medium Trucks:	61.9	60.3	53.0	53.8	61.7	61.8
Heavy Trucks:	71.7	69.8	63.0	65.1	72.3	72.4
Vehicle Noise:	73.1	71.2	65.2	66.4	73.6	73.8
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		91	196	422	910	
CNEL:		93	201	433	933	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		16,271 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		1,627 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		45 mph		Vehicle Mix			
Near/Far Lane Distance:		82 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 87.91%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.77%	
Centerline Dist. to Barrier:		60.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 9.31%	
Centerline Dist. to Observer:		60.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		-90.0 degrees		Autos:		44.091	
				Medium Trucks:		43.890	
				Heavy Trucks:		43.909	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.28	0.72	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.30	0.75	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-10.03	0.74	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	65.5	62.0	60.9	68.2	68.4
Medium Trucks:	63.7	62.1	54.8	55.6	63.4	63.6
Heavy Trucks:	73.8	71.8	65.0	67.1	74.4	74.5
Vehicle Noise:	75.1	73.1	67.0	68.3	75.6	75.7
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		141	304	655	1,412	
CNEL:		145	312	672	1,447	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,917 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		792 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		82 feet							
Site Data									
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	88.86%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.63%
Centerline Dist. to Barrier:		60.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.51%
Centerline Dist. to Observer:		60.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		44.091			
				Medium Trucks:		43.890			
				Heavy Trucks:		43.909			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.36	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-18.66	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-13.55	0.74	-1.20	-5.34	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.6	62.5	58.9	57.8	65.1	65.4
Medium Trucks:	60.3	58.7	51.4	52.2	60.1	60.2
Heavy Trucks:	70.2	68.3	61.5	63.6	70.8	71.0
Vehicle Noise:	71.6	69.7	63.7	64.9	72.1	72.3
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		83	180	387	834	
CNEL:		86	184	397	856	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1 Road Name: 20th St. Road Segment: e/o Rubidoux Bl.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,696 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,370 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 36 feet				Vehicle Mix				
				Vehicle Type	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 88.26%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.72%				
				Heavy Trucks: 76.5% 4.0% 19.5% 9.03%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 50.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 50.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
				Lane Equivalent Distance (in feet)				
				Autos: 46.915				
				Medium Trucks: 46.726				
				Heavy Trucks: 46.744				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	1.37	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-13.75	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-8.54	0.34	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.9	66.8	63.3	62.1	69.4	69.7		
Medium Trucks:	64.8	63.2	55.9	56.7	64.6	64.7		
Heavy Trucks:	74.9	72.9	66.1	68.2	75.5	75.6		
Vehicle Noise:	76.2	74.2	68.2	69.4	76.7	76.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			140	301	649	1,398		
CNEL:			143	309	665	1,433		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,565 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,556 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2%				
Centerline Dist. to Barrier: 50.0 feet					Heavy Trucks: 76.5%				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%									
Left View: -90.0 degrees					Autos: 46.915				
Right View: 90.0 degrees					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.67	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.29	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-8.00	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.2	67.1	63.6	62.4	69.7		70.0		
Medium Trucks:	65.3	63.7	56.4	57.2	65.0		65.2		
Heavy Trucks:	75.4	73.4	66.6	68.8	76.0		76.1		
Vehicle Noise:	76.7	74.7	68.6	69.9	77.2		77.3		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				151	325	699	1,507		
CNEL:				154	333	717	1,544		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,329 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,933 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.03%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.89%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 10.07%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.42	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-14.36	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-8.94	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.0	65.8	62.3	61.2	68.5	68.7			
Medium Trucks:	64.2	62.6	55.3	56.1	64.0	64.1			
Heavy Trucks:	74.4	72.5	65.7	67.8	75.0	75.2			
Vehicle Noise:	75.7	73.7	67.6	68.9	76.2	76.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				129	278	599	1,291		
CNEL:				132	285	614	1,323		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1 Road Name: Market St. Road Segment: e/o Rivera St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,901 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,990 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	88.01%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.76%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	9.22%
Centerline Dist. to Observer:		50.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004			
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		44.147			
				Medium Trucks:		43.947			
				Heavy Trucks:		43.966			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.36	0.71	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-12.67	0.74	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.43	0.73	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.3	68.2	64.7	63.5	70.8	71.1			
Medium Trucks:	66.3	64.7	57.4	58.2	66.1	66.2			
Heavy Trucks:	76.4	74.4	67.6	69.7	77.0	77.1			
Vehicle Noise:	77.7	75.7	69.7	70.9	78.2	78.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			175	378	814	1,754			
CNEL:			180	387	835	1,799			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,822 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,082 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.84%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.66%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 52.0 feet					Grade Adjustment: 0.0				
Centerline Dist. to Observer: 52.0 feet					Lane Equivalent Distance (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 46.400				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 46.209				
Pad Elevation: 0.0 feet					Heavy Trucks: 46.228				
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	4.32	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-11.23	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-6.37	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.0	67.9	64.3	63.2	70.5	70.8			
Medium Trucks:	65.7	64.0	56.8	57.6	65.4	65.6			
Heavy Trucks:	75.8	73.9	67.1	69.2	76.4	76.6			
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				169	364	785	1,691		
CNEL:				173	374	805	1,734		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 29,346 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,935 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 52.0 feet					Daily				
Centerline Dist. to Observer: 52.0 feet					Autos: 73.2% 8.1% 18.6% 89.07%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.61%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.32%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Barrier Atten		
Autos:	66.51	2.85	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.48	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.45	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.5	66.4	62.9	61.7	69.0	69.3			
Medium Trucks:	64.4	62.8	55.5	56.4	64.2	64.3			
Heavy Trucks:	74.8	72.8	66.0	68.1	75.4	75.5			
Vehicle Noise:	76.0	74.0	68.0	69.2	76.5	76.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				142	305	657	1,416		
CNEL:				145	313	673	1,451		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cedar Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,285 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,529 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2%				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5%				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%									
Left View: -90.0 degrees					Autos: 46.400				
Right View: 90.0 degrees					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.19	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-13.11	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-8.04	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.9	65.7	62.2	61.0	68.4	68.6			
Medium Trucks:	63.8	62.2	54.9	55.7	63.5	63.7			
Heavy Trucks:	74.2	72.2	65.4	67.5	74.8	74.9			
Vehicle Noise:	75.4	73.4	67.4	68.6	75.9	76.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			129	278	599	1,290			
CNEL:			132	285	614	1,322			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,820 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,582 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.72%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.62%				
Centerline Dist. to Barrier: 52.0 feet									
Centerline Dist. to Observer: 52.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet									
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 46.400				
Right View: 90.0 degrees					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.27	0.38	-1.20	-4.66	0.000		0.000	
Medium Trucks:	77.72	-12.97	0.41	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	82.99	-7.85	0.41	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	68.0	65.8	62.3	61.1	68.4		68.7		
Medium Trucks:	64.0	62.3	55.0	55.9	63.7		63.8		
Heavy Trucks:	74.4	72.4	65.6	67.7	75.0		75.1		
Vehicle Noise:	75.6	73.6	67.5	68.8	76.1		76.2		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				132	285	615	1,324		
CNEL:				136	292	630	1,357		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cedar Av. Road Segment: s/o Jurupa Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,181 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,318 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 88.68%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.68%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
Heavy Trucks: 46.228									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.83	0.38	-1.20	-4.66	0.000		0.000	
Medium Trucks:	81.00	-14.41	0.41	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	85.38	-9.26	0.41	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.2	68.1	64.5	63.4	70.7	71.0			
Medium Trucks:	65.8	64.2	56.9	57.7	65.5	65.7			
Heavy Trucks:	75.3	73.4	66.6	68.7	75.9	76.1			
Vehicle Noise:	76.8	74.9	69.0	70.1	77.4	77.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				161	347	747	1,610		
CNEL:				165	356	767	1,652		
Thursday, October 18, 2018									

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,178 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,518 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 87.64%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.79%				
					Heavy Trucks: 76.5% 4.0% 19.5% 9.57%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 1.14 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -13.83 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -8.48 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.5 67.4 63.9 62.7 70.0 70.3									
Medium Trucks: 65.4 63.7 56.5 57.3 65.1 65.3									
Heavy Trucks: 75.1 73.1 66.3 68.5 75.7 75.8									
Vehicle Noise: 76.5 74.5 68.6 69.7 77.0 77.2									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			173	374	805	1,735			
CNEL:			178	383	826	1,779			

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o Production Circle					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,246 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,525 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.79%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.76%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 9.45%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	RECEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.16	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.87	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.52	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.5	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.3	63.7	56.4	57.2	65.1	65.2			
Heavy Trucks:	75.1	73.1	66.3	68.4	75.7	75.8			
Vehicle Noise:	76.5	74.5	68.5	69.7	77.0	77.2			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	173		372		802		1,727		
CNEL:	177		382		822		1,771		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,871 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,987 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 88.22%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.72%				
					Heavy Trucks: 76.5% 4.0% 19.5% 9.06%				
Site Data					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet					Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 2.297				
Centerline Dist. to Barrier: 59.0 feet					Heavy Trucks: 8.004				
Centerline Dist. to Observer: 59.0 feet					Grade Adjustment: 0.0				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet					Lane Equivalent Distance (in feet)				
Pad Elevation: 0.0 feet					Autos: 54.129				
Road Elevation: 0.0 feet					Medium Trucks: 53.966				
Road Grade: 0.0%					Heavy Trucks: 53.982				
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 0.14 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -14.97 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -9.74 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.5 66.4 62.9 61.7 69.0 69.3									
Medium Trucks: 64.2 62.6 55.3 56.1 64.0 64.1									
Heavy Trucks: 73.8 71.9 65.1 67.2 74.4 74.6									
Vehicle Noise: 75.3 73.3 67.4 68.5 75.8 76.0									
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	144		311		669		1,442		
CNEL:	148		319		687		1,479		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 24th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		20,815 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,082 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet		VehicleType			
Site Data				Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.30%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.71%	
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.99%	
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet		Autos:		0.000	
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297	
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Elevation:		0.0 feet		Grade Adjustment: 0.0			
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees		Autos:		54.129	
Right View:		90.0 degrees		Medium Trucks:		53.966	
				Heavy Trucks:		53.982	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.35	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.78	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.57	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.6	63.1	61.9	69.2	69.5
Medium Trucks:	64.4	62.8	55.5	56.3	64.2	64.3
Heavy Trucks:	74.0	72.0	65.2	67.4	74.6	74.7
Vehicle Noise:	75.5	73.5	67.6	68.7	76.0	76.2
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	148	319	688	1,482		
CNEL:	152	328	706	1,520		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 26th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 21,382 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,138 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
Site Data				Day			
Barrier Height: 0.0 feet				Evening			
Barrier Type (0-Wall, 1-Berm): 0.0				Night			
Centerline Dist. to Barrier: 59.0 feet				Daily			
Centerline Dist. to Observer: 59.0 feet				Autos: 73.2% 8.1% 18.6% 88.34%			
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.70%			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 8.95%			
Pad Elevation: 0.0 feet				Noise Source Elevations (in feet)			
Road Elevation: 0.0 feet				Autos: 0.000			
Road Grade: 0.0%				Medium Trucks: 2.297			
Left View: -90.0 degrees				Heavy Trucks: 8.004			
Right View: 90.0 degrees				Grade Adjustment: 0.0			
FHWA Noise Model Calculations				Lane Equivalent Distance (in feet)			
Autos: 54.129				Autos: 54.129			
Medium Trucks: 53.966				Medium Trucks: 53.966			
Heavy Trucks: 53.982				Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.67	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.47	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	66.7	63.2	62.0	69.3	69.6
Medium Trucks:	64.5	62.9	55.6	56.4	64.3	64.4
Heavy Trucks:	74.1	72.1	65.3	67.5	74.7	74.8
Vehicle Noise:	75.6	73.6	67.7	68.8	76.1	76.3
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	151	324	699	1,506		
CNEL:	154	333	717	1,545		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 28th St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		22,868 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,287 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType					
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	88.43%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.69%
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.87%
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		54.129			
				Medium Trucks:		53.966			
				Heavy Trucks:		53.982			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.76	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.40	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.22	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.0	63.5	62.3	69.6	69.9
Medium Trucks:	64.8	63.2	55.9	56.7	64.5	64.7
Heavy Trucks:	74.4	72.4	65.6	67.7	75.0	75.1
Vehicle Noise:	75.9	73.9	68.0	69.1	76.4	76.5
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	157	338	728	1,568		
CNEL:	161	347	747	1,608		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,340 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,434 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph				Vehicle Mix				
Near/Far Lane Distance: 48 feet								
Site Data				VehicleType				
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 89.82%				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.69%				
Centerline Dist. to Observer: 59.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 54.129				
Left View: -90.0 degrees				Medium Trucks: 53.966				
Right View: 90.0 degrees				Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.10	-0.62	-1.20	-4.69	0.000		0.000
Medium Trucks:	81.00	-14.45	-0.60	-1.20	-4.88	0.000		0.000
Heavy Trucks:	85.38	-9.58	-0.60	-1.20	-5.35	0.000		0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.3	63.8	62.6	70.0	70.2
Medium Trucks:	64.7	63.1	55.8	56.7	64.5	64.6
Heavy Trucks:	74.0	72.0	65.2	67.4	74.6	74.7
Vehicle Noise:	75.7	73.7	67.9	68.9	76.2	76.4
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	153	329	708	1,526		
CNEL:	157	337	727	1,566		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 34th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 18,671 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 1,867 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet							
Site Data				VehicleType			
Barrier Height: 0.0 feet				Autos: 73.2%			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2%			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 76.5%			
Centerline Dist. to Observer: 59.0 feet				Day			
Barrier Distance to Observer: 0.0 feet				Evening			
Observer Height (Above Pad): 5.0 feet				Night			
Pad Elevation: 0.0 feet				Daily			
Road Elevation: 0.0 feet				Autos: 0.000			
Road Grade: 0.0%				Medium Trucks: 2.297			
Left View: -90.0 degrees				Heavy Trucks: 8.004			
Right View: 90.0 degrees				Grade Adjustment: 0.0			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.05	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.61	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.71	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.2	62.7	61.5	68.8	69.1
Medium Trucks:	63.6	61.9	54.7	55.5	63.3	63.5
Heavy Trucks:	72.9	70.9	64.1	66.2	73.5	73.6
Vehicle Noise:	74.5	72.6	66.7	67.8	75.0	75.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		128	276	594	1,280	
CNEL:		131	283	610	1,314	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		3,215 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		322 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		11 feet							
Site Data				VehicleType					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 30.0 feet Centerline Dist. to Observer: 30.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos:		73.2%	8.1%	18.6%	90.80%
				Medium Trucks:		82.2%	3.9%	14.0%	2.28%
				Heavy Trucks:		76.5%	4.0%	19.5%	6.92%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Medium Trucks:		2.297							
Heavy Trucks:		8.004							
Grade Adjustment:		0.0							
Lane Equivalent Distance (in feet)									
Autos:		29.912							
Medium Trucks:		29.615							
Heavy Trucks:		29.644							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-6.67	3.24	-1.20	-4.49	0.000	0.000		
Medium Trucks:	77.72	-22.68	3.31	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	82.99	-17.85	3.30	-1.20	-5.77	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	59.7	56.2	55.0	62.4	62.6
Medium Trucks:	57.1	55.5	48.2	49.1	56.9	57.0
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0
Vehicle Noise:	68.7	66.7	60.8	61.9	69.2	69.4
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		27	57	123	265	
CNEL:		27	59	126	272	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rivera St. Road Segment: n/o Market St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		8,797 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		880 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		30 mph		Vehicle Mix					
Near/Far Lane Distance:		12 feet		VehicleType		Day	Evening	Night	Daily
Site Data				Autos:		73.2%	8.1%	18.6%	90.02%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.47%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	7.51%
Centerline Dist. to Barrier:		33.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		33.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		32.833			
Road Grade:		0.0%		Medium Trucks:		32.562			
Left View:		-90.0 degrees		Heavy Trucks:		32.589			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	-1.09	2.64	-1.20	-4.52	0.000	0.000		
Medium Trucks:	73.48	-16.71	2.69	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	79.92	-11.88	2.69	-1.20	-5.69	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.0	56.4	55.3	62.6	62.8
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.2
Heavy Trucks:	69.5	67.6	60.8	62.9	70.1	70.3
Vehicle Noise:	70.5	68.6	62.4	63.8	71.1	71.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		39	84	180	388	
CNEL:		40	86	184	397	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1A Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,978 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,798 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.80%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.51%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.69%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.772 Medium Trucks: 54.610 Heavy Trucks: 54.626				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	4.00	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:	77.72	-11.53	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	82.99	-6.67	-0.68	-1.20	-5.34	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.6	66.5	62.9	61.8	69.1	69.4
Medium Trucks:	64.3	62.7	55.4	56.2	64.0	64.2
Heavy Trucks:	74.4	72.5	65.7	67.8	75.0	75.2
Vehicle Noise:	75.8	73.8	67.8	69.0	76.3	76.5
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		158	340	732	1,577	
CNEL:		162	348	750	1,616	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 39,927 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,993 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 50 feet									
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet				VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0				Autos:		73.2%	8.1%	18.6%	89.28%
Centerline Dist. to Barrier: 60.0 feet				Medium Trucks:		82.2%	3.9%	14.0%	2.59%
Centerline Dist. to Observer: 60.0 feet				Heavy Trucks:		76.5%	4.0%	19.5%	8.13%
Barrier Distance to Observer: 0.0 feet				Noise Source Elevations (in feet)					
Observer Height (Above Pad): 5.0 feet				Autos:		0.000			
Pad Elevation: 0.0 feet				Medium Trucks:		2.297			
Road Elevation: 0.0 feet				Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Road Grade: 0.0%				Lane Equivalent Distance (in feet)					
Left View: -90.0 degrees				Autos:		54.772			
Right View: 90.0 degrees				Medium Trucks:		54.610			
				Heavy Trucks:		54.626			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.23	-0.70	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.15	-0.68	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.18	-0.68	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	71.5	69.4	65.9	64.7		72.0		72.3	
Medium Trucks:	67.0	65.3	58.1	58.9		66.7		66.9	
Heavy Trucks:	76.3	74.4	67.6	69.7		76.9		77.1	
Vehicle Noise:	77.9	76.0	70.1	71.1		78.4		78.6	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				219	472	1,017	2,191		
CNEL:				225	484	1,044	2,248		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Riverside Av. Road Segment: s/o Slower Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,295 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,729 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 52.0 feet					Daily				
Centerline Dist. to Observer: 52.0 feet					Autos: 73.2% 8.1% 18.6% 89.24%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.60%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.17%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:		70.20	2.93	0.54	-1.20	-4.66	0.000	0.000	
Medium Trucks:		81.00	-12.43	0.57	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		85.38	-7.46	0.56	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType		Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:		72.5	70.3	66.8	65.6	72.9	73.2		
Medium Trucks:		67.9	66.3	59.0	59.8	67.7	67.8		
Heavy Trucks:		77.3	75.3	68.5	70.7	77.9	78.0		
Vehicle Noise:		78.9	76.9	71.0	72.1	79.4	79.6		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				220	474	1,021	2,200		
CNEL:				226	486	1,048	2,258		
Thursday, October 18, 2018									

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1A Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		29,221 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,922 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		55 mph					
Near/Far Lane Distance:		52 feet					
Site Data				Vehicle Mix			
Barrier Height:		0.0 feet		Autos:		73.2%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		8.1%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		18.6%	
Centerline Dist. to Observer:		52.0 feet				89.07%	
Barrier Distance to Observer:		0.0 feet				2.62%	
Observer Height (Above Pad):		5.0 feet				8.31%	
Pad Elevation:		0.0 feet					
Road Elevation:		0.0 feet					
Road Grade:		0.0%					
Left View:		-90.0 degrees					
Right View:		90.0 degrees					
				Noise Source Elevations (in feet)			
				Autos:		0.000	
				Medium Trucks:		2.297	
				Heavy Trucks:		8.004	
				Grade Adjustment:		0.0	
				Lane Equivalent Distance (in feet)			
				Autos:		45.310	
				Medium Trucks:		45.114	
				Heavy Trucks:		45.133	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.45	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	82.40	-13.87	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	86.40	-8.86	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.6	70.4	66.9	65.7	73.0	73.3	
Medium Trucks:	67.9	66.3	59.0	59.8	67.6	67.8	
Heavy Trucks:	76.9	74.9	68.1	70.3	77.5	77.6	
Vehicle Noise:	78.6	76.7	70.9	71.9	79.2	79.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			212	457	984	2,119	
CNEL:			218	469	1,010	2,176	

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1A Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 33,946 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,395 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15						
Site Data				Vehicle Mix						
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily		
				Autos:		73.2%	8.1%	18.6%	89.19%	
				Medium Trucks:		82.2%	3.9%	14.0%	2.60%	
				Heavy Trucks:		76.5%	4.0%	19.5%	8.21%	
				Noise Source Elevations (in feet)						
				Autos:		0.000				
				Medium Trucks:		2.297				
				Heavy Trucks:		8.004		Grade Adjustment: 0.0		
				Lane Equivalent Distance (in feet)						
				Autos:		45.310				
				Medium Trucks:		45.114				
				Heavy Trucks:		45.133				
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	71.78	2.10	0.54	-1.20	-4.66	0.000	0.000			
Medium Trucks:	82.40	-13.25	0.57	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	86.40	-8.26	0.56	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	73.2	71.1	67.5	66.4	73.7	74.0				
Medium Trucks:	68.5	66.9	59.6	60.4	68.3	68.4				
Heavy Trucks:	77.5	75.5	68.7	70.9	78.1	78.2				
Vehicle Noise:	79.3	77.3	71.5	72.5	79.8	79.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			233	502	1,081	2,329				
CNEL:			239	515	1,110	2,391				

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1A Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,148 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,815 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph					Vehicle Mix					
Near/Far Lane Distance: 52 feet					VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.57%					
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.55%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.88%					
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000					
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet					Autos: 45.310					
Road Grade: 0.0%					Medium Trucks: 45.114					
Left View: -90.0 degrees					Heavy Trucks: 45.133					
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos: 66.51 0.78 0.54 -1.20 -4.66 0.000 0.000										
Medium Trucks: 77.72 -14.68 0.57 -1.20 -4.87 0.000 0.000										
Heavy Trucks: 82.99 -9.77 0.56 -1.20 -5.41 0.000 0.000										
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos: 66.6 64.5 61.0 59.8 67.1 67.4										
Medium Trucks: 62.4 60.8 53.5 54.3 62.1 62.3										
Heavy Trucks: 72.6 70.6 63.8 66.0 73.2 73.3										
Vehicle Noise: 73.9 71.9 65.9 67.1 74.4 74.6										
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				102	221	475	1,024			
CNEL:				105	226	487	1,050			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,918 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,292 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.72%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.52%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.76%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 45.310				
Road Grade: 0.0%					Medium Trucks: 45.114				
Left View: -90.0 degrees					Heavy Trucks: 45.133				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -0.69 0.54 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -16.20 0.57 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -11.32 0.56 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 65.2 63.0 59.5 58.3 65.6 65.9									
Medium Trucks: 60.9 59.2 52.0 52.8 60.6 60.8									
Heavy Trucks: 71.0 69.1 62.3 64.4 71.6 71.8									
Vehicle Noise: 72.4 70.4 64.4 65.6 72.9 73.0									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				81	174	376	809		
CNEL:				83	179	385	830		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1A Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		11,181 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,118 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	90.10%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.45%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.45%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		46.400			
					Medium Trucks:		46.209			
					Heavy Trucks:		46.228			
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu			
Autos:		70.20	-2.26	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:		81.00	-17.92	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:		85.38	-13.09	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:		67.1	65.0	61.5	60.3	67.6	67.9			
Medium Trucks:		62.3	60.6	53.4	54.2	62.0	62.2			
Heavy Trucks:		71.5	69.5	62.7	64.9	72.1	72.2			
Vehicle Noise:		73.2	71.2	65.4	66.4	73.7	73.9			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				92	198	427	921			
CNEL:				95	204	439	945			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,067 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,007 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.95%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.49%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.56%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 -2.73 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 81.00 -18.31 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 85.38 -13.48 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 66.7 64.5 61.0 59.8 67.1 67.4									
Medium Trucks: 61.9 60.3 53.0 53.8 61.6 61.8									
Heavy Trucks: 71.1 69.1 62.3 64.5 71.7 71.8									
Vehicle Noise: 72.8 70.8 65.0 66.0 73.3 73.5									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			86	186	401	865			
CNEL:			89	191	412	888			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		6,664 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		666 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet		Vehicle Mix					
				Vehicle Type	Day	Evening	Night	Daily	
				Autos:		73.2%	8.1%	18.6%	88.92%
				Medium Trucks:		82.2%	3.9%	14.0%	2.65%
				Heavy Trucks:		76.5%	4.0%	19.5%	8.44%
Site Data				Noise Source Elevations (in feet)					
Barrier Height:		0.0 feet		Autos:		0.000			
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		2.297			
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Centerline Dist. to Observer:		44.0 feet							
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
				Lane Equivalent Distance (in feet)					
				Autos:		40.460			
				Medium Trucks:		40.241			
				Heavy Trucks:		40.262			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	-3.60	1.28	-1.20	-4.61	0.000	0.000	
Medium Trucks:		77.72	-18.86	1.31	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		82.99	-13.83	1.31	-1.20	-5.50	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		63.0	60.8	57.3	56.1	63.5	63.7		
Medium Trucks:		59.0	57.3	50.0	50.9	58.7	58.9		
Heavy Trucks:		69.3	67.3	60.5	62.6	69.9	70.0		
Vehicle Noise:		70.5	68.5	62.5	63.7	71.0	71.2		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				52	111	239	516		
CNEL:				53	114	245	528		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: Existing With Alt 1A Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt):		5,284 vehicles			Autos:		15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15				
Peak Hour Volume:		528 vehicles			Heavy Trucks (3+ Axles):		15				
Vehicle Speed:		40 mph			Vehicle Mix						
Near/Far Lane Distance:		48 feet									
Site Data					VehicleType						
Barrier Height:		0.0 feet			Autos:		73.2%		8.1%	18.6%	90.25%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%		3.9%	14.0%	2.41%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%		4.0%	19.5%	7.34%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)						
Barrier Distance to Observer:		0.0 feet									
Observer Height (Above Pad):		5.0 feet			Autos:		0.000		Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Medium Trucks:		2.297				
Road Elevation:		0.0 feet			Heavy Trucks:		8.004				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)						
Left View:		-90.0 degrees			Autos:		46.400		Medium Trucks:		
Right View:		90.0 degrees			Medium Trucks:		46.209				
					Heavy Trucks:		46.228				
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	-4.54	0.38	-1.20	-4.66	0.000	0.000				
Medium Trucks:	77.72	-20.27	0.41	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.44	0.41	-1.20	-5.41	0.000	0.000				
Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	61.2	59.0	55.5	54.3	61.6	61.9					
Medium Trucks:	56.7	55.0	47.7	48.6	56.4	56.5					
Heavy Trucks:	66.8	64.8	58.0	60.1	67.4	67.5					
Vehicle Noise:	68.1	66.2	60.2	61.4	68.7	68.8					
Centerline Distance to Noise Contour (in feet)											
				70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:				42	91	196	423				
CNEL:				43	93	201	434				

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,020 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 402 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 90.03% Medium Trucks: 82.2% 3.9% 14.0% 2.47% Heavy Trucks: 76.5% 4.0% 19.5% 7.50%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -5.74 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 77.72 -21.36 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -16.53 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 60.8 58.7 55.2 54.0 61.3 61.6									
Medium Trucks: 56.5 54.8 47.5 48.4 56.2 56.4									
Heavy Trucks: 66.6 64.6 57.8 59.9 67.2 67.3									
Vehicle Noise: 67.9 66.0 60.0 61.2 68.4 68.6									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				35	75	161	347		
CNEL:				36	77	165	355		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		9,097 vehicles		Autos: 15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles): 15			
Peak Hour Volume:		910 vehicles		Heavy Trucks (3+ Axles): 15			
Vehicle Speed:		45 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet		VehicleType			
Site Data				Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos: 73.2% 8.1% 18.6% 82.52%			
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks: 82.2% 3.9% 14.0% 3.44%			
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks: 76.5% 4.0% 19.5% 14.05%			
Centerline Dist. to Observer:		44.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet		Autos: 0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks: 2.297			
Pad Elevation:		0.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)			
Road Grade:		0.0%		Autos: 40.460			
Left View:		-90.0 degrees		Medium Trucks: 40.241			
Right View:		90.0 degrees		Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.08	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-16.89	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-10.77	1.31	-1.20	-5.50	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	65.5	63.3	59.8	58.6	65.9	66.2	
Medium Trucks:	62.7	61.0	53.8	54.6	62.4	62.6	
Heavy Trucks:	73.6	71.6	64.8	67.0	74.2	74.3	
Vehicle Noise:	74.5	72.5	66.3	67.8	75.0	75.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			95	205	443	954	
CNEL:			98	210	453	976	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,849 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 585 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 85.92%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.97%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 11.12%				
Centerline Dist. to Barrier: 44.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 44.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 40.460				
Road Grade: 0.0%					Medium Trucks: 40.241				
Left View: -90.0 degrees					Heavy Trucks: 40.262				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-4.83	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-19.44	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-13.71	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.7	61.6	58.0	56.9	64.2	64.5			
Medium Trucks:	60.1	58.5	51.2	52.0	59.8	60.0			
Heavy Trucks:	70.7	68.7	61.9	64.0	71.3	71.4			
Vehicle Noise:	71.8	69.8	63.6	65.0	72.3	72.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				63	135	290	625		
CNEL:				64	138	297	641		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,257 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 426 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 93.05% Medium Trucks: 82.2% 3.9% 14.0% 1.72% Heavy Trucks: 76.5% 4.0% 19.5% 5.23%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-5.86	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-23.19	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-18.36	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	62.7	60.5	57.0	55.8	63.2		63.4		
Medium Trucks:	56.4	54.7	47.5	48.3	56.1		56.3		
Heavy Trucks:	66.0	64.0	57.2	59.4	66.6		66.7		
Vehicle Noise:	68.0	66.0	60.4	61.2	68.5		68.7		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			35	75	162		348		
CNEL:			36	77	166		358		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,856 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,186 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 86.34%				
					Medium Trucks: 82.2% 3.9% 14.0% 3.07%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.59%				
					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.74	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-16.23	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.85	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.7	60.2	59.0	66.3	66.6			
Medium Trucks:	62.4	60.7	53.4	54.3	62.1	62.3			
Heavy Trucks:	72.5	70.6	63.8	65.9	73.1	73.3			
Vehicle Noise:	73.7	71.7	65.6	67.0	74.2	74.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				96	206	445	958		
CNEL:				98	211	456	981		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,856 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,186 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 86.34% Medium Trucks: 82.2% 3.9% 14.0% 3.07% Heavy Trucks: 76.5% 4.0% 19.5% 10.59%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.74	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-16.23	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.85	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.7	60.2	59.0	66.3	66.6			
Medium Trucks:	62.4	60.7	53.4	54.3	62.1	62.3			
Heavy Trucks:	72.5	70.6	63.8	65.9	73.1	73.3			
Vehicle Noise:	73.7	71.7	65.6	67.0	74.2	74.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			96	206	445	958			
CNEL:			98	211	456	981			

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,656 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,266 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph							
Near/Far Lane Distance:		48 feet		Vehicle Mix					
Site Data				Vehicle Type		Day	Evening	Night	Daily
				Autos:		73.2%	8.1%	18.6%	88.99%
				Medium Trucks:		82.2%	3.9%	14.0%	2.63%
				Heavy Trucks:		76.5%	4.0%	19.5%	8.38%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004		Grade Adjustment: 0.0	
				Lane Equivalent Distance (in feet)					
				Autos:		46.400			
Medium Trucks:		46.209							
Heavy Trucks:		46.228							
FHWA Noise Model Calculations									
Vehicle Type	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.32	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-16.61	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-11.58	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.3	64.2	60.6	59.5	66.8	67.1			
Medium Trucks:	62.1	60.4	53.1	54.0	61.8	61.9			
Heavy Trucks:	71.9	69.9	63.1	65.2	72.5	72.6			
Vehicle Noise:	73.3	71.3	65.3	66.5	73.8	74.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			93	201	433	932			
CNEL:			96	206	444	956			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,675 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,267 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 48 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 86.29%				
				Medium Trucks: 82.2% 3.9% 14.0% 3.11%				
				Heavy Trucks: 76.5% 4.0% 19.5% 10.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 52.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 52.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
Vehicle Type	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-1.45	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:	79.45	-15.88	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-10.56	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	66.2	64.1	60.5	59.4	66.7	66.9		
Medium Trucks:	62.8	61.1	53.9	54.7	62.5	62.7		
Heavy Trucks:	72.9	70.9	64.1	66.3	73.5	73.6		
Vehicle Noise:	74.1	72.1	66.0	67.3	74.6	74.8		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			105	227	489	1,054		
CNEL:			108	233	501	1,080		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,271 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,627 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet									
Site Data					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 87.91%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.77%				
Centerline Dist. to Barrier: 60.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 9.31%				
Centerline Dist. to Observer: 60.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 44.091				
Left View: -90.0 degrees					Medium Trucks: 43.890				
Right View: 90.0 degrees					Heavy Trucks: 43.909				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.28	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-15.30	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-10.03	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.7	65.5	62.0	60.9	68.2	68.4			
Medium Trucks:	63.7	62.1	54.8	55.6	63.4	63.6			
Heavy Trucks:	73.8	71.8	65.0	67.1	74.4	74.5			
Vehicle Noise:	75.1	73.1	67.0	68.3	75.6	75.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			141	304	655	1,412			
CNEL:			145	312	672	1,447			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,917 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		792 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph								
Near/Far Lane Distance:		82 feet			Vehicle Mix					
Site Data					Vehicle Type		Day	Evening	Night	Daily
					Autos:		73.2%	8.1%	18.6%	88.86%
					Medium Trucks:		82.2%	3.9%	14.0%	2.63%
					Heavy Trucks:		76.5%	4.0%	19.5%	8.51%
Barrier Height:		0.0 feet			Noise Source Elevations (in feet)					
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		0.000			
Centerline Dist. to Barrier:		60.0 feet			Medium Trucks:		2.297			
Centerline Dist. to Observer:		60.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Barrier Distance to Observer:		0.0 feet			Lane Equivalent Distance (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		44.091			
Pad Elevation:		0.0 feet			Medium Trucks:		43.890			
Road Elevation:		0.0 feet			Heavy Trucks:		43.909			
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-3.36	0.72	-1.20	-4.69	0.000	0.000			
Medium Trucks:	79.45	-18.66	0.75	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	84.25	-13.55	0.74	-1.20	-5.34	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	64.6	62.5	58.9	57.8	65.1	65.4				
Medium Trucks:	60.3	58.7	51.4	52.2	60.1	60.2				
Heavy Trucks:	70.2	68.3	61.5	63.6	70.8	71.0				
Vehicle Noise:	71.6	69.7	63.7	64.9	72.1	72.3				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				83	180	387	834			
CNEL:				86	184	397	856			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: 20th St. Road Segment: e/o Rubidoux Bl.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,439 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,344 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.45%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.69%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.87%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004				
					Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		68.46	1.33	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:		79.45	-13.85	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		84.25	-8.66	0.34	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		68.9	66.8	63.2	62.1	69.4	69.7		
Medium Trucks:		64.7	63.1	55.8	56.6	64.5	64.6		
Heavy Trucks:		74.7	72.8	66.0	68.1	75.3	75.5		
Vehicle Noise:		76.1	74.1	68.1	69.3	76.6	76.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				137	296	638	1,375		
CNEL:				141	304	654	1,409		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,329 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,933 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 87.03%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.89%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.07%				
Noise Source Elevations (in feet)					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Lane Equivalent Distance (in feet)					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 0.42 0.31 -1.20 -4.65 0.000 0.000									
Medium Trucks: 79.45 -14.36 0.34 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -8.94 0.34 -1.20 -5.43 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.0 65.8 62.3 61.2 68.5 68.7									
Medium Trucks: 64.2 62.6 55.3 56.1 64.0 64.1									
Heavy Trucks: 74.4 72.5 65.7 67.8 75.0 75.2									
Vehicle Noise: 75.7 73.7 67.6 68.9 76.2 76.3									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				129	278	599	1,291		
CNEL:				132	285	614	1,323		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,565 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,556 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 87.73%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.80%				
Centerline Dist. to Barrier: 50.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 9.47%				
Centerline Dist. to Observer: 50.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees									
Right View: 90.0 degrees					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 1.67 0.31 -1.20 -4.65 0.000 0.000									
Medium Trucks: 79.45 -13.29 0.34 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -8.00 0.34 -1.20 -5.43 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.2 67.1 63.6 62.4 69.7 70.0									
Medium Trucks: 65.3 63.7 56.4 57.2 65.0 65.2									
Heavy Trucks: 75.4 73.4 66.6 68.8 76.0 76.1									
Vehicle Noise: 76.7 74.7 68.6 69.9 77.2 77.3									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			151	325	699	1,507			
CNEL:			154	333	717	1,544			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Alt 1A Road Name: Market St. Road Segment: e/o Rivera St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,901 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,990 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily	
				Autos:		73.2%	8.1%	18.6%	88.01%
				Medium Trucks:		82.2%	3.9%	14.0%	2.76%
				Heavy Trucks:		76.5%	4.0%	19.5%	9.22%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)					
				Autos:		44.147			
				Medium Trucks:		43.947			
				Heavy Trucks:		43.966			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.36	0.71	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-12.67	0.74	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.43	0.73	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.3	68.2	64.7	63.5	70.8	71.1			
Medium Trucks:	66.3	64.7	57.4	58.2	66.1	66.2			
Heavy Trucks:	76.4	74.4	67.6	69.7	77.0	77.1			
Vehicle Noise:	77.7	75.7	69.7	70.9	78.2	78.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			175	378	814	1,754			
CNEL:			180	387	835	1,799			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 44,029 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,403 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 4.65 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -10.91 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -6.08 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 70.3 68.2 64.7 63.5 70.8 71.1									
Medium Trucks: 66.0 64.4 57.1 57.9 65.8 65.9									
Heavy Trucks: 76.1 74.2 67.4 69.5 76.7 76.9									
Vehicle Noise: 77.5 75.5 69.5 70.7 78.0 78.1									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				177	382	822	1,772		
CNEL:				182	391	843	1,816		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,699 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,770 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 3.97 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -11.58 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 88.99 -6.75 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.7 67.5 64.0 62.8 70.1 70.4									
Medium Trucks: 65.3 63.7 56.4 57.3 65.1 65.2									
Heavy Trucks: 75.4 73.5 66.7 68.8 76.1 76.2									
Vehicle Noise: 76.8 74.8 68.8 70.0 77.3 77.5									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				160	344	741	1,597		
CNEL:				164	353	760	1,638		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 Without Project Road Name: Cedar Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		30,518 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,052 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		46.400			
Road Grade:		0.0%			Medium Trucks:		46.209			
Left View:		-90.0 degrees			Heavy Trucks:		46.228			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu			
Autos:		66.51	3.06	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:		77.72	-12.50	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:		82.99	-7.67	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:		68.8	66.6	63.1	61.9	69.2	69.5			
Medium Trucks:		64.4	62.8	55.5	56.3	64.2	64.3			
Heavy Trucks:		74.5	72.6	65.8	67.9	75.1	75.3			
Vehicle Noise:		75.9	73.9	67.9	69.1	76.4	76.6			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				139	299	644	1,387			
CNEL:				142	306	660	1,423			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,707 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,071 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.08	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.47	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.65	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.8	66.6	63.1	61.9	69.3	69.5			
Medium Trucks:	64.5	62.8	55.5	56.4	64.2	64.3			
Heavy Trucks:	74.6	72.6	65.8	67.9	75.2	75.3			
Vehicle Noise:	75.9	73.9	67.9	69.1	76.4	76.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			139	300	647	1,393			
CNEL:			143	308	663	1,428			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 Without Project Road Name: Cedar Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,873 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,787 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 48 feet				Vehicle Mix				
				Vehicle Type	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.90%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Site Data				Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet				Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297				
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 8.004				
Centerline Dist. to Observer: 52.0 feet				Grade Adjustment: 0.0				
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
				Lane Equivalent Distance (in feet)				
				Autos: 46.400				
				Medium Trucks: 46.209				
				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.69	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:	81.00	-13.86	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	85.38	-9.04	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.1	68.9	65.4	64.2	71.6	71.8		
Medium Trucks:	66.3	64.7	57.4	58.3	66.1	66.2		
Heavy Trucks:	75.6	73.6	66.8	68.9	76.2	76.3		
Vehicle Noise:	77.2	75.3	69.4	70.5	77.8	77.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			171	368	794	1,710		
CNEL:			175	378	815	1,755		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,439 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,844 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 1.78 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -13.78 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -8.95 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 70.2 68.0 64.5 63.3 70.6 70.9									
Medium Trucks: 65.4 63.8 56.5 57.3 65.2 65.3									
Heavy Trucks: 74.6 72.7 65.9 68.0 75.2 75.4									
Vehicle Noise: 76.3 74.3 68.5 69.5 76.8 77.0									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			168	363	782	1,684			
CNEL:			173	372	802	1,729			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o Production Circle				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,156 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,816 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 48 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.90%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129				
				Medium Trucks: 53.966				
Heavy Trucks: 53.982								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos: 70.20 1.74 -0.62 -1.20 -4.69 0.000 0.000								
Medium Trucks: 81.00 -13.82 -0.60 -1.20 -4.88 0.000 0.000								
Heavy Trucks: 85.38 -8.99 -0.60 -1.20 -5.35 0.000 0.000								
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos: 70.1 68.0 64.4 63.3 70.6 70.9								
Medium Trucks: 65.4 63.7 56.5 57.3 65.1 65.3								
Heavy Trucks: 74.6 72.6 65.8 68.0 75.2 75.3								
Vehicle Noise: 76.3 74.3 68.5 69.5 76.8 77.0								
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			167	360	776	1,673		
CNEL:			172	370	797	1,717		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,621 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,362 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data									
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 59.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 59.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%									
Left View: -90.0 degrees					Lane Equivalent Distance (in feet)				
Right View: 90.0 degrees					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.98	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.58	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.75	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.4	67.2	63.7	62.5	69.8	70.1			
Medium Trucks:	64.6	63.0	55.7	56.5	64.4	64.5			
Heavy Trucks:	73.8	71.9	65.1	67.2	74.4	74.6			
Vehicle Noise:	75.5	73.5	67.7	68.7	76.0	76.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				149	321	691	1,488		
CNEL:				153	329	709	1,527		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 24th St.				Project Name: Agua Mansa Job Number: 11215							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt): 24,377 vehicles				Autos: 15							
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15							
Peak Hour Volume: 2,438 vehicles				Heavy Trucks (3+ Axles): 15							
Vehicle Speed: 50 mph				Vehicle Mix							
Near/Far Lane Distance: 48 feet				Vehicle Type							
Site Data				Day		Evening		Night		Daily	
				Autos: 73.2%		8.1%		18.6%		89.90%	
				Medium Trucks: 82.2%		3.9%		14.0%		2.50%	
				Heavy Trucks: 76.5%		4.0%		19.5%		7.60%	
				Noise Source Elevations (in feet)		Autos: 0.000					
		Medium Trucks: 2.297									
		Heavy Trucks: 8.004		Grade Adjustment: 0.0							
		Lane Equivalent Distance (in feet)		Autos: 54.129							
				Medium Trucks: 53.966							
				Heavy Trucks: 53.982							
FHWA Noise Model Calculations											
Vehicle Type		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:		70.20	1.11	-0.62	-1.20	-4.69	0.000	0.000			
Medium Trucks:		81.00	-14.45	-0.60	-1.20	-4.88	0.000	0.000			
Heavy Trucks:		85.38	-9.62	-0.60	-1.20	-5.35	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)											
Vehicle Type		Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:		69.5	67.4	63.8	62.7	70.0	70.2				
Medium Trucks:		64.8	63.1	55.8	56.7	64.5	64.6				
Heavy Trucks:		74.0	72.0	65.2	67.3	74.6	74.7				
Vehicle Noise:		75.7	73.7	67.9	68.9	76.2	76.3				
Centerline Distance to Noise Contour (in feet)											
				70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:				152	327	705	1,520				
CNEL:				156	336	724	1,560				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,227 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,523 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.26	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.30	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.47	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.5	64.0	62.8	70.1	70.4			
Medium Trucks:	64.9	63.3	56.0	56.8	64.6	64.8			
Heavy Trucks:	74.1	72.2	65.3	67.5	74.7	74.8			
Vehicle Noise:	75.8	73.8	68.0	69.0	76.3	76.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				155	335	722	1,555		
CNEL:				160	344	741	1,596		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,550 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,655 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph					Vehicle Mix					
Near/Far Lane Distance: 48 feet					Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%					
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%					
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000					
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet					Autos: 54.129					
Road Grade: 0.0%					Medium Trucks: 53.966					
Left View: -90.0 degrees					Heavy Trucks: 53.982					
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.48	-0.62	-1.20	-4.69	0.000	0.000			
Medium Trucks:	81.00	-14.08	-0.60	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-9.25	-0.60	-1.20	-5.35	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	69.9	67.7	64.2	63.0	70.3	70.6				
Medium Trucks:	65.1	63.5	56.2	57.0	64.9	65.0				
Heavy Trucks:	74.3	72.4	65.6	67.7	74.9	75.1				
Vehicle Noise:	76.0	74.1	68.2	69.2	76.5	76.7				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			161	347	747	1,609				
CNEL:			165	356	766	1,651				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,306 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,731 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.61	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.95	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.12	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	70.0	67.8	64.3	63.1	70.5		70.7		
Medium Trucks:	65.2	63.6	56.3	57.2	65.0		65.1		
Heavy Trucks:	74.5	72.5	65.7	67.8	75.1		75.2		
Vehicle Noise:	76.1	74.2	68.4	69.4	76.7		76.8		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			164	353	761	1,639			
CNEL:			168	362	781	1,682			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 34th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,503 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,050 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)				
					Autos:	54.129			
					Medium Trucks:	53.966			
					Heavy Trucks:	53.982			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.36	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.20	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.37	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.7	66.6	63.1	61.9	69.2	69.5			
Medium Trucks:	64.0	62.4	55.1	55.9	63.7	63.9			
Heavy Trucks:	73.2	71.3	64.4	66.6	73.8	73.9			
Vehicle Noise:	74.9	72.9	67.1	68.1	75.4	75.6			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	135	292	628	1,354					
CNEL:	139	299	645	1,390					

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		7,464 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		746 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		11 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height:		0.0 feet			Medium Trucks:		82.2% 3.9% 14.0% 2.50%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5% 4.0% 19.5% 7.60%		
Centerline Dist. to Barrier:		30.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		30.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos:		29.912		
Road Grade:		0.0%			Medium Trucks:		29.615		
Left View:		-90.0 degrees			Heavy Trucks:		29.644		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-3.06	3.24	-1.20	-4.49	0.000	0.000		
Medium Trucks:	77.72	-18.62	3.31	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	82.99	-13.79	3.30	-1.20	-5.77	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.5	63.4	59.8	58.7	66.0	66.2			
Medium Trucks:	61.2	59.6	52.3	53.1	60.9	61.1			
Heavy Trucks:	71.3	69.4	62.6	64.7	71.9	72.0			
Vehicle Noise:	72.6	70.7	64.7	65.9	73.2	73.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			49	105	226	488			
CNEL:			50	108	232	500			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,110 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,011 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 30 mph					Vehicle Mix				
Near/Far Lane Distance: 12 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 33.0 feet Centerline Dist. to Observer: 33.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 32.833				
					Medium Trucks: 32.562				
					Heavy Trucks: 32.589				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	-0.49	2.64	-1.20	-4.52	0.000	0.000		
Medium Trucks:	73.48	-16.05	2.69	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	79.92	-11.22	2.69	-1.20	-5.69	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.7	60.6	57.0	55.9	63.2	63.4			
Medium Trucks:	58.9	57.3	50.0	50.8	58.7	58.8			
Heavy Trucks:	70.2	68.2	61.4	63.6	70.8	70.9			
Vehicle Noise:	71.2	69.2	63.0	64.4	71.7	71.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				43	92	199	429		
CNEL:				44	95	204	439		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 Without Project Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,439 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,044 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.90%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.772				
				Medium Trucks: 54.610				
				Heavy Trucks: 54.626				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	4.28	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:	77.72	-11.28	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	82.99	-6.45	-0.68	-1.20	-5.34	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.9	66.8	63.2	62.1	69.4	69.6		
Medium Trucks:	64.6	62.9	55.6	56.5	64.3	64.4		
Heavy Trucks:	74.7	72.7	65.9	68.0	75.3	75.4		
Vehicle Noise:	76.0	74.0	68.0	69.2	76.5	76.7		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			163	352	759	1,635		
CNEL:			168	361	778	1,676		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 45,163 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,516 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.772				
Road Grade: 0.0%					Medium Trucks: 54.610				
Left View: -90.0 degrees					Heavy Trucks: 54.626				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.79	-0.70	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-11.77	-0.68	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-6.94	-0.68	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.1	70.0	66.4	65.3	72.6	72.8			
Medium Trucks:	67.4	65.7	58.4	59.3	67.1	67.2			
Heavy Trucks:	76.6	74.6	67.8	69.9	77.2	77.3			
Vehicle Noise:	78.3	76.3	70.5	71.5	78.8	78.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:	230	496	1,069	2,304					
CNEL:	236	509	1,098	2,365					
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Riverside Av. Road Segment: s/o Slower Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 41,762 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,176 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.45	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-12.11	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-7.28	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.0	70.8	67.3	66.2	73.5	73.7			
Medium Trucks:	68.3	66.6	59.3	60.2	68.0	68.2			
Heavy Trucks:	77.5	75.5	68.7	70.8	78.1	78.2			
Vehicle Noise:	79.2	77.2	71.4	72.4	79.7	79.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			229	494	1,064	2,293			
CNEL:			235	507	1,092	2,353			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		33,353 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		3,335 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		55 mph			Vehicle Mix				
Near/Far Lane Distance:		52 feet			Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%
Centerline Dist. to Barrier:		52.0 feet					4.0%	19.5%	7.60%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet			Autos:		0.000		
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297		
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos:		45.310		
Left View:		-90.0 degrees			Medium Trucks:		45.114		
Right View:		90.0 degrees			Heavy Trucks:		45.133		
FHWA Noise Model Calculations									
Vehicle Type	RECEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.06	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-13.50	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-8.67	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.2	71.0	67.5	66.3	73.7	73.9			
Medium Trucks:	68.3	66.6	59.4	60.2	68.0	68.2			
Heavy Trucks:	77.1	75.1	68.3	70.5	77.7	77.8			
Vehicle Noise:	79.0	77.0	71.2	72.2	79.5	79.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				222	479	1,031	2,222		
CNEL:				228	492	1,059	2,282		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Riverside Av. Road Segment: s/o Jurupa Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 38,171 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,817 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Medium Trucks: 2.297					Grade Adjustment: 0.0				
Heavy Trucks: 8.004									
Lane Equivalent Distance (in feet)									
Autos: 45.310									
Medium Trucks: 45.114									
Heavy Trucks: 45.133									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.65	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-12.91	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-8.08	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.8	71.6	68.1	66.9	74.2	74.5			
Medium Trucks:	68.9	67.2	59.9	60.8	68.6	68.7			
Heavy Trucks:	77.7	75.7	68.9	71.0	78.3	78.4			
Vehicle Noise:	79.5	77.6	71.8	72.7	80.0	80.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			243	524	1,128	2,431			
CNEL:			250	538	1,159	2,497			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,219 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,022 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 52 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 52.0 feet					Grade Adjustment: 0.0				
Centerline Dist. to Observer: 52.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 1.27 0.54 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -14.29 0.57 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -9.46 0.56 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 67.1 65.0 61.4 60.3 67.6 67.9									
Medium Trucks: 62.8 61.1 53.9 54.7 62.5 62.7									
Heavy Trucks: 72.9 70.9 64.1 66.3 73.5 73.6									
Vehicle Noise: 74.2 72.3 66.3 67.5 74.8 74.9									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				108	233	501	1,080		
CNEL:				111	239	514	1,107		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,645 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,464 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.13	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-15.69	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-10.86	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.7	63.6	60.0	58.9	66.2	66.5			
Medium Trucks:	61.4	59.7	52.5	53.3	61.1	61.3			
Heavy Trucks:	71.5	69.5	62.7	64.9	72.1	72.2			
Vehicle Noise:	72.8	70.9	64.9	66.1	73.4	73.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				87	188	404	871		
CNEL:				89	192	415	893		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 Without Project Road Name: Slover Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,795 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,379 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph				Vehicle Mix				
Near/Far Lane Distance: 48 feet								
Site Data				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 52.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 46.400				
Left View: -90.0 degrees				Medium Trucks: 46.209				
Right View: 90.0 degrees				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	-1.36	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:	81.00	-16.92	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	85.38	-12.09	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.0	65.9	62.4	61.2	68.5	68.8		
Medium Trucks:	63.3	61.6	54.4	55.2	63.0	63.2		
Heavy Trucks:	72.5	70.5	63.7	65.9	73.1	73.2		
Vehicle Noise:	74.2	72.2	66.4	67.4	74.7	74.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			107	230	497	1,070		
CNEL:			110	237	510	1,098		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,338 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,134 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data									
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 52.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%									
Left View: -90.0 degrees					Lane Equivalent Distance (in feet)				
Right View: 90.0 degrees					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.21	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-17.77	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-12.94	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.0	61.5	60.3	67.6	67.9			
Medium Trucks:	62.4	60.8	53.5	54.4	62.2	62.3			
Heavy Trucks:	71.6	69.7	62.9	65.0	72.2	72.4			
Vehicle Noise:	73.3	71.4	65.5	66.6	73.8	74.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				94	202	436	939		
CNEL:				96	208	447	963		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: OY 2020 Without Project Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		8,031 vehicles		Autos:		15					
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15					
Peak Hour Volume:		803 vehicles		Heavy Trucks (3+ Axles):		15					
Vehicle Speed:		40 mph									
Near/Far Lane Distance:		36 feet		Vehicle Mix							
				Vehicle Type	Day	Evening	Night	Daily			
Site Data				Autos:		73.2%	8.1%	18.6%	89.90%		
				Medium Trucks:		82.2%	3.9%	14.0%	2.50%		
				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%		
				Noise Source Elevations (in feet)							
				Autos:		0.000					
Barrier Height:		0.0 feet		Medium Trucks:		2.297					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		8.004		Grade Adjustment: 0.0			
Centerline Dist. to Barrier:		44.0 feet									
Centerline Dist. to Observer:		44.0 feet									
Barrier Distance to Observer:		0.0 feet									
Observer Height (Above Pad):		5.0 feet									
Pad Elevation:		0.0 feet									
Road Elevation:		0.0 feet									
Road Grade:		0.0%									
Left View:		-90.0 degrees									
Right View:		90.0 degrees									
FHWA Noise Model Calculations											
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:		66.51	-2.74	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:		77.72	-18.30	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:		82.99	-13.47	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)											
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:		63.8	61.7	58.2	57.0	64.3	64.6				
Medium Trucks:		59.5	57.9	50.6	51.4	59.3	59.4				
Heavy Trucks:		69.6	67.7	60.9	63.0	70.2	70.4				
Vehicle Noise:		71.0	69.0	63.0	64.2	71.5	71.7				
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			55	119	257	553					
CNEL:			57	122	263	567					

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		5,102 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		510 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		36 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height:		0.0 feet			Medium Trucks:		82.2% 3.9% 14.0% 2.50%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5% 4.0% 19.5% 7.60%		
Centerline Dist. to Barrier:		44.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		44.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		
Pad Elevation:		0.0 feet			Grade Adjustment: 0.0				
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos:		40.460		
Left View:		-90.0 degrees			Medium Trucks:		40.241		
Right View:		90.0 degrees			Heavy Trucks:		40.262		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	-4.71	1.28	-1.20	-4.61	0.000	0.000	
Medium Trucks:		77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		61.9	59.7	56.2	55.0	62.4	62.6		
Medium Trucks:		57.6	55.9	48.6	49.5	57.3	57.4		
Heavy Trucks:		67.7	65.7	58.9	61.0	68.3	68.4		
Vehicle Noise:		69.0	67.0	61.0	62.2	69.5	69.7		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				41	88	190	409		
CNEL:				42	90	195	419		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 Without Project Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,181 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		718 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		46.400			
Left View:		-90.0 degrees			Medium Trucks:		46.209			
Right View:		90.0 degrees			Heavy Trucks:		46.228			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu			
Autos:	66.51	-3.23	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	77.72	-18.78	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-13.96	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.5	60.3	56.8	55.6	62.9	63.2				
Medium Trucks:	58.1	56.5	49.2	50.1	57.9	58.0				
Heavy Trucks:	68.2	66.3	59.5	61.6	68.8	69.0				
Vehicle Noise:	69.6	67.6	61.6	62.8	70.1	70.3				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			53	114	245	529				
CNEL:			54	117	252	542				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 Without Project Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 9,543 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 954 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.50	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-18.06	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-13.23	1.31	-1.20	-5.50	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	66.0	63.9	60.4	59.2	66.5	66.8	
Medium Trucks:	61.5	59.9	52.6	53.4	61.2	61.4	
Heavy Trucks:	71.1	69.2	62.4	64.5	71.7	71.9	
Vehicle Noise:	72.6	70.7	64.8	65.9	73.2	73.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			71	154	332	715	
CNEL:			73	158	340	733	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,669 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 567 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 44.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 44.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 40.460				
Road Grade: 0.0%					Medium Trucks: 40.241				
Left View: -90.0 degrees					Heavy Trucks: 40.262				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 -4.76 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 79.45 -20.32 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -15.49 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 63.8 61.6 58.1 56.9 64.2 64.5									
Medium Trucks: 59.2 57.6 50.3 51.1 59.0 59.1									
Heavy Trucks: 68.9 66.9 60.1 62.2 69.5 69.6									
Vehicle Noise: 70.4 68.4 62.5 63.6 70.9 71.1									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				51	109	234	505		
CNEL:				52	112	241	518		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 3,874 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 387 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 44.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 44.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 40.460				
Road Grade: 0.0%					Medium Trucks: 40.241				
Left View: -90.0 degrees					Heavy Trucks: 40.262				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-6.42	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.1	60.0	56.4	55.3	62.6	62.9			
Medium Trucks:	57.6	55.9	48.7	49.5	57.3	57.5			
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0			
Vehicle Noise:	68.7	66.8	60.8	62.0	69.2	69.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				39	84	182	392		
CNEL:				40	87	187	402		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		14,739 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,474 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.50%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 7.60%					
Centerline Dist. to Barrier:		50.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		50.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		46.915			
Road Grade:		0.0%			Medium Trucks:		46.726			
Left View:		-90.0 degrees			Heavy Trucks:		46.744			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:		68.46	-0.62	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:		79.45	-16.17	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:		84.25	-11.34	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:		67.0	64.8	61.3	60.1	67.4	67.7			
Medium Trucks:		62.4	60.8	53.5	54.3	62.1	62.3			
Heavy Trucks:		72.0	70.1	63.3	65.4	72.6	72.8			
Vehicle Noise:		73.6	71.6	65.7	66.8	74.1	74.2			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				93	201	434	935			
CNEL:				96	207	445	959			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,739 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,474 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 -0.62 0.31 -1.20 -4.65 0.000 0.000									
Medium Trucks: 79.45 -16.17 0.34 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -11.34 0.34 -1.20 -5.43 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 67.0 64.8 61.3 60.1 67.4 67.7									
Medium Trucks: 62.4 60.8 53.5 54.3 62.1 62.3									
Heavy Trucks: 72.0 70.1 63.3 65.4 72.6 72.8									
Vehicle Noise: 73.6 71.6 65.7 66.8 74.1 74.2									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			93	201	434	935			
CNEL:			96	207	445	959			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,023 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,502 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	46.400			
					Medium Trucks:	46.209			
					Heavy Trucks:	46.228			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.1	65.0	61.4	60.3	67.6	67.9			
Medium Trucks:	62.6	60.9	53.7	54.5	62.3	62.5			
Heavy Trucks:	72.2	70.2	63.4	65.6	72.8	72.9			
Vehicle Noise:	73.7	71.7	65.8	66.9	74.2	74.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				100	215	462	996		
CNEL:				102	220	474	1,022		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,023 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,502 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	46.400			
					Medium Trucks:	46.209			
					Heavy Trucks:	46.228			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.1	65.0	61.4	60.3	67.6	67.9			
Medium Trucks:	62.6	60.9	53.7	54.5	62.3	62.5			
Heavy Trucks:	72.2	70.2	63.4	65.6	72.8	72.9			
Vehicle Noise:	73.7	71.7	65.8	66.9	74.2	74.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				100	215	462	996		
CNEL:				102	220	474	1,022		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,330 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,833 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 82 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	44.091			
					Medium Trucks:	43.890			
					Heavy Trucks:	43.909			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.2	62.6	61.5	68.8	69.1			
Medium Trucks:	63.8	62.1	54.9	55.7	63.5	63.7			
Heavy Trucks:	73.4	71.4	64.6	66.8	74.0	74.1			
Vehicle Noise:	74.9	72.9	67.0	68.1	75.4	75.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				138	298	641	1,381		
CNEL:				142	305	658	1,417		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 9,637 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 964 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 82 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	44.091			
					Medium Trucks:	43.890			
					Heavy Trucks:	43.909			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.5	63.4	59.8	58.7	66.0	66.3			
Medium Trucks:	61.0	59.3	52.1	52.9	60.7	60.9			
Heavy Trucks:	70.6	68.6	61.8	64.0	71.2	71.3			
Vehicle Noise:	72.1	70.2	64.2	65.3	72.6	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				90	194	418	900		
CNEL:				92	199	428	923		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 Without Project Road Name: 20th St. Road Segment: e/o Rubidoux Bl.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 28,062 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,806 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 45 mph				Vehicle Mix			
Near/Far Lane Distance: 36 feet				VehicleType			
Site Data				Day			
Barrier Height: 0.0 feet				Evening			
Barrier Type (0-Wall, 1-Berm): 0.0				Night			
Centerline Dist. to Barrier: 50.0 feet				Daily			
Centerline Dist. to Observer: 50.0 feet				Autos: 73.2% 8.1% 18.6% 89.90%			
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.50%			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%			
Pad Elevation: 0.0 feet				Noise Source Elevations (in feet)			
Road Elevation: 0.0 feet				Autos: 0.000			
Road Grade: 0.0%				Medium Trucks: 2.297			
Left View: -90.0 degrees				Heavy Trucks: 8.004			
Right View: 90.0 degrees				Grade Adjustment: 0.0			
FHWA Noise Model Calculations				Lane Equivalent Distance (in feet)			
VehicleType				Autos: 46.915			
REMED				Medium Trucks: 46.726			
Traffic Flow				Heavy Trucks: 46.744			
Distance				Finite Road			
Finite Road				Fresnel			
Fresnel				Barrier Atten			
Barrier Atten				Berm Atten			
Berm Atten				Autos: 68.46 2.18 0.31 -1.20 -4.65 0.000 0.000			
Autos: 68.46 2.18 0.31 -1.20 -4.65 0.000 0.000				Medium Trucks: 79.45 -13.38 0.34 -1.20 -4.87 0.000 0.000			
Medium Trucks: 79.45 -13.38 0.34 -1.20 -4.87 0.000 0.000				Heavy Trucks: 84.25 -8.55 0.34 -1.20 -5.43 0.000 0.000			
Heavy Trucks: 84.25 -8.55 0.34 -1.20 -5.43 0.000 0.000							

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.6	64.1	62.9	70.2	70.5
Medium Trucks:	65.2	63.6	56.3	57.1	64.9	65.1
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	76.4	74.4	68.5	69.6	76.9	77.0
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			144	309	667	1,436
CNEL:			147	317	684	1,473

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 Without Project Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,282 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,428 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		36 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos:		73.2%	8.1%	18.6%	89.90%
				Medium Trucks:		82.2%	3.9%	14.0%	2.50%
				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)					
				Autos:		46.915			
				Medium Trucks:		46.726			
				Heavy Trucks:		46.744			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.55	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-14.01	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.18	0.34	-1.20	-5.43	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.0	63.5	62.3	69.6	69.9
Medium Trucks:	64.6	62.9	55.7	56.5	64.3	64.5
Heavy Trucks:	74.2	72.3	65.5	67.6	74.8	74.9
Vehicle Noise:	75.7	73.8	67.8	69.0	76.2	76.4
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			130	281	605	1,304
CNEL:			134	288	621	1,338

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 Without Project Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		33,069 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,307 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Barrier:		50.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Observer:		50.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		46.915			
					Medium Trucks:		46.726			
					Heavy Trucks:		46.744			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	2.89	0.31	-1.20	-4.65	0.000	0.000			
Medium Trucks:	79.45	-12.66	0.34	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-7.84	0.34	-1.20	-5.43	0.000	0.000			

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.3	64.8	63.6	70.9	71.2
Medium Trucks:	65.9	64.3	57.0	57.8	65.7	65.8
Heavy Trucks:	75.6	73.6	66.8	68.9	76.2	76.3
Vehicle Noise:	77.1	75.1	69.2	70.3	77.6	77.8
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			160	345	744	1,602
CNEL:			164	354	763	1,644

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 Without Project Road Name: Market St. Road Segment: e/o Rivera St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,754 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,675 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 44.147				
				Medium Trucks: 43.947 Heavy Trucks: 43.966				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	3.35	0.71	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-12.21	0.74	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-7.38	0.73	-1.20	-5.43	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.3	69.2	65.6	64.5	71.8	72.1
Medium Trucks:	66.8	65.1	57.9	58.7	66.5	66.7
Heavy Trucks:	76.4	74.5	67.7	69.8	77.0	77.1
Vehicle Noise:	77.9	76.0	70.0	71.2	78.4	78.6
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			183	394	848	1,828
CNEL:			188	404	870	1,875

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: OY 2020 With Alt 1 Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		44,507 vehicles		Autos:		15							
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15							
Peak Hour Volume:		4,451 vehicles		Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		40 mph		Vehicle Mix									
Near/Far Lane Distance:		48 feet		Vehicle Type									
Site Data				Day		Evening		Night		Daily			
				Autos:		73.2%		8.1%		18.6%		89.84%	
				Medium Trucks:		82.2%		3.9%		14.0%		2.50%	
				Heavy Trucks:		76.5%		4.0%		19.5%		7.66%	
				Noise Source Elevations (in feet)		Autos:		0.000					
Barrier Height:		0.0 feet		Medium Trucks:		2.297							
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		8.004		Grade Adjustment:		0.0			
Centerline Dist. to Barrier:		52.0 feet											
Centerline Dist. to Observer:		52.0 feet											
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet											
Pad Elevation:		0.0 feet											
Road Elevation:		0.0 feet											
Road Grade:		0.0%											
Left View:		-90.0 degrees											
Right View:		90.0 degrees											
FHWA Noise Model Calculations													
Vehicle Type		REMEL		Traffic Flow		Distance		Finite Road		Fresnel			
Autos:		66.51		4.69		0.38		-1.20		-4.66			
Medium Trucks:		77.72		-10.86		0.41		-1.20		-4.87			
Heavy Trucks:		82.99		-6.00		0.41		-1.20		-5.41			
Unmitigated Noise Levels (without Topo and barrier attenuation)													
Vehicle Type		Leq Peak Hour		Leq Day		Leq Evening		Leq Night		Ldn			
Autos:		70.4		68.2		64.7		63.5		70.9			
Medium Trucks:		66.1		64.4		57.2		58.0		65.8			
Heavy Trucks:		76.2		74.2		67.4		69.6		76.8			
Vehicle Noise:		77.5		75.6		69.6		70.8		78.1			
Centerline Distance to Noise Contour (in feet)													
				70 dBA		65 dBA		60 dBA		55 dBA			
Ldn:				179		386		831		1,791			
CNEL:				184		396		852		1,836			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 39,173 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,917 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph					Vehicle Mix					
Near/Far Lane Distance: 48 feet					VehicleType					
Site Data					Day		Evening		Night	
					Autos: 73.2%		8.1%		18.6%	
					Medium Trucks: 82.2%		3.9%		14.0%	
					Heavy Trucks: 76.5%		4.0%		19.5%	
					Barrier Height: 0.0 feet		0.000		89.28%	
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2%					
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5%					
Centerline Dist. to Observer: 52.0 feet					Noise Source Elevations (in feet)					
Barrier Distance to Observer: 0.0 feet					Autos: 0.000					
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297					
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004					
Road Elevation: 0.0 feet					Grade Adjustment: 0.0					
Road Grade: 0.0%					Lane Equivalent Distance (in feet)					
Left View: -90.0 degrees					Autos: 46.400					
Right View: 90.0 degrees					Medium Trucks: 46.209					
					Heavy Trucks: 46.228					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	4.11	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	77.72	-11.27	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-6.29	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	69.8	67.7	64.1	63.0	70.3	70.6				
Medium Trucks:	65.7	64.0	56.7	57.6	65.4	65.5				
Heavy Trucks:	75.9	74.0	67.2	69.3	76.5	76.6				
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			170	366	788	1,697				
CNEL:			174	375	807	1,739				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Slover Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		32,277 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,228 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	89.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.60%
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.25%
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		46.400			
Left View:		-90.0 degrees		Medium Trucks:		46.209			
Right View:		90.0 degrees		Heavy Trucks:		46.228			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.26	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.09	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.07	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.0	66.8	63.3	62.1	69.4	69.7			
Medium Trucks:	64.8	63.2	55.9	56.7	64.6	64.7			
Heavy Trucks:	75.1	73.2	66.4	68.5	75.7	75.9			
Vehicle Noise:	76.4	74.4	68.4	69.6	76.9	77.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			150	324	697	1,502			
CNEL:			154	332	714	1,539			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 32,812 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,281 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.98%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.40%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.33	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-11.98	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-6.92	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.0	66.9	63.3	62.2	69.5			69.8	
Medium Trucks:	64.9	63.3	56.0	56.9	64.7			64.8	
Heavy Trucks:	75.3	73.3	66.5	68.6	75.9			76.0	
Vehicle Noise:	76.5	74.6	68.5	69.8	77.0			77.2	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				153	330	712	1,533		
CNEL:				157	338	729	1,571		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Jurupa Av.			Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,172 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,017 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data			Vehicle Mix				
			VehicleType	Day	Evening	Night	Daily
			Autos: 73.2% 8.1% 18.6% 88.96%				
			Medium Trucks: 82.2% 3.9% 14.0% 2.61%				
			Heavy Trucks: 76.5% 4.0% 19.5% 8.43%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			Noise Source Elevations (in feet)				
			Autos: 0.000				
			Medium Trucks: 2.297				
			Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			Lane Equivalent Distance (in feet)				
			Autos: 46.400				
			Medium Trucks: 46.209				
			Heavy Trucks: 46.228				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.99	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-13.33	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.24	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.2	65.7	64.5	71.9	72.1
Medium Trucks:	66.9	65.2	58.0	58.8	66.6	66.8
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1
Vehicle Noise:	77.9	75.9	70.0	71.1	78.4	78.6
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	189	408	878	1,892		
CNEL:	194	418	901	1,942		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 31,507 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,151 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.22%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.91%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 9.87%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.10	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.67	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.37	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.3	64.8	63.6	71.0	71.2
Medium Trucks:	66.5	64.9	57.6	58.4	66.3	66.4
Heavy Trucks:	76.2	74.3	67.4	69.6	76.8	76.9
Vehicle Noise:	77.6	75.6	69.6	70.8	78.1	78.3
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	205	441	951	2,048		
CNEL:	210	452	975	2,100		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o Production Circle					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		32,838 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		3,284 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		48 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 73.2% 8.1% 18.6% 87.83%				
Centerline Dist. to Barrier:		59.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.77%				
Centerline Dist. to Observer:		59.0 feet			Heavy Trucks: 76.5% 4.0% 19.5% 9.40%				
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet			Noise Source Elevations (in feet)				
Road Elevation:		0.0 feet			Autos: 0.000				
Road Grade:		0.0%			Medium Trucks: 2.297				
Left View:		-90.0 degrees			Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View:		90.0 degrees			Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.30	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.71	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.40	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.2	71.4
Medium Trucks:	66.5	64.9	57.6	58.4	66.2	66.4
Heavy Trucks:	76.2	74.2	67.4	69.5	76.8	76.9
Vehicle Noise:	77.6	75.6	69.7	70.8	78.1	78.3
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	205	442	953	2,053		
CNEL:	211	454	977	2,106		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,165 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,616 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 88.72%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.64%				
				Heavy Trucks: 76.5% 4.0% 19.5% 8.63%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129				
				Medium Trucks: 53.966				
				Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.36	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-13.90	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-8.76	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.6	64.1	62.9	70.2	70.5
Medium Trucks:	65.3	63.7	56.4	57.2	65.0	65.2
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	76.4	74.4	68.5	69.6	76.9	77.0
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	169	365	785	1,692		
CNEL:	174	374	806	1,736		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 24th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,673 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,667 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.65%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.69%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 1.44 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -13.78 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -8.65 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.8 67.7 64.2 63.0 70.3 70.6									
Medium Trucks: 65.4 63.8 56.5 57.3 65.2 65.3									
Heavy Trucks: 74.9 73.0 66.2 68.3 75.5 75.7									
Vehicle Noise: 76.5 74.5 68.6 69.7 77.0 77.1									
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:		172	370	798	1,719				
CNEL:		176	380	819	1,764				
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,524 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,752 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 88.69%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
Centerline Dist. to Barrier: 59.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.65%				
Centerline Dist. to Observer: 59.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 54.129				
Left View: -90.0 degrees					Medium Trucks: 53.966				
Right View: 90.0 degrees					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.58	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.65	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.53	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	70.0	67.8	64.3	63.1	70.4		70.7		
Medium Trucks:	65.5	63.9	56.6	57.5	65.3		65.4		
Heavy Trucks:	75.0	73.1	66.3	68.4	75.7		75.8		
Vehicle Noise:	76.6	74.6	68.7	69.8	77.1		77.3		
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	175	378	813	1,752					
CNEL:	180	387	834	1,798					
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,820 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,882 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.74%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.61%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.78	-0.62	-1.20	-4.69	0.000			0.000
Medium Trucks:	81.00	-13.46	-0.60	-1.20	-4.88	0.000			0.000
Heavy Trucks:	85.38	-8.35	-0.60	-1.20	-5.35	0.000			0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	70.2	68.0	64.5	63.3	70.6				70.9
Medium Trucks:	65.7	64.1	56.8	57.6	65.5				65.6
Heavy Trucks:	75.2	73.3	66.5	68.6	75.8				76.0
Vehicle Noise:	76.8	74.8	68.9	70.0	77.3				77.4
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
		Ldn:	180	388	837		1,803		
		CNEL:	185	398	859		1,850		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,835 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,784 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.83%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.67%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.68	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.87	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.00	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	70.1	67.9	64.4	63.2	70.5		70.8		
Medium Trucks:	65.3	63.7	56.4	57.2	65.1		65.2		
Heavy Trucks:	74.6	72.6	65.8	67.9	75.2		75.3		
Vehicle Noise:	76.3	74.3	68.5	69.5	76.8		76.9		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				167	359	774	1,667		
CNEL:				171	369	794	1,711		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 34th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		21,033 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,103 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet		VehicleType			
Site Data				Day			
Barrier Height:		0.0 feet		Evening			
Barrier Type (0-Wall, 1-Berm):		0.0		Night			
Centerline Dist. to Barrier:		59.0 feet		Daily			
Centerline Dist. to Observer:		59.0 feet		Autos: 73.2%			
Barrier Distance to Observer:		0.0 feet		8.1%			
Observer Height (Above Pad):		5.0 feet		Medium Trucks: 82.2%			
Pad Elevation:		0.0 feet		3.9%			
Road Elevation:		0.0 feet		14.0%			
Road Grade:		0.0%		2.50%			
Left View:		-90.0 degrees		Heavy Trucks: 76.5%			
Right View:		90.0 degrees		4.0%			
				19.5%			
				7.70%			
				Noise Source Elevations (in feet)			
				Autos: 0.000			
				Medium Trucks: 2.297			
				Heavy Trucks: 8.004			
				Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 54.129			
				Medium Trucks: 53.966			
				Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.09	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.20	-0.60	-1.20	-5.35	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.9	66.7	63.2	62.0	69.3	69.6	
Medium Trucks:	64.1	62.5	55.2	56.0	63.8	64.0	
Heavy Trucks:	73.4	71.4	64.6	66.7	74.0	74.1	
Vehicle Noise:	75.1	73.1	67.2	68.3	75.6	75.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			139	298	643	1,385	
CNEL:			142	306	660	1,422	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,751 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		775 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		11 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	90.27%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.41%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.32%
Centerline Dist. to Barrier:		30.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		30.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		29.912			
Road Grade:		0.0%			Medium Trucks:		29.615			
Left View:		-90.0 degrees			Heavy Trucks:		29.644			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:		66.51	-2.88	3.24	-1.20	-4.49	0.000	0.000		
Medium Trucks:		77.72	-18.62	3.31	-1.20	-4.86	0.000	0.000		
Heavy Trucks:		82.99	-13.79	3.30	-1.20	-5.77	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:		65.7	63.5	60.0	58.8	66.2	66.4			
Medium Trucks:		61.2	59.6	52.3	53.1	60.9	61.1			
Heavy Trucks:		71.3	69.4	62.6	64.7	71.9	72.0			
Vehicle Noise:		72.7	70.7	64.7	65.9	73.2	73.4			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				49	106	228	490			
CNEL:				50	108	233	503			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		10,214 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,021 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		30 mph			Vehicle Mix					
Near/Far Lane Distance:		12 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	90.00%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.47%
Centerline Dist. to Barrier:		33.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.52%
Centerline Dist. to Observer:		33.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		32.833			
Left View:		-90.0 degrees			Medium Trucks:		32.562			
Right View:		90.0 degrees			Heavy Trucks:		32.589			
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:		61.75	-0.44	2.64	-1.20	-4.52	0.000	0.000		
Medium Trucks:		73.48	-16.05	2.69	-1.20	-4.86	0.000	0.000		
Heavy Trucks:		79.92	-11.22	2.69	-1.20	-5.69	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:		62.7	60.6	57.1	55.9	63.2	63.5			
Medium Trucks:		58.9	57.3	50.0	50.8	58.7	58.8			
Heavy Trucks:		70.2	68.2	61.4	63.6	70.8	70.9			
Vehicle Noise:		71.2	69.2	63.0	64.4	71.7	71.9			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				43	92	199	429			
CNEL:				44	95	204	439			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,812 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,081 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.81%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.51%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.68%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.772				
Road Grade: 0.0%					Medium Trucks: 54.610				
Left View: -90.0 degrees					Heavy Trucks: 54.626				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 4.32 -0.70 -1.20 -4.69 0.000 0.000									
Medium Trucks: 77.72 -11.22 -0.68 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 82.99 -6.36 -0.68 -1.20 -5.34 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.9 66.8 63.3 62.1 69.4 69.7									
Medium Trucks: 64.6 63.0 55.7 56.5 64.3 64.5									
Heavy Trucks: 74.7 72.8 66.0 68.1 75.4 75.5									
Vehicle Noise: 76.1 74.1 68.1 69.3 76.6 76.8									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			165	356	767	1,653			
CNEL:			170	365	787	1,695			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 46,352 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,635 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.36%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.58%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.06%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.772				
Road Grade: 0.0%					Medium Trucks: 54.610				
Left View: -90.0 degrees					Heavy Trucks: 54.626				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 3.88 -0.70 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -11.52 -0.68 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -6.57 -0.68 -1.20 -5.34 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 72.2 70.0 66.5 65.3 72.7 72.9									
Medium Trucks: 67.6 66.0 58.7 59.5 67.3 67.5									
Heavy Trucks: 76.9 75.0 68.2 70.3 77.5 77.7									
Vehicle Noise: 78.5 76.6 70.7 71.8 79.1 79.2									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				241	519	1,119	2,410		
CNEL:				247	533	1,148	2,473		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 42,964 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,296 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.32%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.58%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.09%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.55	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-11.84	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-6.88	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.1	70.9	67.4	66.2	73.6	73.8			
Medium Trucks:	68.5	66.9	59.6	60.4	68.3	68.4			
Heavy Trucks:	77.9	75.9	69.1	71.2	78.5	78.6			
Vehicle Noise:	79.5	77.5	71.6	72.7	80.0	80.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			241	519	1,117	2,407			
CNEL:			247	532	1,147	2,470			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,607 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,461 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.20%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.60%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.20%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
Vehicle Type	REMODEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.19	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-13.17	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-8.18	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.3	71.2	67.6	66.5	73.8	74.1			
Medium Trucks:	68.6	67.0	59.7	60.5	68.3	68.5			
Heavy Trucks:	77.6	75.6	68.8	70.9	78.2	78.3			
Vehicle Noise:	79.3	77.4	71.6	72.6	79.8	80.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				236	508	1,094	2,358		
CNEL:				242	521	1,123	2,420		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Jurupa Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,426 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,943 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.29%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.59%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.13%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.76	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-12.62	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-7.65	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.9	71.7	68.2	67.0	74.3	74.6			
Medium Trucks:	69.1	67.5	60.2	61.1	68.9	69.0			
Heavy Trucks:	78.1	76.2	69.4	71.5	78.7	78.8			
Vehicle Noise:	79.9	77.9	72.1	73.1	80.4	80.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			256	552	1,189	2,561			
CNEL:			263	566	1,220	2,629			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,605 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,060 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.61%
					Medium Trucks:	82.2%	3.9%	14.0%	2.54%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.85%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	45.310			
					Medium Trucks:	45.114			
					Heavy Trucks:	45.133			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.0	61.5	60.3	67.7	67.9			
Medium Trucks:	62.9	61.3	54.0	54.9	62.7	62.8			
Heavy Trucks:	73.1	71.2	64.4	66.5	73.7	73.9			
Vehicle Noise:	74.4	72.5	66.4	67.7	75.0	75.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				111	240	516	1,112		
CNEL:				114	246	529	1,140		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,902 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,490 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.75%
					Medium Trucks:	82.2%	3.9%	14.0%	2.52%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.74%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	45.310			
					Medium Trucks:	45.114			
					Heavy Trucks:	45.133			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.6	60.1	58.9	66.3	66.5			
Medium Trucks:	61.5	59.9	52.6	53.4	61.2	61.4			
Heavy Trucks:	71.7	69.7	62.9	65.0	72.3	72.4			
Vehicle Noise:	73.0	71.0	65.0	66.2	73.5	73.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				89	192	413	889		
CNEL:				91	196	423	912		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,016 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,402 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	90.06%
					Medium Trucks:	82.2%	3.9%	14.0%	2.46%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.48%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	46.400			
					Medium Trucks:	46.209			
					Heavy Trucks:	46.228			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.1	66.0	62.4	61.3	68.6	68.9			
Medium Trucks:	63.3	61.6	54.4	55.2	63.0	63.2			
Heavy Trucks:	72.5	70.5	63.7	65.9	73.1	73.2			
Vehicle Noise:	74.2	72.2	66.4	67.4	74.7	74.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				107	231	498	1,073		
CNEL:				110	237	511	1,101		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,390 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,139 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.95%
					Medium Trucks:	82.2%	3.9%	14.0%	2.49%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.57%
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment:	0.0	
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos:	46.400			
					Medium Trucks:	46.209			
					Heavy Trucks:	46.228			
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.1	61.5	60.4	67.7	67.9			
Medium Trucks:	62.4	60.8	53.5	54.4	62.2	62.3			
Heavy Trucks:	71.6	69.7	62.9	65.0	72.2	72.4			
Vehicle Noise:	73.3	71.4	65.6	66.6	73.9	74.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				94	202	436	939		
CNEL:				96	208	448	964		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,364 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 836 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.12%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.27%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 44.0 feet									
Centerline Dist. to Observer: 44.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 40.460				
Right View: 90.0 degrees					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
Vehicle Type	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -2.60 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 77.72 -17.93 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -12.93 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 64.0 61.8 58.3 57.1 64.5 64.7									
Medium Trucks: 59.9 58.3 51.0 51.8 59.6 59.8									
Heavy Trucks: 70.2 68.2 61.4 63.5 70.8 70.9									
Vehicle Noise: 71.4 69.5 63.4 64.7 72.0 72.1									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				59	128	276	594		
CNEL:				61	131	282	608		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 5,154 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 515 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType		Day	Evening	Night	Daily
					Autos:		73.2%	8.1%	18.6%	90.00%
					Medium Trucks:		82.2%	3.9%	14.0%	2.47%
					Heavy Trucks:		76.5%	4.0%	19.5%	7.52%
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.004		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		40.460			
					Medium Trucks:		40.241			
					Heavy Trucks:		40.262			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.66	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:	77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.9	59.8	56.3	55.1	62.4	62.7				
Medium Trucks:	57.6	55.9	48.6	49.5	57.3	57.4				
Heavy Trucks:	67.7	65.7	58.9	61.0	68.3	68.4				
Vehicle Noise:	69.0	67.0	61.0	62.2	69.5	69.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				41	88	190	410			
CNEL:				42	90	195	420			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,363 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		736 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.15%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.44%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 7.41%					
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos: 0.000					
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 2.297					
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos: 46.400					
Road Grade:		0.0%			Medium Trucks: 46.209					
Left View:		-90.0 degrees			Heavy Trucks: 46.228					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu			
Autos:	66.51	-3.11	0.38	-1.20	-4.66	0.000	0.000	0.000		
Medium Trucks:	77.72	-18.78	0.41	-1.20	-4.87	0.000	0.000	0.000		
Heavy Trucks:	82.99	-13.96	0.41	-1.20	-5.41	0.000	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.6	60.4	56.9	55.7	63.1	63.3				
Medium Trucks:	58.1	56.5	49.2	50.1	57.9	58.0				
Heavy Trucks:	68.2	66.3	59.5	61.6	68.8	69.0				
Vehicle Noise:	69.6	67.6	61.7	62.8	70.1	70.3				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			53	114	246	531				
CNEL:			54	117	253	544				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,781 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,178 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.73%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.40%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.87%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 -1.60 1.28 -1.20 -4.61 0.000 0.000									
Medium Trucks: 79.45 -17.33 1.31 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -12.17 1.31 -1.20 -5.50 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 66.9 64.8 61.3 60.1 67.4 67.7									
Medium Trucks: 62.2 60.6 53.3 54.1 62.0 62.1									
Heavy Trucks: 72.2 70.2 63.4 65.6 72.8 72.9									
Vehicle Noise: 73.7 71.7 65.8 66.9 74.2 74.3									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			83	180	388	835			
CNEL:			86	184	397	856			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,739 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		774 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		36 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	86.89%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.85%
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	10.26%
Centerline Dist. to Observer:		44.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004			
Road Grade:		0.0%		Grade Adjustment: 0.0					
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)					
Right View:		90.0 degrees							
				Autos:		40.460			
				Medium Trucks:		40.241			
				Heavy Trucks:		40.262			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.56	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-18.40	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-12.84	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.0	62.8	59.3	58.1	65.4	65.7			
Medium Trucks:	61.2	59.5	52.2	53.1	60.9	61.1			
Heavy Trucks:	71.5	69.6	62.8	64.9	72.1	72.3			
Vehicle Noise:	72.7	70.7	64.6	65.9	73.2	73.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				72	156	335	723		
CNEL:				74	160	344	740		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,202 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 520 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 92.48%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 1.86%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 5.66%				
Centerline Dist. to Barrier: 44.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 44.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 40.460				
Road Grade: 0.0%					Medium Trucks: 40.241				
Left View: -90.0 degrees					Heavy Trucks: 40.262				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-5.02	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.5	61.4	57.8	56.7	64.0	64.3			
Medium Trucks:	57.6	55.9	48.7	49.5	57.3	57.5			
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0			
Vehicle Noise:	69.1	67.1	61.4	62.3	69.6	69.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				41	89	192	413		
CNEL:				42	91	197	424		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		15,571 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,557 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.86%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.65%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 8.49%					
Centerline Dist. to Barrier:		50.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		50.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos: 46.915					
Road Grade:		0.0%			Medium Trucks: 46.726					
Left View:		-90.0 degrees			Heavy Trucks: 46.744					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-0.43	0.31	-1.20	-4.65	0.000	0.000	0.000		
Medium Trucks:	79.45	-15.68	0.34	-1.20	-4.87	0.000	0.000	0.000		
Heavy Trucks:	84.25	-10.62	0.34	-1.20	-5.43	0.000	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	67.1	65.0	61.5	60.3	67.6	67.9				
Medium Trucks:	62.9	61.3	54.0	54.8	62.6	62.8				
Heavy Trucks:	72.8	70.8	64.0	66.1	73.4	73.5				
Vehicle Noise:	74.2	72.2	66.2	67.4	74.7	74.8				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				102	221	476	1,024			
CNEL:				105	226	488	1,051			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,441 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,544 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 88.77%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.67%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.56%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915 Medium Trucks: 46.726 Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 -0.47 0.31 -1.20 -4.65 0.000 0.000									
Medium Trucks: 79.45 -15.68 0.34 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -10.62 0.34 -1.20 -5.43 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 67.1 65.0 61.4 60.3 67.6 67.9									
Medium Trucks: 62.9 61.3 54.0 54.8 62.6 62.8									
Heavy Trucks: 72.8 70.8 64.0 66.1 73.4 73.5									
Vehicle Noise: 74.1 72.2 66.2 67.4 74.7 74.8									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			102	220	475	1,023			
CNEL:			105	226	487	1,049			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,659 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,566 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 48 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 88.74%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.68%				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.58%				
Centerline Dist. to Observer: 52.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 46.400				
Right View: 90.0 degrees					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.41	0.38	-1.20	-4.66	0.000		0.000	
Medium Trucks:	79.45	-15.61	0.41	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-10.55	0.41	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	67.2	65.1	61.6	60.4		67.7		68.0	
Medium Trucks:	63.1	61.4	54.1	55.0		62.8		62.9	
Heavy Trucks:	72.9	70.9	64.1	66.3		73.5		73.6	
Vehicle Noise:	74.3	72.3	66.3	67.5		74.8		75.0	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA		55 dBA			
	Ldn:	109	234	505		1,087			
	CNEL:	111	240	518		1,115			
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 15,211 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,521 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType Day Evening Night Daily			
				Autos: 73.2% 8.1% 18.6% 89.22%			
				Medium Trucks: 82.2% 3.9% 14.0% 2.61%			
				Heavy Trucks: 76.5% 4.0% 19.5% 8.17%			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Noise Source Elevations (in feet)			
				Autos: 0.000			
				Medium Trucks: 2.297			
				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 46.400			
				Medium Trucks: 46.209			
				Heavy Trucks: 46.228			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.51	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-15.84	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-10.89	0.41	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.1	65.0	61.5	60.3	67.6	67.9	
Medium Trucks:	62.8	61.2	53.9	54.7	62.6	62.7	
Heavy Trucks:	72.6	70.6	63.8	65.9	73.2	73.3	
Vehicle Noise:	74.0	72.0	66.1	67.2	74.5	74.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			104	224	483	1,041	
CNEL:			107	230	495	1,067	

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,239 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,024 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.30%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.72%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.98%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.091				
Road Grade: 0.0%					Medium Trucks: 43.890				
Left View: -90.0 degrees					Heavy Trucks: 43.909				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.68	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-14.43	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-9.24	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.7	66.5	63.0	61.8	69.1	69.4			
Medium Trucks:	64.6	62.9	55.6	56.5	64.3	64.5			
Heavy Trucks:	74.6	72.6	65.8	67.9	75.2	75.3			
Vehicle Noise:	75.9	73.9	67.9	69.1	76.4	76.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			160	345	744	1,603			
CNEL:			164	354	763	1,643			

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,279 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,028 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.10%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.60%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.30%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.091				
Road Grade: 0.0%					Medium Trucks: 43.890				
Left View: -90.0 degrees					Heavy Trucks: 43.909				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.22	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-17.57	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-12.53	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.6	60.1	58.9	66.2	66.5			
Medium Trucks:	61.4	59.8	52.5	53.3	61.2	61.3			
Heavy Trucks:	71.3	69.3	62.5	64.6	71.9	72.0			
Vehicle Noise:	72.7	70.7	64.7	65.9	73.2	73.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			98	211	455	981			
CNEL:			101	217	467	1,006			

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: 20th St. Road Segment: e/o Rubidoux Bl.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,783 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,078 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.64%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.67%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.70%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.52	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-12.70	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.56	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.1	68.0	64.4	63.3	70.6	70.8			
Medium Trucks:	65.9	64.2	57.0	57.8	65.6	65.8			
Heavy Trucks:	75.8	73.9	67.1	69.2	76.4	76.6			
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
			Ldn: 163	352	758	1,633			
			CNEL: 167	361	777	1,674			
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,549 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,755 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 87.89%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.78%				
					Heavy Trucks: 76.5% 4.0% 19.5% 9.33%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.00	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.00	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.74	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.6	63.9	56.7	57.5	65.3	65.5			
Heavy Trucks:	75.7	73.7	66.9	69.0	76.3	76.4			
Vehicle Noise:	76.9	75.0	68.9	70.2	77.5	77.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			157	339	730	1,572			
CNEL:			161	347	748	1,611			

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,336 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,634 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 88.38%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.71%				
Centerline Dist. to Barrier: 50.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.91%				
Centerline Dist. to Observer: 50.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 46.915				
Right View: 90.0 degrees					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.23	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-11.90	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-6.73	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.7	65.1	64.0	71.3	71.6			
Medium Trucks:	66.7	65.0	57.8	58.6	66.4	66.6			
Heavy Trucks:	76.7	74.7	67.9	70.0	77.3	77.4			
Vehicle Noise:	78.0	76.0	70.0	71.2	78.5	78.7			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	185		398		857		1,847		
CNEL:	189		408		879		1,894		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1 Road Name: Market St. Road Segment: e/o Rivera St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,917 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,992 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 88.49%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.70%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.82%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.147				
					Medium Trucks: 43.947				
					Heavy Trucks: 43.966				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.64	0.71	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-11.52	0.74	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-6.37	0.73	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.6	69.5	65.9	64.8	72.1	72.4			
Medium Trucks:	67.5	65.8	58.6	59.4	67.2	67.4			
Heavy Trucks:	77.4	75.5	68.7	70.8	78.0	78.2			
Vehicle Noise:	78.8	76.8	70.8	72.0	79.3	79.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			208	448	965	2,079			
CNEL:			213	459	989	2,131			

Wednesday, October 19, 2021

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		44,507 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		4,451 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph		Vehicle Mix				
Near/Far Lane Distance:		48 feet		VehicleType				
Site Data				Day				
Barrier Height:		0.0 feet		Evening				
Barrier Type (0-Wall, 1-Berm):		0.0		Night				
Centerline Dist. to Barrier:		52.0 feet		Daily				
Centerline Dist. to Observer:		52.0 feet		Autos: 73.2% 8.1% 18.6% 89.84%				
Barrier Distance to Observer:		0.0 feet		Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Observer Height (Above Pad):		5.0 feet		Heavy Trucks: 76.5% 4.0% 19.5% 7.66%				
Pad Elevation:		0.0 feet		Noise Source Elevations (in feet)				
Road Elevation:		0.0 feet		Autos: 0.000				
Road Grade:		0.0%		Medium Trucks: 2.297				
Left View:		-90.0 degrees		Heavy Trucks: 8.004				
Right View:		90.0 degrees		Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 46.400				
				Medium Trucks: 46.209				
				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:		66.51	4.69	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:		77.72	-10.86	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:		82.99	-6.00	0.41	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:		70.4	68.2	64.7	63.5	70.9	71.1	
Medium Trucks:		66.1	64.4	57.2	58.0	65.8	66.0	
Heavy Trucks:		76.2	74.2	67.4	69.6	76.8	76.9	
Vehicle Noise:		77.5	75.6	69.6	70.8	78.1	78.2	
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			179	386	831	1,791		
CNEL:			184	396	852	1,836		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,173 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,917 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.28%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.58%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.14%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 4.11 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -11.27 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -6.29 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 69.8 67.7 64.1 63.0 70.3 70.6									
Medium Trucks: 65.7 64.0 56.7 57.6 65.4 65.5									
Heavy Trucks: 75.9 74.0 67.2 69.3 76.5 76.6									
Vehicle Noise: 77.2 75.2 69.2 70.4 77.7 77.9									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				170	366	788	1,697		
CNEL:				174	375	807	1,739		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		32,277 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,228 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	89.16%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.60%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	8.25%
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		46.400			
Road Grade:		0.0%			Medium Trucks:		46.209			
Left View:		-90.0 degrees			Heavy Trucks:		46.228			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REML	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	3.26	0.38	-1.20	-4.66	0.000	0.000	0.000		
Medium Trucks:	77.72	-12.09	0.41	-1.20	-4.87	0.000	0.000	0.000		
Heavy Trucks:	82.99	-7.07	0.41	-1.20	-5.41	0.000	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	69.0	66.8	63.3	62.1	69.4	69.7				
Medium Trucks:	64.8	63.2	55.9	56.7	64.6	64.7				
Heavy Trucks:	75.1	73.2	66.4	68.5	75.7	75.9				
Vehicle Noise:	76.4	74.4	68.4	69.6	76.9	77.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			150	324	697	1,502				
CNEL:			154	332	714	1,539				

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 32,812 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,281 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 88.98%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
				Heavy Trucks: 76.5% 4.0% 19.5% 8.40%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos: 66.51 3.33 0.38 -1.20 -4.66 0.000 0.000								
Medium Trucks: 77.72 -11.98 0.41 -1.20 -4.87 0.000 0.000								
Heavy Trucks: 82.99 -6.92 0.41 -1.20 -5.41 0.000 0.000								
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos: 69.0 66.9 63.3 62.2 69.5 69.8								
Medium Trucks: 64.9 63.3 56.0 56.9 64.7 64.8								
Heavy Trucks: 75.3 73.3 66.5 68.6 75.9 76.0								
Vehicle Noise: 76.5 74.6 68.5 69.8 77.0 77.2								
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			153	330	712	1,533		
CNEL:			157	338	729	1,571		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		30,172 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,017 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.96%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.61%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.43%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.99	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-13.33	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.24	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.2	65.7	64.5	71.9	72.1
Medium Trucks:	66.9	65.2	58.0	58.8	66.6	66.8
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1
Vehicle Noise:	77.9	75.9	70.0	71.1	78.4	78.6
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	189	408	878	1,892		
CNEL:	194	418	901	1,942		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		32,547 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,255 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos:		73.2%	8.1%	18.6%	88.15%
				Medium Trucks:		82.2%	3.9%	14.0%	2.73%
				Heavy Trucks:		76.5%	4.0%	19.5%	9.12%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Medium Trucks:		2.297							
Heavy Trucks:		8.004		Grade Adjustment:		0.0			
Lane Equivalent Distance (in feet)									
Autos:		54.129							
Medium Trucks:		53.966							
Heavy Trucks:		53.982							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.28	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.82	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.57	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.1	71.4
Medium Trucks:	66.4	64.7	57.5	58.3	66.1	66.3
Heavy Trucks:	76.0	74.0	67.2	69.4	76.6	76.7
Vehicle Noise:	77.5	75.5	69.6	70.7	78.0	78.2
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	201	433	933	2,011		
CNEL:	206	444	957	2,062		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o Production Circle				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		32,615 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		3,262 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph		Vehicle Mix				
Near/Far Lane Distance:		48 feet		VehicleType		Day	Evening	Night
Site Data								
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%
Centerline Dist. to Observer:		59.0 feet						
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet		Autos:		0.000		
Pad Elevation:		0.0 feet		Medium Trucks:		2.297		
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		
Road Grade:		0.0%				Grade Adjustment: 0.0		
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)				
Right View:		90.0 degrees		Autos:		54.129		
				Medium Trucks:		53.966		
				Heavy Trucks:		53.982		
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	2.30	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-12.85	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-7.60	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.2	71.4
Medium Trucks:	66.3	64.7	57.4	58.3	66.1	66.2
Heavy Trucks:	76.0	74.0	67.2	69.3	76.6	76.7
Vehicle Noise:	77.4	75.5	69.5	70.7	78.0	78.1
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	200	432	930	2,004		
CNEL:	206	443	954	2,055		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		25,917 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,592 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph		Vehicle Mix				
Near/Far Lane Distance:		48 feet		VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 88.62%				
Barrier Height:		0.0 feet		Medium Trucks: 82.2% 3.9% 14.0% 2.67%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 76.5% 4.0% 19.5% 8.72%				
Centerline Dist. to Barrier:		59.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		59.0 feet		Autos:		0.000		
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet		Autos:		54.129		
Road Grade:		0.0%		Medium Trucks:		53.966		
Left View:		-90.0 degrees		Heavy Trucks:		53.982		
Right View:		90.0 degrees						
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.32	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-13.90	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-8.76	-0.60	-1.20	-5.35	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.6	64.0	62.9	70.2	70.4
Medium Trucks:	65.3	63.7	56.4	57.2	65.0	65.2
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	76.3	74.4	68.5	69.6	76.9	77.0
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	169	364	784	1,690		
CNEL:	173	373	805	1,733		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 24th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,673 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,667 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 59.0 feet					Daily				
Centerline Dist. to Observer: 59.0 feet					Autos: 73.2% 8.1% 18.6% 88.65%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.69%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.44	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.78	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.65	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.8	67.7	64.2	63.0	70.3	70.6			
Medium Trucks:	65.4	63.8	56.5	57.3	65.2	65.3			
Heavy Trucks:	74.9	73.0	66.2	68.3	75.5	75.7			
Vehicle Noise:	76.5	74.5	68.6	69.7	77.0	77.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				172	370	798	1,719		
CNEL:				176	380	819	1,764		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,524 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,752 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.69%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.65%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.58	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.65	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.53	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.0	67.8	64.3	63.1	70.4	70.7			
Medium Trucks:	65.5	63.9	56.6	57.5	65.3	65.4			
Heavy Trucks:	75.0	73.1	66.3	68.4	75.7	75.8			
Vehicle Noise:	76.6	74.6	68.7	69.8	77.1	77.3			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	175	378	813	1,752					
CNEL:	180	387	834	1,798					
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,820 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,882 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.74%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.61%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.78	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.46	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.35	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.2	68.0	64.5	63.3	70.6	70.9			
Medium Trucks:	65.7	64.1	56.8	57.6	65.5	65.6			
Heavy Trucks:	75.2	73.3	66.5	68.6	75.8	76.0			
Vehicle Noise:	76.8	74.8	68.9	70.0	77.3	77.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				180	388	837	1,803		
CNEL:				185	398	859	1,850		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,835 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,784 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.83%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.67%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 1.68 -0.62 -1.20 -4.69 0.000 0.000									
Medium Trucks: 81.00 -13.87 -0.60 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 85.38 -9.00 -0.60 -1.20 -5.35 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 70.1 67.9 64.4 63.2 70.5 70.8									
Medium Trucks: 65.3 63.7 56.4 57.2 65.1 65.2									
Heavy Trucks: 74.6 72.6 65.8 67.9 75.2 75.3									
Vehicle Noise: 76.3 74.3 68.5 69.5 76.8 76.9									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			167	359	774	1,667			
CNEL:			171	369	794	1,711			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 34th St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		21,033 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,103 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph		Vehicle Mix				
Near/Far Lane Distance:		48 feet						
Site Data				VehicleType				
Barrier Height:		0.0 feet		Autos:		73.2%		
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		8.1%		
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		18.6%		
Centerline Dist. to Observer:		59.0 feet				89.80%		
Barrier Distance to Observer:		0.0 feet				14.0%		
Observer Height (Above Pad):		5.0 feet				2.50%		
Pad Elevation:		0.0 feet				7.70%		
Road Elevation:		0.0 feet		Noise Source Elevations (in feet)				
Road Grade:		0.0%						
Left View:		-90.0 degrees		Autos:		0.000		
Right View:		90.0 degrees		Medium Trucks:		2.297		
				Heavy Trucks:		8.004		
						Grade Adjustment: 0.0		
				Lane Equivalent Distance (in feet)				
				Autos:		54.129		
				Medium Trucks:		53.966		
				Heavy Trucks:		53.982		
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:		70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:		81.00	-15.09	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:		85.38	-10.20	-0.60	-1.20	-5.35	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:		68.9	66.7	63.2	62.0	69.3	69.6	
Medium Trucks:		64.1	62.5	55.2	56.0	63.8	64.0	
Heavy Trucks:		73.4	71.4	64.6	66.7	74.0	74.1	
Vehicle Noise:		75.1	73.1	67.2	68.3	75.6	75.7	
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			139	298	643	1,385		
CNEL:			142	306	660	1,422		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 7,751 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 775 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 11 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.27%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.41%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.32%				
Centerline Dist. to Barrier: 30.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 30.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 29.912				
Road Grade: 0.0%					Medium Trucks: 29.615				
Left View: -90.0 degrees					Heavy Trucks: 29.644				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 -2.88 3.24 -1.20 -4.49 0.000 0.000									
Medium Trucks: 77.72 -18.62 3.31 -1.20 -4.86 0.000 0.000									
Heavy Trucks: 82.99 -13.79 3.30 -1.20 -5.77 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 65.7 63.5 60.0 58.8 66.2 66.4									
Medium Trucks: 61.2 59.6 52.3 53.1 60.9 61.1									
Heavy Trucks: 71.3 69.4 62.6 64.7 71.9 72.0									
Vehicle Noise: 72.7 70.7 64.7 65.9 73.2 73.4									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				49	106	228	490		
CNEL:				50	108	233	503		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		10,214 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		1,021 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		30 mph			Vehicle Mix				
Near/Far Lane Distance:		12 feet							
Site Data					Autos: 73.2% 8.1% 18.6% 90.00%				
Barrier Height:		0.0 feet			Medium Trucks:		82.2% 3.9% 14.0% 2.47%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5% 4.0% 19.5% 7.52%		
Centerline Dist. to Barrier:		33.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		33.0 feet							
Barrier Distance to Observer:		0.0 feet			Autos:		0.000		
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297		
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%							
Left View:		-90.0 degrees			Autos:		32.833		
Right View:		90.0 degrees			Medium Trucks:		32.562		
					Heavy Trucks:		32.589		
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		61.75	-0.44	2.64	-1.20	-4.52	0.000	0.000	
Medium Trucks:		73.48	-16.05	2.69	-1.20	-4.86	0.000	0.000	
Heavy Trucks:		79.92	-11.22	2.69	-1.20	-5.69	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		62.7	60.6	57.1	55.9	63.2	63.5		
Medium Trucks:		58.9	57.3	50.0	50.8	58.7	58.8		
Heavy Trucks:		70.2	68.2	61.4	63.6	70.8	70.9		
Vehicle Noise:		71.2	69.2	63.0	64.4	71.7	71.9		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				43	92	199	429		
CNEL:				44	95	204	439		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,812 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,081 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.81%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.51%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.68%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.772				
Road Grade: 0.0%					Medium Trucks: 54.610				
Left View: -90.0 degrees					Heavy Trucks: 54.626				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 4.32 -0.70 -1.20 -4.69 0.000 0.000									
Medium Trucks: 77.72 -11.22 -0.68 -1.20 -4.88 0.000 0.000									
Heavy Trucks: 82.99 -6.36 -0.68 -1.20 -5.34 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.9 66.8 63.3 62.1 69.4 69.7									
Medium Trucks: 64.6 63.0 55.7 56.5 64.3 64.5									
Heavy Trucks: 74.7 72.8 66.0 68.1 75.4 75.5									
Vehicle Noise: 76.1 74.1 68.1 69.3 76.6 76.8									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			165	356	767	1,653			
CNEL:			170	365	787	1,695			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.			Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS					
Highway Data			Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 46,352 vehicles			Autos: 15					
Peak Hour Percentage: 10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,635 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 50 feet								
Site Data			Vehicle Mix					
Barrier Height: 0.0 feet			VehicleType	Day	Evening	Night	Daily	
Barrier Type (0-Wall, 1-Berm): 0.0			Autos:		73.2%	8.1%	18.6%	89.36%
Centerline Dist. to Barrier: 60.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.58%
Centerline Dist. to Observer: 60.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	8.06%
Barrier Distance to Observer: 0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad): 5.0 feet			Autos:		0.000			
Pad Elevation: 0.0 feet			Medium Trucks:		2.297			
Road Elevation: 0.0 feet			Heavy Trucks:		8.004			
Road Grade: 0.0%			Grade Adjustment: 0.0					
Left View: -90.0 degrees			Lane Equivalent Distance (in feet)					
Right View: 90.0 degrees			Autos:		54.772			
			Medium Trucks:		54.610			
			Heavy Trucks:		54.626			
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	3.88	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-11.52	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-6.57	-0.68	-1.20	-5.34	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.2	70.0	66.5	65.3	72.7	72.9
Medium Trucks:	67.6	66.0	58.7	59.5	67.3	67.5
Heavy Trucks:	76.9	75.0	68.2	70.3	77.5	77.7
Vehicle Noise:	78.5	76.6	70.7	71.8	79.1	79.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		241	519	1,119	2,410	
CNEL:		247	533	1,148	2,473	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		42,964 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		4,296 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		52 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos:		73.2%	8.1%	18.6%	89.32%
					Medium Trucks:		82.2%	3.9%	14.0%	2.58%
					Heavy Trucks:		76.5%	4.0%	19.5%	8.09%
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.004 Grade Adjustment: 0.0			
					Lane Equivalent Distance (in feet)					
					Autos:		45.310			
					Medium Trucks:		45.114			
					Heavy Trucks:		45.133			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	3.55	0.54	-1.20	-4.66	0.000	0.000			
Medium Trucks:	81.00	-11.84	0.57	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	85.38	-6.88	0.56	-1.20	-5.41	0.000	0.000			

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.1	70.9	67.4	66.2	73.6	73.8
Medium Trucks:	68.5	66.9	59.6	60.4	68.3	68.4
Heavy Trucks:	77.9	75.9	69.1	71.2	78.5	78.6
Vehicle Noise:	79.5	77.5	71.6	72.7	80.0	80.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		241	519	1,117	2,407	
CNEL:		247	532	1,147	2,470	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		34,607 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,461 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		55 mph		Vehicle Mix					
Near/Far Lane Distance:		52 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	89.20%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.60%
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.20%
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		45.310			
FHWA Noise Model Calculations				Medium Trucks:		45.114			
				Heavy Trucks:		45.133			
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.19	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-13.17	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-8.18	0.56	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.3	71.2	67.6	66.5	73.8	74.1
Medium Trucks:	68.6	67.0	59.7	60.5	68.3	68.5
Heavy Trucks:	77.6	75.6	68.8	70.9	78.2	78.3
Vehicle Noise:	79.3	77.4	71.6	72.6	79.8	80.0
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		236	508	1,094	2,358	
CNEL:		242	521	1,123	2,420	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,426 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,943 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.29%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.59%				
				Heavy Trucks: 76.5% 4.0% 19.5% 8.13%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	2.76	0.54	-1.20	-4.66	0.000	0.000	
Medium Trucks:	82.40	-12.62	0.57	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	86.40	-7.65	0.56	-1.20	-5.41	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.9	71.7	68.2	67.0	74.3	74.6
Medium Trucks:	69.1	67.5	60.2	61.1	68.9	69.0
Heavy Trucks:	78.1	76.2	69.4	71.5	78.7	78.8
Vehicle Noise:	79.9	77.9	72.1	73.1	80.4	80.6
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		256	552	1,189	2,561	
CNEL:		263	566	1,220	2,629	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,605 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,060 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.61%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.54%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.85%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 45.310				
Road Grade: 0.0%					Medium Trucks: 45.114				
Left View: -90.0 degrees					Heavy Trucks: 45.133				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.34	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-14.14	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-9.24	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.0	61.5	60.3	67.7	67.9			
Medium Trucks:	62.9	61.3	54.0	54.9	62.7	62.8			
Heavy Trucks:	73.1	71.2	64.4	66.5	73.7	73.9			
Vehicle Noise:	74.4	72.5	66.4	67.7	75.0	75.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				111	240	516	1,112		
CNEL:				114	246	529	1,140		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,902 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,490 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.75% Medium Trucks: 82.2% 3.9% 14.0% 2.52% Heavy Trucks: 76.5% 4.0% 19.5% 7.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.06	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-15.58	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-10.71	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.6	60.1	58.9	66.3	66.5			
Medium Trucks:	61.5	59.9	52.6	53.4	61.2	61.4			
Heavy Trucks:	71.7	69.7	62.9	65.0	72.3	72.4			
Vehicle Noise:	73.0	71.0	65.0	66.2	73.5	73.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				89	192	413	889		
CNEL:				91	196	423	912		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1A Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		14,016 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,402 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.06%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.46%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 7.48%					
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004 Grade Adjustment: 0.0			
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		46.400			
Road Grade:		0.0%			Medium Trucks:		46.209			
Left View:		-90.0 degrees			Heavy Trucks:		46.228			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-1.28	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	81.00	-16.92	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	85.38	-12.09	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	68.1	66.0	62.4	61.3	68.6	68.9				
Medium Trucks:	63.3	61.6	54.4	55.2	63.0	63.2				
Heavy Trucks:	72.5	70.5	63.7	65.9	73.1	73.2				
Vehicle Noise:	74.2	72.2	66.4	67.4	74.7	74.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				107	231	498	1,073			
CNEL:				110	237	511	1,101			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,390 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,139 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.95%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.49%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.57%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.19	0.38	-1.20	-4.66	0.000	0.000	0.000	
Medium Trucks:	81.00	-17.77	0.41	-1.20	-4.87	0.000	0.000	0.000	
Heavy Trucks:	85.38	-12.94	0.41	-1.20	-5.41	0.000	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.1	61.5	60.4	67.7	67.9			
Medium Trucks:	62.4	60.8	53.5	54.4	62.2	62.3			
Heavy Trucks:	71.6	69.7	62.9	65.0	72.2	72.4			
Vehicle Noise:	73.3	71.4	65.6	66.6	73.9	74.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			94	202	436	939			
CNEL:			96	208	448	964			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: OY 2020 With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.			Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,364 vehicles			Autos: 15				
Peak Hour Percentage: 10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume: 836 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph							
Near/Far Lane Distance: 36 feet							
Site Data			Vehicle Mix				
Barrier Height: 0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0			Autos: 73.2% 8.1% 18.6% 89.12%				
Centerline Dist. to Barrier: 44.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
Centerline Dist. to Observer: 44.0 feet			Heavy Trucks: 76.5% 4.0% 19.5% 8.27%				
Barrier Distance to Observer: 0.0 feet							
Observer Height (Above Pad): 5.0 feet							
Pad Elevation: 0.0 feet							
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
			Noise Source Elevations (in feet)				
			Autos: 0.000				
			Medium Trucks: 2.297				
			Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			Lane Equivalent Distance (in feet)				
			Autos: 40.460				
			Medium Trucks: 40.241				
			Heavy Trucks: 40.262				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.60	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-17.93	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-12.93	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.0	61.8	58.3	57.1	64.5	64.7
Medium Trucks:	59.9	58.3	51.0	51.8	59.6	59.8
Heavy Trucks:	70.2	68.2	61.4	63.5	70.8	70.9
Vehicle Noise:	71.4	69.5	63.4	64.7	72.0	72.1
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		59	128	276	594	
CNEL:		61	131	282	608	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,154 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 515 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 44.0 feet					Daily				
Centerline Dist. to Observer: 44.0 feet					Autos: 73.2% 8.1% 18.6% 90.00%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.47%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.52%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-4.66	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	59.8	56.3	55.1	62.4	62.7
Medium Trucks:	57.6	55.9	48.6	49.5	57.3	57.4
Heavy Trucks:	67.7	65.7	58.9	61.0	68.3	68.4
Vehicle Noise:	69.0	67.0	61.0	62.2	69.5	69.7
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		41	88	190	410	
CNEL:		42	90	195	420	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Jurupa Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,363 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		736 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data									
Barrier Height:		0.0 feet		Vehicle Type		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2%	8.1%	18.6%	90.15%
Centerline Dist. to Barrier:		52.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.44%
Centerline Dist. to Observer:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	7.41%
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet		Autos:		0.000			
Road Grade:		0.0%		Medium Trucks:		2.297			
Left View:		-90.0 degrees		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Right View:		90.0 degrees		Lane Equivalent Distance (in feet)					
				Autos:		46.400			
				Medium Trucks:		46.209			
				Heavy Trucks:		46.228			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-3.11	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-18.78	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-13.96	0.41	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	60.4	56.9	55.7	63.1	63.3
Medium Trucks:	58.1	56.5	49.2	50.1	57.9	58.0
Heavy Trucks:	68.2	66.3	59.5	61.6	68.8	69.0
Vehicle Noise:	69.6	67.6	61.7	62.8	70.1	70.3
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		53	114	246	531	
CNEL:		54	117	253	544	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: OY 2020 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,577 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,458 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 85.29%				
				Medium Trucks: 82.2% 3.9% 14.0% 3.08%				
				Heavy Trucks: 76.5% 4.0% 19.5% 11.62%				
				Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-0.89	1.28	-1.20	-4.61	0.000	0.000	
Medium Trucks:	79.45	-15.31	1.31	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-9.55	1.31	-1.20	-5.50	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	65.5	62.0	60.8	68.1	68.4
Medium Trucks:	64.3	62.6	55.3	56.2	64.0	64.1
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	75.9	73.9	67.7	69.1	76.4	76.6
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		118	254	547	1,178	
CNEL:		121	260	560	1,206	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 7,739 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 774 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 86.89%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.85%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.26%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.56	1.28	-1.20	-4.61	0.000		0.000	
Medium Trucks:	79.45	-18.40	1.31	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-12.84	1.31	-1.20	-5.50	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	65.0	62.8	59.3	58.1		65.4		65.7	
Medium Trucks:	61.2	59.5	52.2	53.1		60.9		61.1	
Heavy Trucks:	71.5	69.6	62.8	64.9		72.1		72.3	
Vehicle Noise:	72.7	70.7	64.6	65.9		73.2		73.4	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				72	156	335	723		
CNEL:				74	160	344	740		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		5,202 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		520 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		45 mph			Vehicle Mix				
Near/Far Lane Distance:		36 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6% 92.48%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0% 1.86%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5% 5.66%
Centerline Dist. to Barrier:		44.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		44.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		
Pad Elevation:		0.0 feet			Grade Adjustment:		0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos:		40.460		
Left View:		-90.0 degrees			Medium Trucks:		40.241		
Right View:		90.0 degrees			Heavy Trucks:		40.262		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-5.02	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	63.5	61.4	57.8	56.7	64.0		64.3		
Medium Trucks:	57.6	55.9	48.7	49.5	57.3		57.5		
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8		68.0		
Vehicle Noise:	69.1	67.1	61.4	62.3	69.6		69.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				41	89	192	413		
CNEL:				42	91	197	424		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 15,918 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,592 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph					Vehicle Mix					
Near/Far Lane Distance: 36 feet					Vehicle Type					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Day		Evening		Night	
					Autos: 73.2%		8.1%		18.6%	
					Medium Trucks: 82.2%		3.9%		14.0%	
					Heavy Trucks: 76.5%		4.0%		19.5%	
					Grade Adjustment: 0.0					
					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.004					
					Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 46.915					
					Medium Trucks: 46.726					
					Heavy Trucks: 46.744					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-0.41	0.31	-1.20	-4.65	0.000	0.000			
Medium Trucks:	79.45	-15.16	0.34	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-9.89	0.34	-1.20	-5.43	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	67.2	65.0	61.5	60.3	67.6	67.9				
Medium Trucks:	63.4	61.8	54.5	55.3	63.2	63.3				
Heavy Trucks:	73.5	71.5	64.7	66.9	74.1	74.2				
Vehicle Noise:	74.7	72.8	66.7	68.0	75.3	75.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				112	241	520	1,121			
CNEL:				115	247	533	1,149			
Thursday, October 18, 2018										

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,918 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,592 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.25%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.92%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 9.83%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.41	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-15.16	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.89	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.0	61.5	60.3	67.6	67.9			
Medium Trucks:	63.4	61.8	54.5	55.3	63.2	63.3			
Heavy Trucks:	73.5	71.5	64.7	66.9	74.1	74.2			
Vehicle Noise:	74.7	72.8	66.7	68.0	75.3	75.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			112	241	520	1,121			
CNEL:			115	247	533	1,149			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 15,585 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,559 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 52.0 feet					Daily				
Centerline Dist. to Observer: 52.0 feet					Autos: 73.2% 8.1% 18.6% 89.16%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.61%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 8.23%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.41	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-15.75	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.76	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	67.2	65.1	61.6	60.4	67.7		68.0		
Medium Trucks:	62.9	61.3	54.0	54.8	62.6		62.8		
Heavy Trucks:	72.7	70.7	63.9	66.1	73.3		73.4		
Vehicle Noise:	74.1	72.2	66.2	67.4	74.6		74.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				106	229	493	1,061		
CNEL:				109	235	505	1,089		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.					Project Name: Agua Mansa Job Number: 11215								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt): 15,604 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,560 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15								
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix								
					VehicleType					Day	Evening	Night	Daily
					Autos:					73.2%	8.1%	18.6%	86.97%
					Medium Trucks:					82.2%	3.9%	14.0%	3.00%
					Heavy Trucks:					76.5%	4.0%	19.5%	10.03%
					Noise Source Elevations (in feet)								
					Autos:					0.000			
Medium Trucks:					2.297								
Heavy Trucks:					8.004 Grade Adjustment: 0.0								
Lane Equivalent Distance (in feet)					Autos:					46.400			
					Medium Trucks:					46.209			
					Heavy Trucks:					46.228			
FHWA Noise Model Calculations													
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	68.46	-0.51	0.38	-1.20	-4.66	0.000	0.000						
Medium Trucks:	79.45	-15.14	0.41	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	84.25	-9.89	0.41	-1.20	-5.41	0.000	0.000						
Unmitigated Noise Levels (without Topo and barrier attenuation)													
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL						
Autos:	67.1	65.0	61.5	60.3	67.6		67.9						
Medium Trucks:	63.5	61.9	54.6	55.4	63.3		63.4						
Heavy Trucks:	73.6	71.6	64.8	66.9	74.2		74.3						
Vehicle Noise:	74.8	72.8	66.7	68.0	75.3		75.5						
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				118	253	546	1,176						
CNEL:				121	260	560	1,206						
Thursday, October 18, 2018													

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,239 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,024 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.30%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.72%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.98%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 44.091				
					Medium Trucks: 43.890				
					Heavy Trucks: 43.909				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.68	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-14.43	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-9.24	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	68.7	66.5	63.0	61.8	69.1		69.4		
Medium Trucks:	64.6	62.9	55.6	56.5	64.3		64.5		
Heavy Trucks:	74.6	72.6	65.8	67.9	75.2		75.3		
Vehicle Noise:	75.9	73.9	67.9	69.1	76.4		76.6		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				160	345	744	1,603		
CNEL:				164	354	763	1,643		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,279 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,028 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 82 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.10%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.60%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.30%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 44.091				
					Medium Trucks: 43.890				
					Heavy Trucks: 43.909				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.22	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-17.57	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-12.53	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	65.8	63.6	60.1	58.9	66.2		66.5		
Medium Trucks:	61.4	59.8	52.5	53.3	61.2		61.3		
Heavy Trucks:	71.3	69.3	62.5	64.6	71.9		72.0		
Vehicle Noise:	72.7	70.7	64.7	65.9	73.2		73.4		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				98	211	455	981		
CNEL:				101	217	467	1,006		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: 20th St. Road Segment: e/o Rubidoux Bl.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,525 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,053 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 88.79%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.64%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.57%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
Autos: 46.915									
Medium Trucks: 46.726									
Heavy Trucks: 46.744									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.49	0.31	-1.20	-4.65	0.000			0.000
Medium Trucks:	79.45	-12.77	0.34	-1.20	-4.87	0.000			0.000
Heavy Trucks:	84.25	-7.66	0.34	-1.20	-5.43	0.000			0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	70.1	67.9	64.4	63.2		70.5			70.8
Medium Trucks:	65.8	64.2	56.9	57.7		65.5			65.7
Heavy Trucks:	75.7	73.8	67.0	69.1		76.3			76.5
Vehicle Noise:	77.1	75.1	69.1	70.3		77.6			77.8
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:		161	347	748	1,612				
CNEL:		165	356	767	1,653				

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,549 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,755 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos:	73.2%	8.1%	18.6%	87.89%	
				Medium Trucks:	82.2%	3.9%	14.0%	2.78%	
				Heavy Trucks:	76.5%	4.0%	19.5%	9.33%	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Noise Source Elevations (in feet)					
				Autos:	0.000				
				Medium Trucks:	2.297				
				Heavy Trucks:	8.004	Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)					
				Autos:	46.915				
				Medium Trucks:	46.726				
				Heavy Trucks:	46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.00	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.00	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.74	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.6	63.9	56.7	57.5	65.3	65.5			
Heavy Trucks:	75.7	73.7	66.9	69.0	76.3	76.4			
Vehicle Noise:	76.9	75.0	68.9	70.2	77.5	77.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			157	339	730	1,572			
CNEL:			161	347	748	1,611			

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,336 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,634 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.38%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.71%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.91%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.23	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-11.90	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-6.73	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.7	65.1	64.0	71.3	71.6			
Medium Trucks:	66.7	65.0	57.8	58.6	66.4	66.6			
Heavy Trucks:	76.7	74.7	67.9	70.0	77.3	77.4			
Vehicle Noise:	78.0	76.0	70.0	71.2	78.5	78.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				185	398	857	1,847		
CNEL:				189	408	879	1,894		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: OY 2020 With Alt 1A Road Name: Market St. Road Segment: e/o Rivera St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,917 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,992 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 88.49%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.70%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.82%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
<th colspan="5">Lane Equivalent Distance (in feet)</th>					Lane Equivalent Distance (in feet)				
					Autos: 44.147				
					Medium Trucks: 43.947				
					Heavy Trucks: 43.966				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 3.64 0.71 -1.20 -4.65 0.000 0.000									
Medium Trucks: 79.45 -11.52 0.74 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -6.37 0.73 -1.20 -5.43 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 71.6 69.5 65.9 64.8 72.1 72.4									
Medium Trucks: 67.5 65.8 58.6 59.4 67.2 67.4									
Heavy Trucks: 77.4 75.5 68.7 70.8 78.0 78.2									
Vehicle Noise: 78.8 76.8 70.8 72.0 79.3 79.4									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				208	448	965	2,079		
CNEL:				213	459	989	2,131		

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 46,297 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,630 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)				
					Autos:	46.400			
					Medium Trucks:	46.209			
					Heavy Trucks:	46.228			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	4.87	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-10.69	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-5.86	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.6	68.4	64.9	63.7	71.0	71.3			
Medium Trucks:	66.2	64.6	57.3	58.1	66.0	66.1			
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1			
Vehicle Noise:	77.7	75.7	69.7	70.9	78.2	78.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				183	395	850	1,832		
CNEL:				188	405	872	1,878		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,699 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,770 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.97	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-11.58	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-6.75	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.7	67.5	64.0	62.8	70.1		70.4		
Medium Trucks:	65.3	63.7	56.4	57.3	65.1		65.2		
Heavy Trucks:	75.4	73.5	66.7	68.8	76.1		76.2		
Vehicle Noise:	76.8	74.8	68.8	70.0	77.3		77.5		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			160	344	741		1,597		
CNEL:			164	353	760		1,638		
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Cedar Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		30,518 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		3,052 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		48 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			Autos:		73.2%		8.1%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%		3.9%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%		4.0%
Centerline Dist. to Observer:		52.0 feet					19.5%		7.60%
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
FHWA Noise Model Calculations					Noise Source Elevations (in feet)				
Vehicle Type		REMEEL		Traffic Flow		Distance		Finite Road	
Autos:		66.51		3.06		0.38		-1.20	
Medium Trucks:		77.72		-12.50		0.41		-1.20	
Heavy Trucks:		82.99		-7.67		0.41		-1.20	
Unmitigated Noise Levels (without Topo and barrier attenuation)					Fresnel <td colspan="2">Barrier Atten</td> <td>Berm Atten</td>		Barrier Atten		Berm Atten
Vehicle Type		Leq Peak Hour		Leq Day		Leq Evening		Leq Night	
Autos:		68.8		66.6		63.1		61.9	
Medium Trucks:		64.4		62.8		55.5		56.3	
Heavy Trucks:		74.5		72.6		65.8		67.9	
Vehicle Noise:		75.9		73.9		67.9		69.1	
Centerline Distance to Noise Contour (in feet)					Ldn		CNEL		
					70 dBA		65 dBA		60 dBA
					139		299		644
					CNEL:		142		306
							660		1,423

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,707 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,071 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 3.08 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 77.72 -12.47 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -7.65 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 68.8 66.6 63.1 61.9 69.3 69.5									
Medium Trucks: 64.5 62.8 55.5 56.4 64.2 64.3									
Heavy Trucks: 74.6 72.6 65.8 67.9 75.2 75.3									
Vehicle Noise: 75.9 73.9 67.9 69.1 76.4 76.6									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			139	300	647	1,393			
CNEL:			143	308	663	1,428			

Wednesday, October 19, 2028

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 Without Project Road Name: Cedar Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,873 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,787 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 48 feet				Vehicle Mix				
				Vehicle Type	Day	Evening	Night	Daily
				Autos:	73.2%	8.1%	18.6%	89.90%
				Medium Trucks:	82.2%	3.9%	14.0%	2.50%
				Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
Site Data				Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet				Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297				
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 8.004				
Centerline Dist. to Observer: 52.0 feet				Grade Adjustment: 0.0				
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 46.400				
Left View: -90.0 degrees				Medium Trucks: 46.209				
Right View: 90.0 degrees				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.69	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:	81.00	-13.86	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	85.38	-9.04	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.1	68.9	65.4	64.2	71.6	71.8		
Medium Trucks:	66.3	64.7	57.4	58.3	66.1	66.2		
Heavy Trucks:	75.6	73.6	66.8	68.9	76.2	76.3		
Vehicle Noise:	77.2	75.3	69.4	70.5	77.8	77.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			171	368	794	1,710		
CNEL:			175	378	815	1,755		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		28,439 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,844 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet		VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		59.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		59.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		54.129			
Road Grade:		0.0%		Medium Trucks:		53.966			
Left View:		-90.0 degrees		Heavy Trucks:		53.982			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.78	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.78	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.95	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.2	68.0	64.5	63.3	70.6	70.9			
Medium Trucks:	65.4	63.8	56.5	57.3	65.2	65.3			
Heavy Trucks:	74.6	72.7	65.9	68.0	75.2	75.4			
Vehicle Noise:	76.3	74.3	68.5	69.5	76.8	77.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			168	363	782	1,684			
CNEL:			173	372	802	1,729			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o Production Circle					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 28,156 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,816 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph					Vehicle Mix					
Near/Far Lane Distance: 48 feet					VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%					
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%					
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000					
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet					Autos: 54.129					
Road Grade: 0.0%					Medium Trucks: 53.966					
Left View: -90.0 degrees					Heavy Trucks: 53.982					
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.74	-0.62	-1.20	-4.69	0.000	0.000			
Medium Trucks:	81.00	-13.82	-0.60	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-8.99	-0.60	-1.20	-5.35	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.1	68.0	64.4	63.3	70.6	70.9				
Medium Trucks:	65.4	63.7	56.5	57.3	65.1	65.3				
Heavy Trucks:	74.6	72.6	65.8	68.0	75.2	75.3				
Vehicle Noise:	76.3	74.3	68.5	69.5	76.8	77.0				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			167	360	776	1,673				
CNEL:			172	370	797	1,717				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		23,621 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,362 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet		VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Barrier:		59.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		59.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		54.129			
Road Grade:		0.0%		Medium Trucks:		53.966			
Left View:		-90.0 degrees		Heavy Trucks:		53.982			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.98	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.58	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.75	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.4	67.2	63.7	62.5	69.8	70.1			
Medium Trucks:	64.6	63.0	55.7	56.5	64.4	64.5			
Heavy Trucks:	73.8	71.9	65.1	67.2	74.4	74.6			
Vehicle Noise:	75.5	73.5	67.7	68.7	76.0	76.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			149	321	691	1,488			
CNEL:			153	329	709	1,527			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 24th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,377 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,438 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.11	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.45	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.62	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn	CNEL		
Autos:	69.5	67.4	63.8	62.7		70.0		70.2	
Medium Trucks:	64.8	63.1	55.8	56.7		64.5		64.6	
Heavy Trucks:	74.0	72.0	65.2	67.3		74.6		74.7	
Vehicle Noise:	75.7	73.7	67.9	68.9		76.2		76.3	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	152	327	705	1,520				
	CNEL:	156	336	724	1,560				
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,227 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,523 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.26	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.30	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.47	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.6	67.5	64.0	62.8	70.1		70.4		
Medium Trucks:	64.9	63.3	56.0	56.8	64.6		64.8		
Heavy Trucks:	74.1	72.2	65.3	67.5	74.7		74.8		
Vehicle Noise:	75.8	73.8	68.0	69.0	76.3		76.5		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			155	335	722	1,555			
CNEL:			160	344	741	1,596			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL												
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215							
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS							
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt): 27,400 vehicles					Autos: 15							
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15							
Peak Hour Volume: 2,740 vehicles					Heavy Trucks (3+ Axles): 15							
Vehicle Speed: 50 mph					Vehicle Mix							
Near/Far Lane Distance: 48 feet					VehicleType							
Site Data					Day		Evening		Night		Daily	
					Autos: 73.2%		8.1%		18.6%		89.90%	
					Medium Trucks: 82.2%		3.9%		14.0%		2.50%	
					Heavy Trucks: 76.5%		4.0%		19.5%		7.60%	
					Noise Source Elevations (in feet)							
					Autos: 0.000							
					Medium Trucks: 2.297							
					Heavy Trucks: 8.004		Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)							
					Autos: 54.129							
					Medium Trucks: 53.966							
					Heavy Trucks: 53.982							
FHWA Noise Model Calculations												
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten					
Autos:	70.20	1.62	-0.62	-1.20	-4.69	0.000	0.000					
Medium Trucks:	81.00	-13.94	-0.60	-1.20	-4.88	0.000	0.000					
Heavy Trucks:	85.38	-9.11	-0.60	-1.20	-5.35	0.000	0.000					
Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	70.0	67.9	64.3	63.2	70.5	70.8						
Medium Trucks:	65.3	63.6	56.3	57.2	65.0	65.2						
Heavy Trucks:	74.5	72.5	65.7	67.8	75.1	75.2						
Vehicle Noise:	76.2	74.2	68.4	69.4	76.7	76.8						
Centerline Distance to Noise Contour (in feet)												
			70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:			164	354	763	1,643						
CNEL:			169	363	783	1,686						
Wednesday, October 17, 2018												

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,778 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,778 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.68	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.88	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-9.05	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.1	67.9	64.4	63.2	70.5	70.8			
Medium Trucks:	65.3	63.7	56.4	57.2	65.1	65.2			
Heavy Trucks:	74.5	72.6	65.8	67.9	75.1	75.3			
Vehicle Noise:	76.2	74.2	68.4	69.4	76.7	76.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			166	357	769	1,658			
CNEL:			170	367	790	1,702			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rubidoux Bl. Road Segment: s/o 34th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,503 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,050 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.36	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-15.20	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.37	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn	CNEL		
Autos:	68.7	66.6	63.1	61.9		69.2	69.5		
Medium Trucks:	64.0	62.4	55.1	55.9		63.7	63.9		
Heavy Trucks:	73.2	71.3	64.4	66.6		73.8	73.9		
Vehicle Noise:	74.9	72.9	67.1	68.1		75.4	75.6		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
		Ldn:	135	292	628	1,354			
		CNEL:	139	299	645	1,390			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 Without Project Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 7,464 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 746 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph					Vehicle Mix					
Near/Far Lane Distance: 11 feet					VehicleType Day Evening Night Daily					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 30.0 feet Centerline Dist. to Observer: 30.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90%					
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%					
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%					
					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 29.912					
					Medium Trucks: 29.615					
Heavy Trucks: 29.644										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-3.06	3.24	-1.20	-4.49	0.000	0.000			
Medium Trucks:	77.72	-18.62	3.31	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	82.99	-13.79	3.30	-1.20	-5.77	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.5	63.4	59.8	58.7	66.0	66.2				
Medium Trucks:	61.2	59.6	52.3	53.1	60.9	61.1				
Heavy Trucks:	71.3	69.4	62.6	64.7	71.9	72.0				
Vehicle Noise:	72.6	70.7	64.7	65.9	73.2	73.3				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			49	105	226	488				
CNEL:			50	108	232	500				
Wednesday, October 17, 2018										

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 Without Project Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,110 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,011 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 30 mph					Vehicle Mix					
Near/Far Lane Distance: 12 feet					Vehicle Type		Day	Evening	Night	Daily
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 33.0 feet Centerline Dist. to Observer: 33.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos:		73.2%	8.1%	18.6%	89.90%
					Medium Trucks:		82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
					Noise Source Elevations (in feet)					
					Autos:		0.000			
Medium Trucks:		2.297								
Heavy Trucks:		32.562		Grade Adjustment: 0.0						
Lane Equivalent Distance (in feet)										
Autos:		32.833								
Medium Trucks:		32.562								
Heavy Trucks:		32.589								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	61.75	-0.49	2.64	-1.20	-4.52	0.000	0.000			
Medium Trucks:	73.48	-16.05	2.69	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	79.92	-11.22	2.69	-1.20	-5.69	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.6	57.0	55.9	63.2	63.4				
Medium Trucks:	58.9	57.3	50.0	50.8	58.7	58.8				
Heavy Trucks:	70.2	68.2	61.4	63.6	70.8	70.9				
Vehicle Noise:	71.2	69.2	63.0	64.4	71.7	71.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			43	92	199	429				
CNEL:			44	95	204	439				
Wednesday, October 17, 2018										

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 49,604 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,960 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType				
					Day				
					Evening				
					Night				
					Daily				
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 54.772				
Left View: -90.0 degrees					Medium Trucks: 54.610				
Right View: 90.0 degrees					Heavy Trucks: 54.626				
FHWA Noise Model Calculations									
VehicleType		REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:		66.51	5.17	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:		77.72	-10.39	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:		82.99	-5.56	-0.68	-1.20	-5.34	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType		Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:		69.8	67.6	64.1	62.9	70.3	70.5		
Medium Trucks:		65.4	63.8	56.5	57.4	65.2	65.3		
Heavy Trucks:		75.6	73.6	66.8	68.9	76.2	76.3		
Vehicle Noise:		76.9	74.9	68.9	70.1	77.4	77.6		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				187	404	869	1,873		
CNEL:				192	414	892	1,921		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 54,989 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 5,499 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 60.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 60.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 54.772				
Left View: -90.0 degrees					Medium Trucks: 54.610				
Right View: 90.0 degrees					Heavy Trucks: 54.626				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	4.65	-0.70	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-10.91	-0.68	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-6.08	-0.68	-1.20	-5.34	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.0	70.8	67.3	66.1	73.4	73.7
Medium Trucks:	68.2	66.6	59.3	60.1	67.9	68.1
Heavy Trucks:	77.4	75.5	68.7	70.8	78.0	78.2
Vehicle Noise:	79.1	77.1	71.3	72.3	79.6	79.8

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	263	566	1,219	2,627
CNEL:	270	581	1,251	2,696

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 43,651 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,365 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet									
Site Data					VehicleType				
Barrier Height: 0.0 feet					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 52.0 feet					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 52.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 45.310				
Left View: -90.0 degrees					Medium Trucks: 45.114				
Right View: 90.0 degrees					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	3.23	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-12.33	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-7.50	0.56	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.3	72.2	68.7	67.5	74.8	75.1
Medium Trucks:	69.4	67.8	60.5	61.4	69.2	69.3
Heavy Trucks:	78.3	76.3	69.5	71.6	78.9	79.0
Vehicle Noise:	80.1	78.2	72.4	73.3	80.6	80.8

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	266	573	1,234	2,658
CNEL:	273	588	1,267	2,730

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Riverside Av. Road Segment: s/o Slower Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		51,021 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		5,102 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		52 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height:		0.0 feet			Medium Trucks:		82.2% 3.9% 14.0% 2.50%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5% 4.0% 19.5% 7.60%		
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos:		45.310		
Road Grade:		0.0%			Medium Trucks:		45.114		
Left View:		-90.0 degrees			Heavy Trucks:		45.133		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	4.32	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-11.24	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-6.41	0.56	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.9	71.7	68.2	67.0	74.3	74.6
Medium Trucks:	69.1	67.5	60.2	61.0	68.9	69.0
Heavy Trucks:	78.3	76.4	69.6	71.7	78.9	79.1
Vehicle Noise:	80.0	78.1	72.2	73.2	80.5	80.7

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	262	565	1,216	2,620
CNEL:	269	579	1,248	2,690

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 Without Project Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		43,651 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		4,365 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		55 mph		Vehicle Mix				
Near/Far Lane Distance:		52 feet		VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height:		0.0 feet		Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		52.0 feet		Autos: 0.000				
Barrier Distance to Observer:		0.0 feet		Medium Trucks: 2.297				
Observer Height (Above Pad):		5.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet		Autos: 45.310				
Road Grade:		0.0%		Medium Trucks: 45.114				
Left View:		-90.0 degrees		Heavy Trucks: 45.133				
Right View:		90.0 degrees						
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	3.23	0.54	-1.20	-4.66	0.000	0.000	
Medium Trucks:	82.40	-12.33	0.57	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	86.40	-7.50	0.56	-1.20	-5.41	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.3	72.2	68.7	67.5	74.8	75.1
Medium Trucks:	69.4	67.8	60.5	61.4	69.2	69.3
Heavy Trucks:	78.3	76.3	69.5	71.6	78.9	79.0
Vehicle Noise:	80.1	78.2	72.4	73.3	80.6	80.8

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	266	573	1,234	2,658
CNEL:	273	588	1,267	2,730

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,148 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,315 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.86	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-13.70	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-8.87	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.7	65.6	62.0	60.9	68.2	68.5			
Medium Trucks:	63.4	61.7	54.5	55.3	63.1	63.3			
Heavy Trucks:	73.5	71.5	64.7	66.9	74.1	74.2			
Vehicle Noise:	74.8	72.9	66.9	68.1	75.3	75.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			118	255	549	1,182			
CNEL:			121	261	562	1,212			
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,818 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,682 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-0.50	0.38	-1.20	-4.66	0.000		0.000	
Medium Trucks:	81.00	-16.06	0.41	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	85.38	-11.23	0.41	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	68.9	66.7	63.2	62.0		69.4		69.6	
Medium Trucks:	64.2	62.5	55.2	56.1		63.9		64.0	
Heavy Trucks:	73.4	71.4	64.6	66.7		74.0		74.1	
Vehicle Noise:	75.1	73.1	67.3	68.3		75.6		75.7	
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA		60 dBA		55 dBA	
		Ldn:	122	263		567		1,221	
		CNEL:	125	270		582		1,253	

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,802 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,880 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.90%
					Medium Trucks:	82.2%	3.9%	14.0%	2.50%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.60%
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310				
					Medium Trucks: 45.114				
					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.95	0.54	-1.20	-4.66	0.000		0.000	
Medium Trucks:	77.72	-14.60	0.57	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	82.99	-9.78	0.56	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.8	64.7	61.1	60.0	67.3			67.6	
Medium Trucks:	62.5	60.8	53.6	54.4	62.2			62.4	
Heavy Trucks:	72.6	70.6	63.8	65.9	73.2			73.3	
Vehicle Noise:	73.9	72.0	66.0	67.2	74.4			74.6	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	103	222	478	1,029					
CNEL:	105	227	490	1,055					
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,621 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,162 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 70.20 -2.10 0.38 -1.20 -4.66 0.000 0.000									
Medium Trucks: 81.00 -17.66 0.41 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 85.38 -12.83 0.41 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 67.3 65.1 61.6 60.4 67.8 68.0									
Medium Trucks: 62.5 60.9 53.6 54.5 62.3 62.4									
Heavy Trucks: 71.8 69.8 63.0 65.1 72.4 72.5									
Vehicle Noise: 73.4 71.5 65.6 66.7 74.0 74.1									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				95	206	443	954		
CNEL:				98	211	455	979		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 Without Project Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		8,787 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		879 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet					
Site Data				Vehicle Type			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 89.90%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.50%	
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 7.60%	
Centerline Dist. to Observer:		44.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
				Autos:		40.460	
				Medium Trucks:		40.241	
				Heavy Trucks:		40.262	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.35	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-17.91	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.08	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.2	62.1	58.6	57.4	64.7	65.0
Medium Trucks:	59.9	58.3	51.0	51.8	59.7	59.8
Heavy Trucks:	70.0	68.1	61.3	63.4	70.6	70.8
Vehicle Noise:	71.4	69.4	63.4	64.6	71.9	72.0
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			59	127	273	588
CNEL:			60	130	280	603

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 Without Project Road Name: Jurupa Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		7,370 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		737 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data							
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 89.90%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.50%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 7.60%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		46.400	
				Medium Trucks:		46.209	
				Heavy Trucks:		46.228	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.11	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	77.72	-18.67	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.84	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	60.4	56.9	55.7	63.1	63.3
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.1
Heavy Trucks:	68.4	66.4	59.6	61.7	69.0	69.1
Vehicle Noise:	69.7	67.7	61.7	62.9	70.2	70.4
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			54	116	250	538
CNEL:			55	119	256	552

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,102 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		510 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet		Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		73.2%	8.1%	18.6%	89.90%
				Medium Trucks:		82.2%	3.9%	14.0%	2.50%
				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Barrier Height:		0.0 feet							
Barrier Type (0-Wall, 1-Berm):		0.0							
Centerline Dist. to Barrier:		44.0 feet							
Centerline Dist. to Observer:		44.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-4.71	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	59.7	56.2	55.0	62.4	62.6
Medium Trucks:	57.6	55.9	48.6	49.5	57.3	57.4
Heavy Trucks:	67.7	65.7	58.9	61.0	68.3	68.4
Vehicle Noise:	69.0	67.0	61.0	62.2	69.5	69.7
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			41	88	190	409
CNEL:			42	90	195	419

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 Without Project Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		10,771 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		1,077 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		45 mph					
Near/Far Lane Distance:		36 feet					
Site Data				Vehicle Mix			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees		Autos:		73.2%	8.1%	18.6%	89.90%
		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
		Noise Source Elevations (in feet)					
		Autos:		0.000			
		Medium Trucks:		2.297			
		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
		Lane Equivalent Distance (in feet)					
		Autos:		40.460			
		Medium Trucks:		40.241			
		Heavy Trucks:		40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attten	Berm Attten
Autos:	68.46	-1.98	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-17.54	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-12.71	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	64.4	60.9	59.7	67.0	67.3
Medium Trucks:	62.0	60.4	53.1	53.9	61.8	61.9
Heavy Trucks:	71.7	69.7	62.9	65.0	72.3	72.4
Vehicle Noise:	73.2	71.2	65.3	66.4	73.7	73.9
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			77	167	360	775
CNEL:			79	171	369	795

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		6,236 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		624 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph							
Near/Far Lane Distance:		36 feet		Vehicle Mix					
Site Data				Vehicle Type	Day	Evening	Night	Daily	
				Autos:		73.2%	8.1%	18.6%	89.90%
				Medium Trucks:		82.2%	3.9%	14.0%	2.50%
				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
				Noise Source Elevations (in feet)					
Barrier Height:		0.0 feet		Autos:		0.000			
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		2.297			
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		8.004			
Centerline Dist. to Observer:		44.0 feet		Grade Adjustment:		0.0			
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-4.35	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-19.91	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-15.08	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.2	62.0	58.5	57.3	64.7	64.9			
Medium Trucks:	59.7	58.0	50.7	51.6	59.4	59.5			
Heavy Trucks:	69.3	67.3	60.5	62.6	69.9	70.0			
Vehicle Noise:	70.8	68.8	62.9	64.0	71.3	71.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			55	119	256	552			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 Without Project Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		3,874 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		387 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Barrier:		44.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Observer:		44.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.004			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		40.460			
					Medium Trucks:		40.241			
					Heavy Trucks:		40.262			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-6.42	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.1	60.0	56.4	55.3	62.6	62.9				
Medium Trucks:	57.6	55.9	48.7	49.5	57.3	57.5				
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0				
Vehicle Noise:	68.7	66.8	60.8	62.0	69.2	69.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				39	84	182	392			
CNEL:				40	87	187	402			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,802 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,880 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph				Vehicle Mix					
Near/Far Lane Distance: 36 feet									
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height: 0.0 feet				Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Barrier: 50.0 feet				Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Observer: 50.0 feet				Noise Source Elevations (in feet)					
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet				Autos:		0.000			
Pad Elevation: 0.0 feet				Medium Trucks:		2.297			
Road Elevation: 0.0 feet				Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade: 0.0%				Lane Equivalent Distance (in feet)					
Left View: -90.0 degrees									
Right View: 90.0 degrees				Autos:		46.915			
				Medium Trucks:		46.726			
				Heavy Trucks:		46.744			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.44	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-15.12	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.29	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.0	65.9	62.3	61.2	68.5	68.8			
Medium Trucks:	63.5	61.8	54.6	55.4	63.2	63.4			
Heavy Trucks:	73.1	71.1	64.3	66.5	73.7	73.8			
Vehicle Noise:	74.6	72.6	66.7	67.8	75.1	75.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			110	237	510	1,100			
CNEL:			113	243	524	1,128			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,802 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,880 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 36 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 50.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet				Autos: 46.915				
Road Grade: 0.0%				Medium Trucks: 46.726				
Left View: -90.0 degrees				Heavy Trucks: 46.744				
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	0.44	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-15.12	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-10.29	0.34	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.0	65.9	62.3	61.2	68.5	68.8		
Medium Trucks:	63.5	61.8	54.6	55.4	63.2	63.4		
Heavy Trucks:	73.1	71.1	64.3	66.5	73.7	73.8		
Vehicle Noise:	74.6	72.6	66.7	67.8	75.1	75.3		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			110	237	510	1,100		
CNEL:			113	243	524	1,128		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,519 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,852 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.38	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-15.18	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.35	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	68.0	65.9	62.3	61.2		68.5		68.8	
Medium Trucks:	63.5	61.8	54.6	55.4		63.2		63.4	
Heavy Trucks:	73.1	71.2	64.3	66.5		73.7		73.8	
Vehicle Noise:	74.6	72.7	66.7	67.9		75.1		75.3	
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA		60 dBA		55 dBA	
	Ldn:	114	247	531		1,145			
	CNEL:	117	253	545		1,174			
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,519 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,852 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.38	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-15.18	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.35	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.0	65.9	62.3	61.2	68.5	68.8			
Medium Trucks:	63.5	61.8	54.6	55.4	63.2	63.4			
Heavy Trucks:	73.1	71.2	64.3	66.5	73.7	73.8			
Vehicle Noise:	74.6	72.7	66.7	67.9	75.1	75.3			
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	114	247	531	1,145				
	CNEL:	117	253	545	1,174				
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,582 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,258 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.091				
Road Grade: 0.0%					Medium Trucks: 43.890				
Left View: -90.0 degrees					Heavy Trucks: 43.909				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.24	0.72	-1.20	-4.69	0.000		0.000	
Medium Trucks:	79.45	-14.32	0.75	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	84.25	-9.49	0.74	-1.20	-5.34	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.2	67.1	63.5	62.4	69.7			70.0	
Medium Trucks:	64.7	63.0	55.8	56.6	64.4			64.6	
Heavy Trucks:	74.3	72.3	65.5	67.7	74.9			75.0	
Vehicle Noise:	75.8	73.9	67.9	69.0	76.3			76.5	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:		159	342	737	1,587				
CNEL:		163	351	756	1,628				
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,393 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,039 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					VehicleType				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.091				
Road Grade: 0.0%					Medium Trucks: 43.890				
Left View: -90.0 degrees					Heavy Trucks: 43.909				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.13	0.72	-1.20	-4.69	0.000	0.000		
Medium Trucks:	79.45	-17.69	0.75	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-12.86	0.74	-1.20	-5.34	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.7	60.2	59.0	66.3	66.6			
Medium Trucks:	61.3	59.7	52.4	53.2	61.0	61.2			
Heavy Trucks:	70.9	69.0	62.2	64.3	71.5	71.7			
Vehicle Noise:	72.5	70.5	64.6	65.7	73.0	73.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				95	204	439	946		
CNEL:				97	209	451	971		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 Without Project Road Name: 20th St. Road Segment: e/o Rubidoux Bl.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		28,156 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,816 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		45 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 89.90%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.50%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 7.60%	
Centerline Dist. to Observer:		50.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
				Autos:		46.915	
				Medium Trucks:		46.726	
				Heavy Trucks:		46.744	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.20	0.31	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-13.36	0.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-8.53	0.34	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.6	64.1	62.9	70.2	70.5
Medium Trucks:	65.2	63.6	56.3	57.1	65.0	65.1
Heavy Trucks:	74.9	72.9	66.1	68.2	75.5	75.6
Vehicle Noise:	76.4	74.4	68.5	69.6	76.9	77.1
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		144	310	668	1,439	
CNEL:		148	318	685	1,477	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 Without Project Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,282 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,428 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph				Vehicle Mix				
Near/Far Lane Distance: 36 feet								
Site Data				VehicleType				
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 89.90%				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Centerline Dist. to Barrier: 50.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
Centerline Dist. to Observer: 50.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 46.915				
Left View: -90.0 degrees				Medium Trucks: 46.726				
Right View: 90.0 degrees				Heavy Trucks: 46.744				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	1.55	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-14.01	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-9.18	0.34	-1.20	-5.43	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.0	63.5	62.3	69.6	69.9
Medium Trucks:	64.6	62.9	55.7	56.5	64.3	64.5
Heavy Trucks:	74.2	72.3	65.5	67.6	74.8	74.9
Vehicle Noise:	75.7	73.8	67.8	69.0	76.2	76.4
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		130	281	605	1,304	
CNEL:		134	288	621	1,338	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 Without Project Road Name: Market St. Road Segment: e/o Hall Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		33,069 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,307 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		36 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	89.90%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.50%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	7.60%
Centerline Dist. to Observer:		50.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		46.915			
				Medium Trucks:		46.726			
				Heavy Trucks:		46.744			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.89	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-12.66	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.84	0.34	-1.20	-5.43	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.3	64.8	63.6	70.9	71.2
Medium Trucks:	65.9	64.3	57.0	57.8	65.7	65.8
Heavy Trucks:	75.6	73.6	66.8	68.9	76.2	76.3
Vehicle Noise:	77.1	75.1	69.2	70.3	77.6	77.8
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		160	345	744	1,602	
CNEL:		164	354	763	1,644	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 Without Project Road Name: Market St. Road Segment: e/o Rivera St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 41,195 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,119 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 89.90% Medium Trucks: 82.2% 3.9% 14.0% 2.50% Heavy Trucks: 76.5% 4.0% 19.5% 7.60%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 44.147				
				Medium Trucks: 43.947 Heavy Trucks: 43.966				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	3.85	0.71	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-11.71	0.74	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-6.88	0.73	-1.20	-5.43	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.8	69.7	66.1	65.0	72.3	72.6
Medium Trucks:	67.3	65.6	58.4	59.2	67.0	67.2
Heavy Trucks:	76.9	74.9	68.1	70.3	77.5	77.6
Vehicle Noise:	78.4	76.5	70.5	71.6	78.9	79.1
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		197	425	915	1,972	
CNEL:		202	436	939	2,023	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 46,774 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 4,677 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 40 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
Site Data				Day			
Barrier Height: 0.0 feet				Evening			
Barrier Type (0-Wall, 1-Berm): 0.0				Night			
Centerline Dist. to Barrier: 52.0 feet				Daily			
Centerline Dist. to Observer: 52.0 feet				Autos: 73.2% 8.1% 18.6% 89.84%			
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.50%			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.65%			
Pad Elevation: 0.0 feet				Noise Source Elevations (in feet)			
Road Elevation: 0.0 feet				Autos: 0.000			
Road Grade: 0.0%				Medium Trucks: 2.297			
Left View: -90.0 degrees				Heavy Trucks: 8.004			
Right View: 90.0 degrees				Grade Adjustment: 0.0			
FHWA Noise Model Calculations				Lane Equivalent Distance (in feet)			
VehicleType				Autos: 46.400			
REMEL				Medium Trucks: 46.209			
Traffic Flow				Heavy Trucks: 46.228			
Distance							
Finite Road							
Fresnel							
Barrier Atten							
Berm Atten							
Autos: 66.51 4.91 0.38 -1.20 -4.66 0.000 0.000							
Medium Trucks: 77.72 -10.64 0.41 -1.20 -4.87 0.000 0.000							
Heavy Trucks: 82.99 -5.79 0.41 -1.20 -5.41 0.000 0.000							

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.5	64.9	63.8	71.1	71.4
Medium Trucks:	66.3	64.6	57.4	58.2	66.0	66.2
Heavy Trucks:	76.4	74.5	67.7	69.8	77.0	77.2
Vehicle Noise:	77.7	75.8	69.8	71.0	78.3	78.4
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		185	399	859	1,851	
CNEL:		190	409	881	1,898	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		39,173 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,917 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet		VehicleType			
Site Data				Day		Evening	
Barrier Height:		0.0 feet		Night		Daily	
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2% 8.1% 18.6% 89.28%	
Centerline Dist. to Barrier:		52.0 feet		Medium Trucks:		82.2% 3.9% 14.0% 2.58%	
Centerline Dist. to Observer:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.14%	
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos: 0.000			
Pad Elevation:		0.0 feet		Medium Trucks: 2.297			
Road Elevation:		0.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees		Autos: 46.400			
Right View:		90.0 degrees		Medium Trucks: 46.209			
				Heavy Trucks: 46.228			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	4.11	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	77.72	-11.27	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-6.29	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.7	64.1	63.0	70.3	70.6
Medium Trucks:	65.7	64.0	56.7	57.6	65.4	65.5
Heavy Trucks:	75.9	74.0	67.2	69.3	76.5	76.6
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.9
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		170	366	788	1,697	
CNEL:		174	375	807	1,739	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Slover Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		32,277 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,228 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	89.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.60%
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.25%
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees							
Right View:		90.0 degrees		Autos:		46.400			
				Medium Trucks:		46.209			
				Heavy Trucks:		46.228			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.26	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.09	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.07	0.41	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	66.8	63.3	62.1	69.4	69.7
Medium Trucks:	64.8	63.2	55.9	56.7	64.6	64.7
Heavy Trucks:	75.1	73.2	66.4	68.5	75.7	75.9
Vehicle Noise:	76.4	74.4	68.4	69.6	76.9	77.1
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		150	324	697	1,502	
CNEL:		154	332	714	1,539	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		32,812 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,281 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.98%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.62%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.40%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		46.400	
				Medium Trucks:		46.209	
				Heavy Trucks:		46.228	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.33	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	77.72	-11.98	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-6.92	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	66.9	63.3	62.2	69.5	69.8
Medium Trucks:	64.9	63.3	56.0	56.9	64.7	64.8
Heavy Trucks:	75.3	73.3	66.5	68.6	75.9	76.0
Vehicle Noise:	76.5	74.6	68.5	69.8	77.0	77.2
Centerline Distance to Noise Contour (in feet)						
		70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:		153	330	712	1,533	
CNEL:		157	338	729	1,571	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Cedar Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		30,172 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,017 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.96%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.61%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.43%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
				Autos: 46.400			
				Medium Trucks: 46.209			
				Heavy Trucks: 46.228			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.99	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-13.33	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.24	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.2	65.7	64.5	71.9	72.1
Medium Trucks:	66.9	65.2	58.0	58.8	66.6	66.8
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1
Vehicle Noise:	77.9	75.9	70.0	71.1	78.4	78.6
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			189	408	878	1,892
CNEL:			194	418	901	1,942

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 31,507 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,151 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 48 feet									
Site Data				Vehicle Type		Day	Evening	Night	Daily
				Autos:		73.2%	8.1%	18.6%	87.22%
				Medium Trucks:		82.2%	3.9%	14.0%	2.91%
				Heavy Trucks:		76.5%	4.0%	19.5%	9.87%
				Noise Source Elevations (in feet)					
				Autos: 0.000					
				Medium Trucks: 2.297					
				Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 54.129					
				Medium Trucks: 53.966					
				Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.10	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-12.67	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-7.37	-0.60	-1.20	-5.35	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.3	64.8	63.6	71.0	71.2
Medium Trucks:	66.5	64.9	57.6	58.4	66.3	66.4
Heavy Trucks:	76.2	74.3	67.4	69.6	76.8	76.9
Vehicle Noise:	77.6	75.6	69.6	70.8	78.1	78.3
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			205	441	951	2,048
CNEL:			210	452	975	2,100

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o Production Circle				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		32,838 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		3,284 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph		Vehicle Mix				
Near/Far Lane Distance:		48 feet						
Site Data				VehicleType				
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 87.83%		
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.77%		
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 9.40%		
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet						
Observer Height (Above Pad):		5.0 feet		Autos:		0.000		
Pad Elevation:		0.0 feet		Medium Trucks:		2.297		
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0		
Road Grade:		0.0%		Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees						
Right View:		90.0 degrees		Autos:		54.129		
FHWA Noise Model Calculations				Medium Trucks:		53.966		
				Heavy Trucks:		53.982		
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:		70.20	2.30	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:		81.00	-12.71	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:		85.38	-7.40	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.2	71.4
Medium Trucks:	66.5	64.9	57.6	58.4	66.2	66.4
Heavy Trucks:	76.2	74.2	67.4	69.5	76.8	76.9
Vehicle Noise:	77.6	75.6	69.7	70.8	78.1	78.3
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			205	442	953	2,053
CNEL:			211	454	977	2,106

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 26,165 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,616 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 88.72% Medium Trucks: 82.2% 3.9% 14.0% 2.64% Heavy Trucks: 76.5% 4.0% 19.5% 8.63%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.36	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-13.90	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.76	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.6	64.1	62.9	70.2	70.5
Medium Trucks:	65.3	63.7	56.4	57.2	65.0	65.2
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	76.4	74.4	68.5	69.6	76.9	77.0
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			169	365	785	1,692
CNEL:			174	374	806	1,736

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 24th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,673 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,667 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 48 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.65%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.69%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 59.0 feet					Grade Adjustment: 0.0				
Centerline Dist. to Observer: 59.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 54.129				
Left View: -90.0 degrees					Medium Trucks: 53.966				
Right View: 90.0 degrees					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.44	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.78	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.65	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.8	67.7	64.2	63.0	70.3	70.6			
Medium Trucks:	65.4	63.8	56.5	57.3	65.2	65.3			
Heavy Trucks:	74.9	73.0	66.2	68.3	75.5	75.7			
Vehicle Noise:	76.5	74.5	68.6	69.7	77.0	77.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				172	370	798	1,719		
CNEL:				176	380	819	1,764		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,671 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,967 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph					Vehicle Mix					
Near/Far Lane Distance: 48 feet					VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.77%					
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.58%					
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000					
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet					Autos: 54.129					
Road Grade: 0.0%					Medium Trucks: 53.966					
Left View: -90.0 degrees					Heavy Trucks: 53.982					
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.91	-0.62	-1.20	-4.69	0.000	0.000			
Medium Trucks:	81.00	-13.34	-0.60	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-8.24	-0.60	-1.20	-5.35	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:	70.3	68.2	64.6	63.5	70.8		71.0			
Medium Trucks:	65.9	64.2	56.9	57.8	65.6		65.8			
Heavy Trucks:	75.3	73.4	66.6	68.7	75.9		76.1			
Vehicle Noise:	76.9	74.9	69.0	70.1	77.4		77.6			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			184	395	852	1,835				
CNEL:			188	406	874	1,883				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,524 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,752 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.69%					
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.66%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 8.65%					
Centerline Dist. to Barrier:		59.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		59.0 feet			Autos: 0.000					
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 2.297					
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos: 54.129					
Road Grade:		0.0%			Medium Trucks: 53.966					
Left View:		-90.0 degrees			Heavy Trucks: 53.982					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.58	-0.62	-1.20	-4.69	0.000	0.000			
Medium Trucks:	81.00	-13.65	-0.60	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-8.53	-0.60	-1.20	-5.35	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.0	67.8	64.3	63.1	70.4	70.7				
Medium Trucks:	65.5	63.9	56.6	57.5	65.3	65.4				
Heavy Trucks:	75.0	73.1	66.3	68.4	75.7	75.8				
Vehicle Noise:	76.6	74.6	68.7	69.8	77.1	77.3				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			175	378	813	1,752				
CNEL:			180	387	834	1,798				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,308 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,831 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.83%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.67%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.76	-0.62	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-13.80	-0.60	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-8.93	-0.60	-1.20	-5.35	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.1	68.0	64.5	63.3	70.6	70.9		
Medium Trucks:	65.4	63.8	56.5	57.3	65.1	65.3		
Heavy Trucks:	74.6	72.7	65.9	68.0	75.3	75.4		
Vehicle Noise:	76.3	74.4	68.5	69.5	76.8	77.0		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			169	363	783	1,686		
CNEL:			173	373	803	1,731		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Rubidoux Bl. Road Segment: s/o 34th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		21,033 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,103 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet		VehicleType			
Site Data				Day		Evening	
Barrier Height:		0.0 feet		Night		Daily	
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2% 8.1% 18.6% 89.80%	
Centerline Dist. to Barrier:		59.0 feet		Medium Trucks:		82.2% 3.9% 14.0% 2.50%	
Centerline Dist. to Observer:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 7.70%	
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment:		0.0	
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees		Autos:		54.129	
				Medium Trucks:		53.966	
				Heavy Trucks:		53.982	
FHWA Noise Model Calculations							
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.09	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.20	-0.60	-1.20	-5.35	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.9	66.7	63.2	62.0	69.3	69.6	
Medium Trucks:	64.1	62.5	55.2	56.0	63.8	64.0	
Heavy Trucks:	73.4	71.4	64.6	66.7	74.0	74.1	
Vehicle Noise:	75.1	73.1	67.2	68.3	75.6	75.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			139	298	643	1,385	
CNEL:			142	306	660	1,422	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,214 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,021 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 30 mph					Vehicle Mix				
Near/Far Lane Distance: 12 feet					VehicleType				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 73.2% 8.1% 18.6% 90.00%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.47%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.52%				
Centerline Dist. to Barrier: 33.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 33.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 32.833				
Road Grade: 0.0%					Medium Trucks: 32.562				
Left View: -90.0 degrees					Heavy Trucks: 32.589				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 61.75 -0.44 2.64 -1.20 -4.52 0.000 0.000									
Medium Trucks: 73.48 -16.05 2.69 -1.20 -4.86 0.000 0.000									
Heavy Trucks: 79.92 -11.22 2.69 -1.20 -5.69 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos: 62.7 60.6 57.1 55.9 63.2 63.5									
Medium Trucks: 58.9 57.3 50.0 50.8 58.7 58.8									
Heavy Trucks: 70.2 68.2 61.4 63.6 70.8 70.9									
Vehicle Noise: 71.2 69.2 63.0 64.4 71.7 71.9									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				43	92	199	429		
CNEL:				44	95	204	439		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,751 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		775 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		11 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	90.27%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.41%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.32%
Centerline Dist. to Barrier:		30.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		30.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		29.912			
Road Grade:		0.0%			Medium Trucks:		29.615			
Left View:		-90.0 degrees			Heavy Trucks:		29.644			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-2.88	3.24	-1.20	-4.49	0.000	0.000			
Medium Trucks:	77.72	-18.62	3.31	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	82.99	-13.79	3.30	-1.20	-5.77	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.7	63.5	60.0	58.8	66.2	66.4				
Medium Trucks:	61.2	59.6	52.3	53.1	60.9	61.1				
Heavy Trucks:	71.3	69.4	62.6	64.7	71.9	72.0				
Vehicle Noise:	72.7	70.7	64.7	65.9	73.2	73.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				49	106	228	490			
CNEL:				50	108	233	503			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		49,977 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		4,998 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph					
Near/Far Lane Distance:		50 feet		Vehicle Mix			
				VehicleType	Day	Evening	Night
							Daily
Site Data							
Barrier Height:		0.0 feet		Autos:		73.2%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		8.1%	
Centerline Dist. to Barrier:		60.0 feet		Heavy Trucks:		18.6%	
Centerline Dist. to Observer:		60.0 feet				89.83%	
Barrier Distance to Observer:		0.0 feet				14.0%	
Observer Height (Above Pad):		5.0 feet				2.51%	
Pad Elevation:		0.0 feet				7.67%	
Road Elevation:		0.0 feet		Noise Source Elevations (in feet)			
Road Grade:		0.0%		Autos:		0.000	
Left View:		-90.0 degrees		Medium Trucks:		2.297	
Right View:		90.0 degrees		Heavy Trucks:		8.004	
						Grade Adjustment: 0.0	
				Lane Equivalent Distance (in feet)			
				Autos:		54.772	
				Medium Trucks:		54.610	
				Heavy Trucks:		54.626	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Attenu	Berm Attenu
Autos:	66.51	5.20	-0.70	-1.20	-4.69	0.000	0.000
Medium Trucks:	77.72	-10.35	-0.68	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-5.49	-0.68	-1.20	-5.34	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	69.8	67.7	64.1	63.0	70.3	70.6	
Medium Trucks:	65.5	63.8	56.6	57.4	65.2	65.4	
Heavy Trucks:	75.6	73.7	66.9	69.0	76.2	76.4	
Vehicle Noise:	77.0	75.0	69.0	70.2	77.5	77.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			189	407	878	1,891	
CNEL:			194	418	900	1,939	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 56,179 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 5,618 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.46%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.56%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.98%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 60.0 feet					Lane Equivalent Distance (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 54.772				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 54.610				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 54.626				
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	4.72	-0.70	-1.20	-4.69	0.000		0.000	
Medium Trucks:	81.00	-10.71	-0.68	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	85.38	-5.78	-0.68	-1.20	-5.34	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	73.0	70.9	67.4	66.2		73.5		73.8	
Medium Trucks:	68.4	66.8	59.5	60.3		68.1		68.3	
Heavy Trucks:	77.7	75.8	69.0	71.1		78.3		78.5	
Vehicle Noise:	79.4	77.4	71.5	72.6		79.9		80.0	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				273	587	1,265	2,726		
CNEL:				280	603	1,299	2,798		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Slover Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 52,223 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 5,222 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.43%
					Medium Trucks:	82.2%	3.9%	14.0%	2.57%
					Heavy Trucks:	76.5%	4.0%	19.5%	8.01%
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	4.40	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-11.02	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-6.08	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	73.9	71.8	68.3	67.1	74.4				74.7
Medium Trucks:	69.3	67.7	60.4	61.3	69.1				69.2
Heavy Trucks:	78.7	76.7	69.9	72.0	79.3				79.4
Vehicle Noise:	80.3	78.3	72.5	73.5	80.8				81.0
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				273	588	1,266	2,727		
CNEL:				280	603	1,299	2,799		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 44,906 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,491 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 55 mph				Vehicle Mix					
Near/Far Lane Distance: 52 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.36%					
Barrier Height: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.58%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 76.5% 4.0% 19.5% 8.06%					
Centerline Dist. to Barrier: 52.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 52.0 feet				Autos: 0.000					
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos: 45.310					
Road Grade: 0.0%				Medium Trucks: 45.114					
Left View: -90.0 degrees				Heavy Trucks: 45.133					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	3.33	0.54	-1.20	-4.66	0.000		0.000	
Medium Trucks:	82.40	-12.07	0.57	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	86.40	-7.12	0.56	-1.20	-5.41	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	74.4	72.3	68.8	67.6	74.9	75.2			
Medium Trucks:	69.7	68.1	60.8	61.6	69.4	69.6			
Heavy Trucks:	78.6	76.7	69.9	72.0	79.2	79.4			
Vehicle Noise:	80.4	78.4	72.7	73.6	80.9	81.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
			Ldn:	278	600	1,292	2,783		
			CNEL:	286	616	1,326	2,857		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 44,906 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,491 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 52 feet									
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos: 73.2% 8.1% 18.6% 89.36%					
				Medium Trucks: 82.2% 3.9% 14.0% 2.58%					
				Heavy Trucks: 76.5% 4.0% 19.5% 8.06%					
				Noise Source Elevations (in feet)					
				Autos: 0.000					
				Medium Trucks: 2.297					
				Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
Autos: 45.310									
Medium Trucks: 45.114									
Heavy Trucks: 45.133									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 71.78 3.33 0.54 -1.20 -4.66 0.000 0.000									
Medium Trucks: 82.40 -12.07 0.57 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 86.40 -7.12 0.56 -1.20 -5.41 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 74.4 72.3 68.8 67.6 74.9 75.2									
Medium Trucks: 69.7 68.1 60.8 61.6 69.4 69.6									
Heavy Trucks: 78.6 76.7 69.9 72.0 79.2 79.4									
Vehicle Noise: 80.4 78.4 72.7 73.6 80.9 81.1									
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				278	600	1,292	2,783		
CNEL:				286	616	1,326	2,857		
Wednesday, October 17, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,534 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,353 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 52 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos:	73.2%	8.1%	18.6%	89.64%
					Medium Trucks:	82.2%	3.9%	14.0%	2.54%
					Heavy Trucks:	76.5%	4.0%	19.5%	7.82%
					Noise Source Elevations (in feet)				
					Autos:	0.000			
					Medium Trucks:	2.297			
					Heavy Trucks:	8.004			
					Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos:	45.310			
					Medium Trucks:	45.114			
					Heavy Trucks:	45.133			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.92	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-13.57	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-8.68	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	67.8	65.6	62.1	60.9	68.2		68.5		
Medium Trucks:	63.5	61.9	54.6	55.4	63.2		63.4		
Heavy Trucks:	73.7	71.7	64.9	67.0	74.3		74.4		
Vehicle Noise:	75.0	73.0	67.0	68.2	75.5		75.7		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				121	261	563	1,212		
CNEL:				124	268	577	1,243		
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,060 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,906 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		52 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	89.78%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.51%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.71%
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		45.310			
Road Grade:		0.0%			Medium Trucks:		45.114			
Left View:		-90.0 degrees			Heavy Trucks:		45.133			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	RECEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.01	0.54	-1.20	-4.66	0.000		0.000		
Medium Trucks:	77.72	-14.52	0.57	-1.20	-4.87	0.000		0.000		
Heavy Trucks:	82.99	-9.66	0.56	-1.20	-5.41	0.000		0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:	66.9	64.7		61.2	60.0	67.3		67.6		
Medium Trucks:	62.6	60.9		53.6	54.5	62.3		62.5		
Heavy Trucks:	72.7	70.7		63.9	66.1	73.3		73.4		
Vehicle Noise:	74.0	72.1		66.0	67.3	74.6		74.7		
Centerline Distance to Noise Contour (in feet)										
		70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:		105	225	485	1,046					
CNEL:		107	231	498	1,072					

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Slover Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,039 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,704 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.03%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.47%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.50%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.400				
Road Grade: 0.0%					Medium Trucks: 46.209				
Left View: -90.0 degrees					Heavy Trucks: 46.228				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-0.44	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	81.00	-16.06	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	85.38	-11.23	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.0	66.8	63.3	62.1	69.4		69.7		
Medium Trucks:	64.2	62.5	55.2	56.1	63.9		64.0		
Heavy Trucks:	73.4	71.4	64.6	66.7	74.0		74.1		
Vehicle Noise:	75.1	73.1	67.3	68.3	75.6		75.7		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				122	264	568	1,224		
CNEL:				126	271	583	1,256		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Slover Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		11,674 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		1,167 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		48 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.95%				
Barrier Height:		0.0 feet			Medium Trucks: 82.2% 3.9% 14.0% 2.49%				
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 76.5% 4.0% 19.5% 7.57%				
Centerline Dist. to Barrier:		52.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		52.0 feet			Autos: 0.000				
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 2.297				
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos: 46.400				
Road Grade:		0.0%			Medium Trucks: 46.209				
Left View:		-90.0 degrees			Heavy Trucks: 46.228				
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		70.20	-2.08	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:		81.00	-17.66	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		85.38	-12.83	0.41	-1.20	-5.41	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:		67.3	65.2	61.6	60.5	67.8	68.1		
Medium Trucks:		62.5	60.9	53.6	54.5	62.3	62.4		
Heavy Trucks:		71.8	69.8	63.0	65.1	72.4	72.5		
Vehicle Noise:		73.5	71.5	65.7	66.7	74.0	74.1		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				95	206	443	955		
CNEL:				98	211	455	980		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: Year 2035 With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		9,120 vehicles		Autos:		15					
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15					
Peak Hour Volume:		912 vehicles		Heavy Trucks (3+ Axles):		15					
Vehicle Speed:		40 mph									
Near/Far Lane Distance:		36 feet		Vehicle Mix							
				Vehicle Type	Day	Evening	Night	Daily			
Site Data				Autos:		73.2%	8.1%	18.6%	89.18%		
				Medium Trucks:		82.2%	3.9%	14.0%	2.61%		
				Heavy Trucks:		76.5%	4.0%	19.5%	8.21%		
				Noise Source Elevations (in feet)							
				Autos:		0.000					
Barrier Height:		0.0 feet		Medium Trucks:		2.297					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		8.004		Grade Adjustment: 0.0			
Centerline Dist. to Barrier:		44.0 feet									
Centerline Dist. to Observer:		44.0 feet									
Barrier Distance to Observer:		0.0 feet									
Observer Height (Above Pad):		5.0 feet									
Pad Elevation:		0.0 feet									
Road Elevation:		0.0 feet									
Road Grade:		0.0%									
Left View:		-90.0 degrees									
Right View:		90.0 degrees									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,154 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		515 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet			VehicleType					
Site Data					Day		Evening		Night	
Barrier Height:		0.0 feet			Autos:		73.2%		8.1%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%		3.9%	
Centerline Dist. to Barrier:		44.0 feet			Heavy Trucks:		76.5%		4.0%	
Centerline Dist. to Observer:		44.0 feet			Noise Source Elevations (in feet)		19.5%		7.52%	
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		40.460			
Left View:		-90.0 degrees			Medium Trucks:		40.241			
Right View:		90.0 degrees			Heavy Trucks:		40.262			
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.66	1.28	-1.20	-4.61	0.000	0.000			
Medium Trucks:	77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.9	59.8	56.3	55.1	62.4	62.7				
Medium Trucks:	57.6	55.9	48.6	49.5	57.3	57.4				
Heavy Trucks:	67.7	65.7	58.9	61.0	68.3	68.4				
Vehicle Noise:	69.0	67.0	61.0	62.2	69.5	69.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				41	88	190	410			
CNEL:				42	90	195	420			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1 Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,552 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		755 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet								
Site Data					VehicleType	Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	90.14%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.44%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	7.42%
Centerline Dist. to Observer:		52.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.004			
Road Grade:		0.0%			Grade Adjustment:		0.0			
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)					
Right View:		90.0 degrees								
					Autos:		46.400			
					Medium Trucks:		46.209			
					Heavy Trucks:		46.228			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-3.00	0.38	-1.20	-4.66	0.000	0.000			
Medium Trucks:	77.72	-18.67	0.41	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-13.84	0.41	-1.20	-5.41	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.6	57.0	55.9	63.2	63.4				
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.1				
Heavy Trucks:	68.4	66.4	59.6	61.7	69.0	69.1				
Vehicle Noise:	69.7	67.8	61.8	63.0	70.2	70.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			54	116	251	540				
CNEL:			55	119	257	554				

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,009 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,301 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.75%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.41%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.85%				
Centerline Dist. to Barrier: 44.0 feet									
Centerline Dist. to Observer: 44.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet									
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 40.460				
Right View: 90.0 degrees					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.16	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-16.88	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-11.75	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.4	65.2	61.7	60.5	67.8	68.1			
Medium Trucks:	62.7	61.0	53.8	54.6	62.4	62.6			
Heavy Trucks:	72.6	70.7	63.9	66.0	73.2	73.3			
Vehicle Noise:	74.1	72.1	66.2	67.3	74.6	74.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				89	192	413	891		
CNEL:				91	197	424	914		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,305 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 831 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.09%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.83%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.08%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEF	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.24	1.28	-1.20	-4.61	0.000		0.000	
Medium Trucks:	79.45	-18.13	1.31	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-12.61	1.31	-1.20	-5.50	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night		Ldn		CNEL	
Autos:	65.3	63.1	59.6	58.5		65.8		66.0	
Medium Trucks:	61.4	59.8	52.5	53.3		61.2		61.3	
Heavy Trucks:	71.7	69.8	63.0	65.1		72.4		72.5	
Vehicle Noise:	73.0	71.0	64.9	66.2		73.5		73.6	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	75	162	348	750				
	CNEL:	77	166	357	769				
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,634 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,963 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.08%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.31%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.59	0.31	-1.20	-4.65	0.000		0.000	
Medium Trucks:	79.45	-14.73	0.34	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-9.71	0.34	-1.20	-5.43	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.0	62.5	61.3	68.6	68.9			
Medium Trucks:	63.9	62.2	54.9	55.8	63.6	63.8			
Heavy Trucks:	73.7	71.7	64.9	67.0	74.3	74.4			
Vehicle Noise:	75.1	73.1	67.2	68.3	75.6	75.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				118	255	549	1,183		
CNEL:				121	261	563	1,213		
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,202 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 520 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType Day Evening Night Daily				
					Autos: 73.2% 8.1% 18.6% 92.48%				
					Medium Trucks: 82.2% 3.9% 14.0% 1.86%				
					Heavy Trucks: 76.5% 4.0% 19.5% 5.66%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-5.02	1.28	-1.20	-4.61	0.000		0.000	
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.5	61.4	57.8	56.7	64.0	64.3			
Medium Trucks:	57.6	55.9	48.7	49.5	57.3	57.5			
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0			
Vehicle Noise:	69.1	67.1	61.4	62.3	69.6	69.8			
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	41	89	192	413					
CNEL:	42	91	197	424					
Wednesday, October 17, 2018									

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,504 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,950 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.00%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.64%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.36%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.56	0.31	-1.20	-4.65	0.000		0.000	
Medium Trucks:	79.45	-14.73	0.34	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	84.25	-9.71	0.34	-1.20	-5.43	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.1	66.0	62.5	61.3	68.6	68.9			
Medium Trucks:	63.9	62.2	54.9	55.8	63.6	63.8			
Heavy Trucks:	73.7	71.7	64.9	67.0	74.3	74.4			
Vehicle Noise:	75.1	73.1	67.1	68.3	75.6	75.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				118	255	548	1,181		
CNEL:				121	261	562	1,212		

Wednesday, October 17, 2018

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,155 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,916 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph				Vehicle Mix				
Near/Far Lane Distance: 48 feet								
Site Data				VehicleType				
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 88.95%				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 8.40%				
Centerline Dist. to Observer: 52.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 46.400				
Left View: -90.0 degrees				Medium Trucks: 46.209				
Right View: 90.0 degrees				Heavy Trucks: 46.228				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	0.48	0.38	-1.20	-4.66	0.000	0.000	
Medium Trucks:	79.45	-14.79	0.41	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-9.77	0.41	-1.20	-5.41	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.0	62.4	61.3	68.6	68.9
Medium Trucks:	63.9	62.2	55.0	55.8	63.6	63.8
Heavy Trucks:	73.7	71.7	64.9	67.1	74.3	74.4
Vehicle Noise:	75.1	73.1	67.1	68.3	75.6	75.8
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			123	265	571	1,231
CNEL:			126	272	586	1,262

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 24,491 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,449 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 45 mph				Vehicle Mix			
Near/Far Lane Distance: 82 feet							
Site Data				VehicleType			
Barrier Height: 0.0 feet				Autos: 73.2%			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2%			
Centerline Dist. to Barrier: 60.0 feet				Heavy Trucks: 76.5%			
Centerline Dist. to Observer: 60.0 feet				Grade Adjustment: 0.0			
Barrier Distance to Observer: 0.0 feet				Noise Source Elevations (in feet)			
Observer Height (Above Pad): 5.0 feet				Autos: 0.000			
Pad Elevation: 0.0 feet				Medium Trucks: 2.297			
Road Elevation: 0.0 feet				Heavy Trucks: 8.004			
Road Grade: 0.0%				Lane Equivalent Distance (in feet)			
Left View: -90.0 degrees				Autos: 44.091			
Right View: 90.0 degrees				Medium Trucks: 43.890			
				Heavy Trucks: 43.909			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.53	0.72	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.66	0.75	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-8.53	0.74	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.4	63.8	62.7	70.0	70.3
Medium Trucks:	65.3	63.7	56.4	57.2	65.1	65.2
Heavy Trucks:	75.3	73.3	66.5	68.6	75.9	76.0
Vehicle Noise:	76.6	74.7	68.6	69.9	77.1	77.3
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			180	387	833	1,795
CNEL:			184	397	854	1,841

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,707 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,871 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph		Vehicle Mix					
Near/Far Lane Distance:		48 feet							
Site Data				VehicleType					
Barrier Height:		0.0 feet		Autos:		73.2%	8.1%	18.6%	89.34%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	3.9%	14.0%	2.59%
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.06%
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		46.400			
Left View:		-90.0 degrees		Medium Trucks:		46.209			
Right View:		90.0 degrees		Heavy Trucks:		46.228			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.39	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-14.98	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-10.05	0.41	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.0	65.9	62.4	61.2	68.5	68.8
Medium Trucks:	63.7	62.0	54.8	55.6	63.4	63.6
Heavy Trucks:	73.4	71.5	64.7	66.8	74.0	74.1
Vehicle Noise:	74.9	72.9	66.9	68.1	75.4	75.5
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			119	256	551	1,187
CNEL:			122	262	565	1,217

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		11,035 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		1,103 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		45 mph		Vehicle Mix				
Near/Far Lane Distance:		82 feet		VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.16%				
Barrier Height:		0.0 feet		Medium Trucks: 82.2% 3.9% 14.0% 2.59%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 76.5% 4.0% 19.5% 8.25%				
Centerline Dist. to Barrier:		60.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		60.0 feet		Autos: 0.000				
Barrier Distance to Observer:		0.0 feet		Medium Trucks: 2.297				
Observer Height (Above Pad):		5.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet		Autos: 44.091				
Road Grade:		0.0%		Medium Trucks: 43.890				
Left View:		-90.0 degrees		Heavy Trucks: 43.909				
Right View:		90.0 degrees						
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-1.91	0.72	-1.20	-4.69	0.000	0.000	
Medium Trucks:	79.45	-17.28	0.75	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	84.25	-12.24	0.74	-1.20	-5.34	0.000	0.000	

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	63.9	60.4	59.2	66.5	66.8
Medium Trucks:	61.7	60.1	52.8	53.6	61.5	61.6
Heavy Trucks:	71.6	69.6	62.8	64.9	72.2	72.3
Vehicle Noise:	73.0	71.0	65.0	66.2	73.5	73.7
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			103	221	476	1,025
CNEL:			105	227	488	1,052

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: 20th St. Road Segment: e/o Rubidoux Bl.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,877 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,088 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 36 feet				Vehicle Mix				
				Vehicle Type	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 88.64%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.67%				
				Heavy Trucks: 76.5% 4.0% 19.5% 8.70%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 50.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 50.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	2.54	0.31	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-12.68	0.34	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-7.55	0.34	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.1	68.0	64.4	63.3	70.6	70.9		
Medium Trucks:	65.9	64.3	57.0	57.8	65.6	65.8		
Heavy Trucks:	75.8	73.9	67.1	69.2	76.4	76.6		
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.9		
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				164	352	759	1,636	
CNEL:				168	361	779	1,677	

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,549 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,755 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 87.89%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.78%				
					Heavy Trucks: 76.5% 4.0% 19.5% 9.33%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Medium Trucks: 2.297					Grade Adjustment: 0.0				
Heavy Trucks: 8.004									
Lane Equivalent Distance (in feet)									
Autos: 46.915					Medium Trucks: 46.726 Heavy Trucks: 46.744				
Medium Trucks: 46.726									
Heavy Trucks: 46.744									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.00	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.00	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.74	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.6	63.9	56.7	57.5	65.3	65.5			
Heavy Trucks:	75.7	73.7	66.9	69.0	76.3	76.4			
Vehicle Noise:	76.9	75.0	68.9	70.2	77.5	77.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				157	339	730	1,572		
CNEL:				161	347	748	1,611		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1 Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,336 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,634 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet									
Site Data					Autos: 73.2% 8.1% 18.6% 88.38%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.71%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.91%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet									
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%									
Left View: -90.0 degrees					Autos: 46.915				
Right View: 90.0 degrees					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.23	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-11.90	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-6.73	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.7	65.1	64.0	71.3	71.6			
Medium Trucks:	66.7	65.0	57.8	58.6	66.4	66.6			
Heavy Trucks:	76.7	74.7	67.9	70.0	77.3	77.4			
Vehicle Noise:	78.0	76.0	70.0	71.2	78.5	78.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			185	398	857	1,847			
CNEL:			189	408	879	1,894			

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1 Road Name: Market St. Road Segment: e/o Rivera St.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 44,357 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,436 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				VehicleType	Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 88.63%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.68%				
				Heavy Trucks: 76.5% 4.0% 19.5% 8.69%				
				Noise Source Elevations (in feet)				
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 44.147 Medium Trucks: 43.947 Heavy Trucks: 43.966				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	4.11	0.71	-1.20	-4.65	0.000	0.000	
Medium Trucks:	79.45	-11.09	0.74	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-5.98	0.73	-1.20	-5.43	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	72.1	69.9	66.4	65.2	72.5	72.8		
Medium Trucks:	67.9	66.3	59.0	59.8	67.6	67.8		
Heavy Trucks:	77.8	75.9	69.1	71.2	78.4	78.5		
Vehicle Noise:	79.2	77.2	71.2	72.4	79.7	79.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			221	477	1,028	2,215		
CNEL:			227	489	1,054	2,271		

Wednesday, October 17, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Cedar Av. Road Segment: n/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 46,774 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,677 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.84%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
					Heavy Trucks: 76.5% 4.0% 19.5% 7.65%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	4.91	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-10.64	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-5.79	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.6	68.5	64.9	63.8	71.1	71.4			
Medium Trucks:	66.3	64.6	57.4	58.2	66.0	66.2			
Heavy Trucks:	76.4	74.5	67.7	69.8	77.0	77.2			
Vehicle Noise:	77.7	75.8	69.8	71.0	78.3	78.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			185	399	859	1,851			
CNEL:			190	409	881	1,898			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Cedar Av. Road Segment: s/o I-10 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 39,173 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,917 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 89.28%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.58%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.14%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	4.11	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-11.27	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-6.29	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.8	67.7	64.1	63.0	70.3	70.6			
Medium Trucks:	65.7	64.0	56.7	57.6	65.4	65.5			
Heavy Trucks:	75.9	74.0	67.2	69.3	76.5	76.6			
Vehicle Noise:	77.2	75.2	69.2	70.4	77.7	77.9			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	170	366	788	1,697					
CNEL:	174	375	807	1,739					
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Slover Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		32,277 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		3,228 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		48 feet							
Site Data				Vehicle Mix					
Barrier Height:		0.0 feet		Vehicle Type		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2%	8.1%	18.6%	89.16%
Centerline Dist. to Barrier:		52.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.60%
Centerline Dist. to Observer:		52.0 feet		Heavy Trucks:		76.5%	4.0%	19.5%	8.25%
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000			
Pad Elevation:		0.0 feet		Medium Trucks:		2.297			
Road Elevation:		0.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees		Autos:		46.400			
Right View:		90.0 degrees		Medium Trucks:		46.209			
				Heavy Trucks:		46.228			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.26	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-12.09	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-7.07	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.0	66.8	63.3	62.1	69.4	69.7			
Medium Trucks:	64.8	63.2	55.9	56.7	64.6	64.7			
Heavy Trucks:	75.1	73.2	66.4	68.5	75.7	75.9			
Vehicle Noise:	76.4	74.4	68.4	69.6	76.9	77.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			150	324	697	1,502			
CNEL:			154	332	714	1,539			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Santa Ana Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 32,812 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,281 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 88.98%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.62%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.40%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.33	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-11.98	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-6.92	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.0	66.9	63.3	62.2	69.5	69.8			
Medium Trucks:	64.9	63.3	56.0	56.9	64.7	64.8			
Heavy Trucks:	75.3	73.3	66.5	68.6	75.9	76.0			
Vehicle Noise:	76.5	74.6	68.5	69.8	77.0	77.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				153	330	712	1,533		
CNEL:				157	338	729	1,571		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Cedar Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		30,172 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,017 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.96%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.61%	
Centerline Dist. to Barrier:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.43%	
Centerline Dist. to Observer:		52.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
				Autos:		46.400	
				Medium Trucks:		46.209	
				Heavy Trucks:		46.228	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.99	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-13.33	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.24	0.41	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.2	65.7	64.5	71.9	72.1
Medium Trucks:	66.9	65.2	58.0	58.8	66.6	66.8
Heavy Trucks:	76.3	74.4	67.6	69.7	76.9	77.1
Vehicle Noise:	77.9	75.9	70.0	71.1	78.4	78.6
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			189	408	878	1,892
CNEL:			194	418	901	1,942

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o El Rivino Rd.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		32,547 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,255 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.15%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.73%	
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 9.12%	
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		54.129	
				Medium Trucks:		53.966	
				Heavy Trucks:		53.982	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.28	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.82	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.57	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.1	71.4
Medium Trucks:	66.4	64.7	57.5	58.3	66.1	66.3
Heavy Trucks:	76.0	74.0	67.2	69.4	76.6	76.7
Vehicle Noise:	77.5	75.5	69.6	70.7	78.0	78.2
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			201	433	933	2,011
CNEL:			206	444	957	2,062

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o Production Circle				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		32,615 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		3,262 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2% 8.1% 18.6% 88.27%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2% 3.9% 14.0% 2.70%	
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 9.04%	
Centerline Dist. to Observer:		59.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		54.129	
				Medium Trucks:		53.966	
				Heavy Trucks:		53.982	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.30	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.85	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.60	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.5	65.0	63.8	71.2	71.4
Medium Trucks:	66.3	64.7	57.4	58.3	66.1	66.2
Heavy Trucks:	76.0	74.0	67.2	69.3	76.6	76.7
Vehicle Noise:	77.4	75.5	69.5	70.7	78.0	78.1
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			200	432	930	2,004
CNEL:			206	443	954	2,055

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 20th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 25,917 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,592 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet							
Site Data				VehicleType			
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 88.62%			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.67%			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 8.72%			
Centerline Dist. to Observer: 59.0 feet				Noise Source Elevations (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 0.000			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297			
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)			
Road Grade: 0.0%				Autos: 54.129			
Left View: -90.0 degrees				Medium Trucks: 53.966			
Right View: 90.0 degrees				Heavy Trucks: 53.982			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.32	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-13.90	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.76	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.6	64.0	62.9	70.2	70.4
Medium Trucks:	65.3	63.7	56.4	57.2	65.0	65.2
Heavy Trucks:	74.8	72.9	66.1	68.2	75.4	75.6
Vehicle Noise:	76.3	74.4	68.5	69.6	76.9	77.0
Centerline Distance to Noise Contour (in feet)						
			70 dBA	65 dBA	60 dBA	55 dBA
Ldn:			169	364	784	1,690
CNEL:			173	373	805	1,733

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 24th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,673 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,667 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.65%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.66%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.69%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129				
					Medium Trucks: 53.966				
					Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.44	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.78	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.65	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.8	67.7	64.2	63.0	70.3	70.6			
Medium Trucks:	65.4	63.8	56.5	57.3	65.2	65.3			
Heavy Trucks:	74.9	73.0	66.2	68.3	75.5	75.7			
Vehicle Noise:	76.5	74.5	68.6	69.7	77.0	77.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				172	370	798	1,719		
CNEL:				176	380	819	1,764		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 26th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,524 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,752 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 88.69% Medium Trucks: 82.2% 3.9% 14.0% 2.66% Heavy Trucks: 76.5% 4.0% 19.5% 8.65%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.58	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.65	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.53	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.0	67.8	64.3	63.1	70.4	70.7			
Medium Trucks:	65.5	63.9	56.6	57.5	65.3	65.4			
Heavy Trucks:	75.0	73.1	66.3	68.4	75.7	75.8			
Vehicle Noise:	76.6	74.6	68.7	69.8	77.1	77.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			175	378	813	1,752			
CNEL:			180	387	834	1,798			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 28th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 29,671 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,967 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.77%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.65%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.58%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.91	-0.62	-1.20	-4.69	0.000			0.000
Medium Trucks:	81.00	-13.34	-0.60	-1.20	-4.88	0.000			0.000
Heavy Trucks:	85.38	-8.24	-0.60	-1.20	-5.35	0.000			0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.3	68.2	64.6	63.5	70.8				71.0
Medium Trucks:	65.9	64.2	56.9	57.8	65.6				65.8
Heavy Trucks:	75.3	73.4	66.6	68.7	75.9				76.1
Vehicle Noise:	76.9	74.9	69.0	70.1	77.4				77.6
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	184	395	852	1,835				
	CNEL:	188	406	874	1,883				
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o SR-60 Fwy.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,308 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,831 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 48 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 89.83%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.50%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.67%				
Centerline Dist. to Barrier: 59.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 59.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 54.129				
Road Grade: 0.0%					Medium Trucks: 53.966				
Left View: -90.0 degrees					Heavy Trucks: 53.982				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.76	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-13.80	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-8.93	-0.60	-1.20	-5.35	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.1	68.0	64.5	63.3	70.6	70.9			
Medium Trucks:	65.4	63.8	56.5	57.3	65.1	65.3			
Heavy Trucks:	74.6	72.7	65.9	68.0	75.3	75.4			
Vehicle Noise:	76.3	74.4	68.5	69.5	76.8	77.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			169	363	783	1,686			
CNEL:			173	373	803	1,731			
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Rubidoux Bl. Road Segment: s/o 34th St.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		21,033 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,103 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet		Vehicle Type			
Site Data				Day	Evening	Night	Daily
				Autos: 73.2% 8.1% 18.6% 89.80%			
				Medium Trucks: 82.2% 3.9% 14.0% 2.50%			
				Heavy Trucks: 76.5% 4.0% 19.5% 7.70%			
				Noise Source Elevations (in feet)			
Barrier Height:		0.0 feet		Autos:		0.000	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		2.297	
Centerline Dist. to Barrier:		59.0 feet		Heavy Trucks:		8.004	
Centerline Dist. to Observer:		59.0 feet		Grade Adjustment:		0.0	
Barrier Distance to Observer:		0.0 feet		Lane Equivalent Distance (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		54.129	
Pad Elevation:		0.0 feet		Medium Trucks:		53.966	
Road Elevation:		0.0 feet		Heavy Trucks:		53.982	
Road Grade:		0.0%					
Left View:		-90.0 degrees					
Right View:		90.0 degrees					
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.47	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-15.09	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.20	-0.60	-1.20	-5.35	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.9	66.7	63.2	62.0	69.3	69.6	
Medium Trucks:	64.1	62.5	55.2	56.0	63.8	64.0	
Heavy Trucks:	73.4	71.4	64.6	66.7	74.0	74.1	
Vehicle Noise:	75.1	73.1	67.2	68.3	75.6	75.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			139	298	643	1,385	
CNEL:			142	306	660	1,422	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1A Road Name: Rivera St. Road Segment: n/o Market St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,214 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,021 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 30 mph										
Near/Far Lane Distance: 12 feet					Vehicle Mix					
					Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 90.00%					
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.47%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.52%					
Centerline Dist. to Barrier: 33.0 feet										
Centerline Dist. to Observer: 33.0 feet					Noise Source Elevations (in feet)					
Barrier Distance to Observer: 0.0 feet					Autos: 0.000					
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297					
Pad Elevation: 0.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Road Elevation: 0.0 feet										
Road Grade: 0.0%					Lane Equivalent Distance (in feet)					
Left View: -90.0 degrees					Autos: 32.833					
Right View: 90.0 degrees					Medium Trucks: 32.562					
					Heavy Trucks: 32.589					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	61.75	-0.44	2.64	-1.20	-4.52	0.000	0.000			
Medium Trucks:	73.48	-16.05	2.69	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	79.92	-11.22	2.69	-1.20	-5.69	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:	62.7	60.6	57.1	55.9	63.2		63.5			
Medium Trucks:	58.9	57.3	50.0	50.8	58.7		58.8			
Heavy Trucks:	70.2	68.2	61.4	63.6	70.8		70.9			
Vehicle Noise:	71.2	69.2	63.0	64.4	71.7		71.9			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA		55 dBA			
Ldn:			43	92	199		429			
CNEL:			44	95	204		439			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1A Road Name: Cactus Av. Road Segment: n/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		7,751 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		775 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		11 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	90.27%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.41%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	7.32%
Centerline Dist. to Barrier:		30.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		30.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		29.912			
Road Grade:		0.0%			Medium Trucks:		29.615			
Left View:		-90.0 degrees			Heavy Trucks:		29.644			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-2.88	3.24	-1.20	-4.49	0.000	0.000			
Medium Trucks:	77.72	-18.62	3.31	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	82.99	-13.79	3.30	-1.20	-5.77	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.7	63.5	60.0	58.8	66.2	66.4				
Medium Trucks:	61.2	59.6	52.3	53.1	60.9	61.1				
Heavy Trucks:	71.3	69.4	62.6	64.7	71.9	72.0				
Vehicle Noise:	72.7	70.7	64.7	65.9	73.2	73.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			49	106	228	490				
CNEL:			50	108	233	503				

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Riverside Av. Road Segment: n/o I-10 Fwy.			Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 49,977 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,998 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data			Vehicle Mix				
			VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			Autos: 73.2% 8.1% 18.6% 89.83% Medium Trucks: 82.2% 3.9% 14.0% 2.51% Heavy Trucks: 76.5% 4.0% 19.5% 7.67%				
			Noise Source Elevations (in feet)				
			Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			Lane Equivalent Distance (in feet)				
			Autos: 54.772 Medium Trucks: 54.610 Heavy Trucks: 54.626				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	5.20	-0.70	-1.20	-4.69	0.000	0.000
Medium Trucks:	77.72	-10.35	-0.68	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-5.49	-0.68	-1.20	-5.34	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	69.8	67.7	64.1	63.0	70.3	70.6	
Medium Trucks:	65.5	63.8	56.6	57.4	65.2	65.4	
Heavy Trucks:	75.6	73.7	66.9	69.0	76.2	76.4	
Vehicle Noise:	77.0	75.0	69.0	70.2	77.5	77.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			189	407	878	1,891	
CNEL:			194	418	900	1,939	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2035 With Alt 1A Road Name: Riverside Av. Road Segment: s/o I-10 Fwy.				Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 56,179 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 5,618 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 50 feet				Vehicle Mix				
				Vehicle Type	Day	Evening	Night	Daily
Site Data				Autos: 73.2% 8.1% 18.6% 89.46%				
				Medium Trucks: 82.2% 3.9% 14.0% 2.56%				
				Heavy Trucks: 76.5% 4.0% 19.5% 7.98%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.004				
Centerline Dist. to Barrier: 60.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 60.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	4.72	-0.70	-1.20	-4.69	0.000	0.000	
Medium Trucks:	81.00	-10.71	-0.68	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-5.78	-0.68	-1.20	-5.34	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	73.0	70.9	67.4	66.2	73.5	73.8		
Medium Trucks:	68.4	66.8	59.5	60.3	68.1	68.3		
Heavy Trucks:	77.7	75.8	69.0	71.1	78.3	78.5		
Vehicle Noise:	79.4	77.4	71.5	72.6	79.9	80.0		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			273	587	1,265	2,726		
CNEL:			280	603	1,299	2,798		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Santa Ana Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 44,906 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,491 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 55 mph				Vehicle Mix					
Near/Far Lane Distance: 52 feet									
Site Data				Autos: 73.2% 8.1% 18.6% 89.36%					
Barrier Height: 0.0 feet				Medium Trucks: 82.2% 3.9% 14.0% 2.58%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 76.5% 4.0% 19.5% 8.06%					
Centerline Dist. to Barrier: 52.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 52.0 feet									
Barrier Distance to Observer: 0.0 feet				Autos: 0.000					
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297					
Pad Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)					
Road Grade: 0.0%									
Left View: -90.0 degrees				Autos: 45.310					
Right View: 90.0 degrees				Medium Trucks: 45.114					
				Heavy Trucks: 45.133					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	3.33	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-12.07	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-7.12	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	74.4	72.3	68.8	67.6	74.9	75.2			
Medium Trucks:	69.7	68.1	60.8	61.6	69.4	69.6			
Heavy Trucks:	78.6	76.7	69.9	72.0	79.2	79.4			
Vehicle Noise:	80.4	78.4	72.7	73.6	80.9	81.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			278	600	1,292	2,783			
CNEL:			286	616	1,326	2,857			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Slover Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		52,223 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		5,222 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		52 feet		VehicleType			
Site Data				Day		Evening	
Barrier Height:		0.0 feet		Night		Daily	
Barrier Type (0-Wall, 1-Berm):		0.0		Autos:		73.2% 8.1% 18.6% 89.43%	
Centerline Dist. to Barrier:		52.0 feet		Medium Trucks:		82.2% 3.9% 14.0% 2.57%	
Centerline Dist. to Observer:		52.0 feet		Heavy Trucks:		76.5% 4.0% 19.5% 8.01%	
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Grade:		0.0%		Grade Adjustment:		0.0	
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees		Autos:		45.310	
				Medium Trucks:		45.114	
				Heavy Trucks:		45.133	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.40	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-11.02	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-6.08	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.9	71.8	68.3	67.1	74.4	74.7	
Medium Trucks:	69.3	67.7	60.4	61.3	69.1	69.2	
Heavy Trucks:	78.7	76.7	69.9	72.0	79.3	79.4	
Vehicle Noise:	80.3	78.3	72.5	73.5	80.8	81.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			273	588	1,266	2,727	
CNEL:			280	603	1,299	2,799	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Riverside Av. Road Segment: s/o Jurupa Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		44,906 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		4,491 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		55 mph		Vehicle Mix					
Near/Far Lane Distance:		52 feet		VehicleType		Day	Evening	Night	Daily
Site Data				Autos:		73.2%	8.1%	18.6%	89.36%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.58%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	8.06%
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		45.310			
Road Grade:		0.0%		Medium Trucks:		45.114			
Left View:		-90.0 degrees		Heavy Trucks:		45.133			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	3.33	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	82.40	-12.07	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-7.12	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	74.4	72.3	68.8	67.6	74.9	75.2			
Medium Trucks:	69.7	68.1	60.8	61.6	69.4	69.6			
Heavy Trucks:	78.6	76.7	69.9	72.0	79.2	79.4			
Vehicle Noise:	80.4	78.4	72.7	73.6	80.9	81.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			278	600	1,292	2,783			
CNEL:			286	616	1,326	2,857			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rancho Av. Road Segment: n/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,534 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,353 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 52 feet					Vehicle Type				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 73.2% 8.1% 18.6% 89.64%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.54%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 7.82%				
Centerline Dist. to Barrier: 52.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 52.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 45.310				
Left View: -90.0 degrees					Medium Trucks: 45.114				
Right View: 90.0 degrees					Heavy Trucks: 45.133				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.92	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-13.57	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-8.68	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.8	65.6	62.1	60.9	68.2	68.5			
Medium Trucks:	63.5	61.9	54.6	55.4	63.2	63.4			
Heavy Trucks:	73.7	71.7	64.9	67.0	74.3	74.4			
Vehicle Noise:	75.0	73.0	67.0	68.2	75.5	75.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				121	261	563	1,212		
CNEL:				124	268	577	1,243		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Rancho Av. Road Segment: s/o Agua Mansa Rd.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,060 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,906 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		52 feet		VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		73.2%	8.1%	18.6%	89.78%
Barrier Height:		0.0 feet		Medium Trucks:		82.2%	3.9%	14.0%	2.51%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5%	4.0%	19.5%	7.71%
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		52.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		45.310			
Road Grade:		0.0%		Medium Trucks:		45.114			
Left View:		-90.0 degrees		Heavy Trucks:		45.133			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.01	0.54	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-14.52	0.57	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-9.66	0.56	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.9	64.7	61.2	60.0	67.3	67.6			
Medium Trucks:	62.6	60.9	53.6	54.5	62.3	62.5			
Heavy Trucks:	72.7	70.7	63.9	66.1	73.3	73.4			
Vehicle Noise:	74.0	72.1	66.0	67.3	74.6	74.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			105	225	485	1,046			
CNEL:			107	231	498	1,072			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Slover Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 17,039 vehicles				Autos: 15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 1,704 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet							
Site Data				VehicleType			
Barrier Height: 0.0 feet				Autos: 73.2% 8.1% 18.6% 90.03%			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.2% 3.9% 14.0% 2.47%			
Centerline Dist. to Barrier: 52.0 feet				Heavy Trucks: 76.5% 4.0% 19.5% 7.50%			
Centerline Dist. to Observer: 52.0 feet				Noise Source Elevations (in feet)			
Barrier Distance to Observer: 0.0 feet							
Observer Height (Above Pad): 5.0 feet				Autos: 0.000			
Pad Elevation: 0.0 feet				Medium Trucks: 2.297			
Road Elevation: 0.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Road Grade: 0.0%				Lane Equivalent Distance (in feet)			
Left View: -90.0 degrees							
Right View: 90.0 degrees				Autos: 46.400			
				Medium Trucks: 46.209			
				Heavy Trucks: 46.228			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.44	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-16.06	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-11.23	0.41	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	69.0	66.8	63.3	62.1	69.4	69.7	
Medium Trucks:	64.2	62.5	55.2	56.1	63.9	64.0	
Heavy Trucks:	73.4	71.4	64.6	66.7	74.0	74.1	
Vehicle Noise:	75.1	73.1	67.3	68.3	75.6	75.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			122	264	568	1,224	
CNEL:			126	271	583	1,256	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Slover Av. Road Segment: w/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		11,674 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		1,167 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		48 feet					
Site Data				Autos: 73.2% 8.1% 18.6% 89.95%			
Barrier Height:		0.0 feet		Medium Trucks:		82.2% 3.9% 14.0% 2.49%	
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		76.5% 4.0% 19.5% 7.57%	
Centerline Dist. to Barrier:		52.0 feet		Noise Source Elevations (in feet)			
Centerline Dist. to Observer:		52.0 feet					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000	
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297	
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004	
Road Elevation:		0.0 feet		Grade Adjustment:		0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		46.400	
				Medium Trucks:		46.209	
				Heavy Trucks:		46.228	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.08	0.38	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-17.66	0.41	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-12.83	0.41	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.3	65.2	61.6	60.5	67.8	68.1	
Medium Trucks:	62.5	60.9	53.6	54.5	62.3	62.4	
Heavy Trucks:	71.8	69.8	63.0	65.1	72.4	72.5	
Vehicle Noise:	73.5	71.5	65.7	66.7	74.0	74.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			95	206	443	955	
CNEL:			98	211	455	980	

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		9,120 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		912 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		73.2%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.2%	
Centerline Dist. to Barrier:		44.0 feet		Heavy Trucks:		76.5%	
Centerline Dist. to Observer:		44.0 feet				4.0%	
Barrier Distance to Observer:		0.0 feet				19.5%	
Observer Height (Above Pad):		5.0 feet				8.21%	
Pad Elevation:		0.0 feet		Noise Source Elevations (in feet)			
Road Elevation:		0.0 feet					
Road Grade:		0.0%		Autos:		0.000	
Left View:		-90.0 degrees		Medium Trucks:		2.297	
Right View:		90.0 degrees		Heavy Trucks:		8.004	
				Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos:			
				Medium Trucks:			
				Heavy Trucks:			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.22	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-17.57	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-12.58	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.4	62.2	58.7	57.5	64.8	65.1
Medium Trucks:	60.3	58.6	51.3	52.2	60.0	60.2
Heavy Trucks:	70.5	68.6	61.8	63.9	71.1	71.3
Vehicle Noise:	71.8	69.8	63.8	65.0	72.3	72.5
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	63	135	291	627		
CNEL:	64	138	298	642		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Santa Ana Av. Road Segment: w/o Riverside Av.				Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		5,154 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		515 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		36 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos:		73.2%	8.1%	18.6%	90.00%
				Medium Trucks:		82.2%	3.9%	14.0%	2.47%
				Heavy Trucks:		76.5%	4.0%	19.5%	7.52%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Medium Trucks:		2.297							
Heavy Trucks:		8.004							
Grade Adjustment:		0.0							
Lane Equivalent Distance (in feet)									
Autos:		40.460							
Medium Trucks:		40.241							
Heavy Trucks:		40.262							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-4.66	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	77.72	-20.27	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.44	1.31	-1.20	-5.50	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	59.8	56.3	55.1	62.4	62.7
Medium Trucks:	57.6	55.9	48.6	49.5	57.3	57.4
Heavy Trucks:	67.7	65.7	58.9	61.0	68.3	68.4
Vehicle Noise:	69.0	67.0	61.0	62.2	69.5	69.7
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	41	88	190	410		
CNEL:	42	90	195	420		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Jurupa Av. Road Segment: w/o Cedar Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		7,552 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		755 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		48 feet							
Site Data					VehicleType				
Barrier Height:		0.0 feet			Autos:		73.2%		8.1%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%		3.9%
Centerline Dist. to Barrier:		52.0 feet			Heavy Trucks:		76.5%		4.0%
Centerline Dist. to Observer:		52.0 feet					19.5%		7.42%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet			Autos:		0.000		
Road Elevation:		0.0 feet			Medium Trucks:		2.297		
Road Grade:		0.0%			Heavy Trucks:		8.004		
Left View:		-90.0 degrees					Grade Adjustment: 0.0		
Right View:		90.0 degrees			Lane Equivalent Distance (in feet)				
FHWA Noise Model Calculations					Autos: 46.400				
					Medium Trucks: 46.209				
					Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-3.00	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	77.72	-18.67	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-13.84	0.41	-1.20	-5.41	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.7	60.6	57.0	55.9	63.2	63.4
Medium Trucks:	58.3	56.6	49.3	50.2	58.0	58.1
Heavy Trucks:	68.4	66.4	59.6	61.7	69.0	69.1
Vehicle Noise:	69.7	67.8	61.8	63.0	70.2	70.4
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	54	116	251	540		
CNEL:	55	119	257	554		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2035 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cedar Av.				Project Name: Agua Mansa Job Number: 11215			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 15,805 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,581 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 73.2% 8.1% 18.6% 85.65% Medium Trucks: 82.2% 3.9% 14.0% 3.04% Heavy Trucks: 76.5% 4.0% 19.5% 11.31%			
				Noise Source Elevations (in feet)			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.52	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	79.45	-15.02	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-9.31	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.0	65.9	62.3	61.2	68.5	68.8
Medium Trucks:	64.5	62.9	55.6	56.4	64.3	64.4
Heavy Trucks:	75.0	73.1	66.3	68.4	75.6	75.8
Vehicle Noise:	76.1	74.2	68.0	69.4	76.7	76.8
Centerline Distance to Noise Contour (in feet)						
	70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	123	264	569	1,225		
CNEL:	126	270	583	1,255		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Cactus Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,305 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 831 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.09%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.83%				
					Heavy Trucks: 76.5% 4.0% 19.5% 10.08%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 40.460				
					Medium Trucks: 40.241				
					Heavy Trucks: 40.262				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-3.24	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-18.13	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-12.61	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.3	63.1	59.6	58.5	65.8	66.0			
Medium Trucks:	61.4	59.8	52.5	53.3	61.2	61.3			
Heavy Trucks:	71.7	69.8	63.0	65.1	72.4	72.5			
Vehicle Noise:	73.0	71.0	64.9	66.2	73.5	73.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				75	162	348	750		
CNEL:				77	166	357	769		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: El Rivino Rd. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,202 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 520 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet									
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 92.48%				
					Medium Trucks: 82.2% 3.9% 14.0% 1.86%				
					Heavy Trucks: 76.5% 4.0% 19.5% 5.66%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
Autos: 40.460									
Medium Trucks: 40.241									
Heavy Trucks: 40.262									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-5.02	1.28	-1.20	-4.61	0.000	0.000		
Medium Trucks:	79.45	-21.98	1.31	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.15	1.31	-1.20	-5.50	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.5	61.4	57.8	56.7	64.0	64.3			
Medium Trucks:	57.6	55.9	48.7	49.5	57.3	57.5			
Heavy Trucks:	67.2	65.3	58.5	60.6	67.8	68.0			
Vehicle Noise:	69.1	67.1	61.4	62.3	69.6	69.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				41	89	192	413		
CNEL:				42	91	197	424		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o 20th St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,981 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,998 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.79%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 9.37%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.60	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-14.30	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.11	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.0	62.5	61.3	68.6	68.9			
Medium Trucks:	64.3	62.6	55.4	56.2	64.0	64.2			
Heavy Trucks:	74.3	72.3	65.5	67.6	74.9	75.0			
Vehicle Noise:	75.6	73.6	67.5	68.8	76.1	76.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				127	274	591	1,273		
CNEL:				130	281	606	1,305		
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Brown Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,981 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,998 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 87.79%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 9.37%				
Centerline Dist. to Barrier: 50.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 50.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 46.915				
Road Grade: 0.0%					Medium Trucks: 46.726				
Left View: -90.0 degrees					Heavy Trucks: 46.744				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.60	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-14.30	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.11	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.0	62.5	61.3	68.6	68.9			
Medium Trucks:	64.3	62.6	55.4	56.2	64.0	64.2			
Heavy Trucks:	74.3	72.3	65.5	67.6	74.9	75.0			
Vehicle Noise:	75.6	73.6	67.5	68.8	76.1	76.2			
Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	127	274	591	1,273					
CNEL:	130	281	606	1,305					
Thursday, October 18, 2018									

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: w/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,081 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,908 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 89.30%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.59%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.11%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
Autos: 46.400									
Medium Trucks: 46.209									
Heavy Trucks: 46.228									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.48	0.38	-1.20	-4.66	0.000	0.000		
Medium Trucks:	79.45	-14.90	0.41	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-9.94	0.41	-1.20	-5.41	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	68.1	66.0	62.4	61.3	68.6		68.9		
Medium Trucks:	63.8	62.1	54.8	55.7	63.5		63.7		
Heavy Trucks:	73.5	71.6	64.8	66.9	74.1		74.3		
Vehicle Noise:	75.0	73.0	67.0	68.2	75.5		75.6		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			121	260	560	1,206			
CNEL:			124	267	574	1,237			
Thursday, October 18, 2018									

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o El Rivino Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,491 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,449 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 82 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.58%				
Barrier Height: 0.0 feet					Medium Trucks: 82.2% 3.9% 14.0% 2.68%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 76.5% 4.0% 19.5% 8.74%				
Centerline Dist. to Barrier: 60.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 60.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 44.091				
Road Grade: 0.0%					Medium Trucks: 43.890				
Left View: -90.0 degrees					Heavy Trucks: 43.909				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.53	0.72	-1.20	-4.69	0.000		0.000	
Medium Trucks:	79.45	-13.66	0.75	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	84.25	-8.53	0.74	-1.20	-5.34	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	69.5	67.4	63.8	62.7	70.0			70.3	
Medium Trucks:	65.3	63.7	56.4	57.2	65.1			65.2	
Heavy Trucks:	75.3	73.3	66.5	68.6	75.9			76.0	
Vehicle Noise:	76.6	74.7	68.6	69.9	77.1			77.3	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	180	387	833	1,795				
	CNEL:	184	397	854	1,841				

Thursday, October 18, 2018

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Holly St.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,910 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
					Autos: 73.2% 8.1% 18.6% 87.51% Medium Trucks: 82.2% 3.9% 14.0% 2.91% Heavy Trucks: 76.5% 4.0% 19.5% 9.59%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.400 Medium Trucks: 46.209 Heavy Trucks: 46.228				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.39	0.38	-1.20	-4.66	0.000	0.000	0.000	
Medium Trucks:	79.45	-14.39	0.41	-1.20	-4.87	0.000	0.000	0.000	
Heavy Trucks:	84.25	-9.21	0.41	-1.20	-5.41	0.000	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.0	65.9	62.4	61.2	68.5	68.8		68.8	
Medium Trucks:	64.3	62.6	55.3	56.2	64.0	64.2		64.2	
Heavy Trucks:	74.3	72.3	65.5	67.6	74.9	75.0		75.0	
Vehicle Noise:	75.5	73.6	67.5	68.8	76.0	76.2		76.2	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				131	283	610	1,314		
CNEL:				135	290	625	1,347		
Thursday, October 18, 2018									

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1A Road Name: Agua Mansa Rd. Road Segment: e/o Riverside Av.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		11,035 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,103 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		82 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		73.2%	8.1%	18.6%	89.16%
Barrier Height:		0.0 feet			Medium Trucks:		82.2%	3.9%	14.0%	2.59%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		76.5%	4.0%	19.5%	8.25%
Centerline Dist. to Barrier:		60.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		60.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		44.091			
Road Grade:		0.0%			Medium Trucks:		43.890			
Left View:		-90.0 degrees			Heavy Trucks:		43.909			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	-1.91	0.72	-1.20	-4.69	0.000	0.000	0.000		
Medium Trucks:	79.45	-17.28	0.75	-1.20	-4.88	0.000	0.000	0.000		
Heavy Trucks:	84.25	-12.24	0.74	-1.20	-5.34	0.000	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.1	63.9	60.4	59.2	66.5	66.8				
Medium Trucks:	61.7	60.1	52.8	53.6	61.5	61.6				
Heavy Trucks:	71.6	69.6	62.8	64.9	72.2	72.3				
Vehicle Noise:	73.0	71.0	65.0	66.2	73.5	73.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				103	221	476	1,025			
CNEL:				105	227	488	1,052			
Thursday, October 18, 2018										

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: 20th St. Road Segment: e/o Rubidoux Bl.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,620 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,062 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 73.2% 8.1% 18.6% 88.79%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.64%				
					Heavy Trucks: 76.5% 4.0% 19.5% 8.57%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 50.0 feet									
Centerline Dist. to Observer: 50.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
					Heavy Trucks: 46.744				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.51	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-12.76	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.65	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.1	67.9	64.4	63.2	70.6	70.8			
Medium Trucks:	65.8	64.2	56.9	57.7	65.6	65.7			
Heavy Trucks:	75.7	73.8	67.0	69.1	76.3	76.5			
Vehicle Noise:	77.1	75.1	69.2	70.4	77.6	77.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			161	348	750	1,615			
CNEL:			166	357	769	1,656			

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: Market St. Road Segment: e/o Hall Av.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,336 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,634 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 50.0 feet					Daily				
Centerline Dist. to Observer: 50.0 feet					Autos: 73.2%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.2%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 76.5%				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Grade: 0.0%					Autos: 0.000				
Left View: -90.0 degrees					Medium Trucks: 2.297				
Right View: 90.0 degrees					Heavy Trucks: 8.004				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.23	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-11.90	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-6.73	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.7	65.1	64.0	71.3	71.6			
Medium Trucks:	66.7	65.0	57.8	58.6	66.4	66.6			
Heavy Trucks:	76.7	74.7	67.9	70.0	77.3	77.4			
Vehicle Noise:	78.0	76.0	70.0	71.2	78.5	78.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				185	398	857	1,847		
CNEL:				189	408	879	1,894		

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2035 With Alt 1A Road Name: 20th St. Road Segment: e/o Agua Mansa Rd.					Project Name: Agua Mansa Job Number: 11215				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,549 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,755 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					Vehicle Type Day Evening Night Daily				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 73.2% 8.1% 18.6% 87.89%				
					Medium Trucks: 82.2% 3.9% 14.0% 2.78%				
					Heavy Trucks: 76.5% 4.0% 19.5% 9.33%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 46.915				
					Medium Trucks: 46.726				
Heavy Trucks: 46.744									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.00	0.31	-1.20	-4.65	0.000	0.000		
Medium Trucks:	79.45	-13.00	0.34	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-7.74	0.34	-1.20	-5.43	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.4	63.9	62.7	70.0	70.3			
Medium Trucks:	65.6	63.9	56.7	57.5	65.3	65.5			
Heavy Trucks:	75.7	73.7	66.9	69.0	76.3	76.4			
Vehicle Noise:	76.9	75.0	68.9	70.2	77.5	77.6			
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	157	339	730	1,572					
CNEL:	161	347	748	1,611					

Thursday, October 18, 2018

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2035 With Alt 1A Road Name: Market St. Road Segment: e/o Rivera St.					Project Name: Agua Mansa Job Number: 11215					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		44,357 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		4,436 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		45 mph			Vehicle Mix					
Near/Far Lane Distance:		48 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		73.2%	8.1%	18.6%	88.63%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.2%	3.9%	14.0%	2.68%
Centerline Dist. to Barrier:		50.0 feet			Heavy Trucks:		76.5%	4.0%	19.5%	8.69%
Centerline Dist. to Observer:		50.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		44.147			
					Medium Trucks:		43.947			
					Heavy Trucks:		43.966			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	4.11	0.71	-1.20	-4.65	0.000	0.000			
Medium Trucks:	79.45	-11.09	0.74	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	84.25	-5.98	0.73	-1.20	-5.43	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	72.1	69.9	66.4	65.2	72.5	72.8				
Medium Trucks:	67.9	66.3	59.0	59.8	67.6	67.8				
Heavy Trucks:	77.8	75.9	69.1	71.2	78.4	78.5				
Vehicle Noise:	79.2	77.2	71.2	72.4	79.7	79.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				221	477	1,028	2,215			
CNEL:				227	489	1,054	2,271			

Thursday, October 18, 2018

APPENDIX 9.1:

OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R1

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	400.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	400.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	400.0	-38.1	-38.1	-38.1	-38.1	-38.1	-38.1
Shielding (Barrier Attenuation)	400.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.1	36.3	38.0	39.3	39.6	40.1
39 Minute Hourly Adjustment		37.2	34.4	36.1	37.4	37.7	38.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R1

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	830.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	830.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	830.0	-28.8	-28.8	-28.8	-28.8	-28.8	-28.8
Shielding (Barrier Attenuation)	830.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.4	35.4	38.4	43.0	46.8	51.2
60 Minute Hourly Adjustment		38.4	35.4	38.4	43.0	46.8	51.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R1

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Industria Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	649.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	649.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	649.0	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2
Shielding (Barrier Attenuation)	649.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.0	21.8	22.8	27.8	33.8	44.7
60 Minute Hourly Adjustment		25.0	21.8	22.8	27.8	33.8	44.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R1

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Commer Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	360.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	360.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	56.7	60.7	63.7	67.1	79.5
Distance Attenuation	360.0	-27.9	-27.9	-27.9	-27.9	-27.9	-27.9
Shielding (Barrier Attenuation)	360.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.2	28.8	32.8	35.8	39.2	51.6
60 Minute Hourly Adjustment		32.2	28.8	32.8	35.8	39.2	51.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R2

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	526.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	526.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	526.0	-40.4	-40.4	-40.4	-40.4	-40.4	-40.4
Shielding (Barrier Attenuation)	526.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.8	34.0	35.7	37.0	37.3	37.8
39 Minute Hourly Adjustment		34.9	32.1	33.8	35.1	35.4	35.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R2

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	600.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	600.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	600.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Shielding (Barrier Attenuation)	600.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.2	38.2	41.2	45.8	49.6	54.0
60 Minute Hourly Adjustment		41.2	38.2	41.2	45.8	49.6	54.0

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R2

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Industria) Job Number: 11215
 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	167.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	167.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	167.0	-18.3	-18.3	-18.3	-18.3	-18.3	-18.3
Shielding (Barrier Attenuation)	167.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.9	30.7	31.7	36.7	42.7	53.6
60 Minute Hourly Adjustment		33.9	30.7	31.7	36.7	42.7	53.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R3

Project Name: Agua Mansa

Source: Air Conditioning Unit (Roof-Top) Job Number: 11215
 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	530.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	530.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	530.0	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5
Shielding (Barrier Attenuation)	530.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.7	33.9	35.6	36.9	37.2	37.7
39 Minute Hourly Adjustment		34.8	32.0	33.7	35.0	35.3	35.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R3

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	436.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	436.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	436.0	-23.2	-23.2	-23.2	-23.2	-23.2	-23.2
Shielding (Barrier Attenuation)	436.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		44.0	41.0	44.0	48.6	52.4	56.8
60 Minute Hourly Adjustment		44.0	41.0	44.0	48.6	52.4	56.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R3

Source: Parking Lot Vehicle Movements (Industria
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	475.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	475.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	475.0	-25.2	-25.2	-25.2	-25.2	-25.2	-25.2
Shielding (Barrier Attenuation)	475.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		27.0	23.8	24.8	29.8	35.8	46.7
60 Minute Hourly Adjustment		27.0	23.8	24.8	29.8	35.8	46.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R4

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	774.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	774.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	774.0	-43.8	-43.8	-43.8	-43.8	-43.8	-43.8
Shielding (Barrier Attenuation)	774.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.4	30.6	32.3	33.6	33.9	34.4
39 Minute Hourly Adjustment		31.5	28.7	30.4	31.7	32.0	32.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R4

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	584.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	584.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	584.0	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8
Shielding (Barrier Attenuation)	584.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.4	38.4	41.4	46.0	49.8	54.2
60 Minute Hourly Adjustment		41.4	38.4	41.4	46.0	49.8	54.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R4

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Industria) Job Number: 11215
 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	788.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	788.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	788.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	788.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.8	20.6	21.6	26.6	32.6	43.5
60 Minute Hourly Adjustment		23.8	20.6	21.6	26.6	32.6	43.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Project Name: Agua Mansa

Source: Air Conditioning Unit (Roof-Top) Job Number: 11215
 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,387.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,387.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	3,387.0	-56.6	-56.6	-56.6	-56.6	-56.6	-56.6
Shielding (Barrier Attenuation)	3,387.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		20.6	17.8	19.5	20.8	21.1	21.6
39 Minute Hourly Adjustment		18.7	15.9	17.6	18.9	19.2	19.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,322.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,322.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	3,322.0	-40.9	-40.9	-40.9	-40.9	-40.9	-40.9
Shielding (Barrier Attenuation)	3,322.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.3	23.3	26.3	30.9	34.7	39.1
60 Minute Hourly Adjustment		26.3	23.3	26.3	30.9	34.7	39.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Parking Lot Vehicle Movements (Industria
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,822.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,822.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	2,822.0	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8
Shielding (Barrier Attenuation)	2,822.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		15.4	12.2	13.2	18.2	24.2	35.1
60 Minute Hourly Adjustment		15.4	12.2	13.2	18.2	24.2	35.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Parking Lot Vehicle Movements (Park)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,088.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	4,088.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	55.4	53.2	56.2	59.4	62.2	66.1
Distance Attenuation	4,088.0	-43.7	-43.7	-43.7	-43.7	-43.7	-43.7
Shielding (Barrier Attenuation)	4,088.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		11.7	9.5	12.5	15.7	18.5	22.4
60 Minute Hourly Adjustment		11.7	9.5	12.5	15.7	18.5	22.4

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Dog Park Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,954.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,954.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	62.8	58.5	61.0	65.2	72.6	78.6
Distance Attenuation	3,954.0	-58.0	-58.0	-58.0	-58.0	-58.0	-58.0
Shielding (Barrier Attenuation)	3,954.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		4.8	0.5	3.0	7.2	14.6	20.6
60 Minute Hourly Adjustment		4.8	0.5	3.0	7.2	14.6	20.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Playground Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,891.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,891.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	63.4	61.7	64.1	67.0	69.7	73.9
Distance Attenuation	3,891.0	-57.8	-57.8	-57.8	-57.8	-57.8	-57.8
Shielding (Barrier Attenuation)	3,891.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		5.6	3.9	6.3	9.2	11.9	16.1
60 Minute Hourly Adjustment		5.6	3.9	6.3	9.2	11.9	16.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R5

Source: Park Trail Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,382.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,382.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	57.7	52.7	56.8	59.0	59.1	69.9
Distance Attenuation	2,382.0	-35.7	-35.7	-35.7	-35.7	-35.7	-35.7
Shielding (Barrier Attenuation)	2,382.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.0	17.0	21.1	23.3	23.4	34.2
60 Minute Hourly Adjustment		22.0	17.0	21.1	23.3	23.4	34.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,722.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,722.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	3,722.0	-57.4	-57.4	-57.4	-57.4	-57.4	-57.4
Shielding (Barrier Attenuation)	3,722.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		19.8	17.0	18.7	20.0	20.3	20.8
39 Minute Hourly Adjustment		17.9	15.1	16.8	18.1	18.4	18.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,608.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,608.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	3,608.0	-41.6	-41.6	-41.6	-41.6	-41.6	-41.6
Shielding (Barrier Attenuation)	3,608.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.6	22.6	25.6	30.2	34.0	38.4
60 Minute Hourly Adjustment		25.6	22.6	25.6	30.2	34.0	38.4

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Industria Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,608.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,608.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	3,608.0	-38.4	-38.4	-38.4	-38.4	-38.4	-38.4
Shielding (Barrier Attenuation)	3,608.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		13.8	10.6	11.6	16.6	22.6	33.5
60 Minute Hourly Adjustment		13.8	10.6	11.6	16.6	22.6	33.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Park) Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,157.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	4,157.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	55.4	53.2	56.2	59.4	62.2	66.1
Distance Attenuation	4,157.0	-43.8	-43.8	-43.8	-43.8	-43.8	-43.8
Shielding (Barrier Attenuation)	4,157.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		11.6	9.4	12.4	15.6	18.4	22.3
60 Minute Hourly Adjustment		11.6	9.4	12.4	15.6	18.4	22.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Source: Dog Park Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,863.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,863.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	62.8	58.5	61.0	65.2	72.6	78.6
Distance Attenuation	3,863.0	-57.8	-57.8	-57.8	-57.8	-57.8	-57.8
Shielding (Barrier Attenuation)	3,863.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		5.0	0.7	3.2	7.4	14.8	20.8
60 Minute Hourly Adjustment		5.0	0.7	3.2	7.4	14.8	20.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Source: Playground Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,192.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	4,192.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	63.4	61.7	64.1	67.0	69.7	73.9
Distance Attenuation	4,192.0	-58.5	-58.5	-58.5	-58.5	-58.5	-58.5
Shielding (Barrier Attenuation)	4,192.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		4.9	3.2	5.6	8.5	11.2	15.4
60 Minute Hourly Adjustment		4.9	3.2	5.6	8.5	11.2	15.4

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R6

Source: Park Trail Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,188.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,188.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	57.7	52.7	56.8	59.0	59.1	69.9
Distance Attenuation	3,188.0	-37.6	-37.6	-37.6	-37.6	-37.6	-37.6
Shielding (Barrier Attenuation)	3,188.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		20.1	15.1	19.2	21.4	21.5	32.3
60 Minute Hourly Adjustment		20.1	15.1	19.2	21.4	21.5	32.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,329.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,329.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	2,329.0	-53.4	-53.4	-53.4	-53.4	-53.4	-53.4
Shielding (Barrier Attenuation)	2,329.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.8	21.0	22.7	24.0	24.3	24.8
39 Minute Hourly Adjustment		21.9	19.1	20.8	22.1	22.4	22.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,255.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,255.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	2,255.0	-37.5	-37.5	-37.5	-37.5	-37.5	-37.5
Shielding (Barrier Attenuation)	2,255.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.7	26.7	29.7	34.3	38.1	42.5
60 Minute Hourly Adjustment		29.7	26.7	29.7	34.3	38.1	42.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Parking Lot Vehicle Movements (Industria
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,255.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,255.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	2,255.0	-35.3	-35.3	-35.3	-35.3	-35.3	-35.3
Shielding (Barrier Attenuation)	2,255.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		16.9	13.7	14.7	19.7	25.7	36.6
60 Minute Hourly Adjustment		16.9	13.7	14.7	19.7	25.7	36.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Parking Lot Vehicle Movements (Park)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,039.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,039.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	55.4	53.2	56.2	59.4	62.2	66.1
Distance Attenuation	3,039.0	-41.8	-41.8	-41.8	-41.8	-41.8	-41.8
Shielding (Barrier Attenuation)	3,039.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		13.6	11.4	14.4	17.6	20.4	24.3
60 Minute Hourly Adjustment		13.6	11.4	14.4	17.6	20.4	24.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Dog Park Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,812.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,812.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	62.8	58.5	61.0	65.2	72.6	78.6
Distance Attenuation	2,812.0	-55.0	-55.0	-55.0	-55.0	-55.0	-55.0
Shielding (Barrier Attenuation)	2,812.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		7.8	3.5	6.0	10.2	17.6	23.6
60 Minute Hourly Adjustment		7.8	3.5	6.0	10.2	17.6	23.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Playground Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	3,215.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	3,215.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	63.4	61.7	64.1	67.0	69.7	73.9
Distance Attenuation	3,215.0	-56.2	-56.2	-56.2	-56.2	-56.2	-56.2
Shielding (Barrier Attenuation)	3,215.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		7.2	5.5	7.9	10.8	13.5	17.7
60 Minute Hourly Adjustment		7.2	5.5	7.9	10.8	13.5	17.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R7

Source: Park Trail Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,540.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,540.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	57.7	52.7	56.8	59.0	59.1	69.9
Distance Attenuation	2,540.0	-36.1	-36.1	-36.1	-36.1	-36.1	-36.1
Shielding (Barrier Attenuation)	2,540.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.6	16.6	20.7	22.9	23.0	33.8
60 Minute Hourly Adjustment		21.6	16.6	20.7	22.9	23.0	33.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	932.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	932.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	932.0	-45.4	-45.4	-45.4	-45.4	-45.4	-45.4
Shielding (Barrier Attenuation)	932.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.8	29.0	30.7	32.0	32.3	32.8
39 Minute Hourly Adjustment		29.9	27.1	28.8	30.1	30.4	30.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	932.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	932.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	932.0	-29.8	-29.8	-29.8	-29.8	-29.8	-29.8
Shielding (Barrier Attenuation)	932.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		37.4	34.4	37.4	42.0	45.8	50.2
60 Minute Hourly Adjustment		37.4	34.4	37.4	42.0	45.8	50.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Industria) Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	932.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	932.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	932.0	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5
Shielding (Barrier Attenuation)	932.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.7	19.5	20.5	25.5	31.5	42.4
60 Minute Hourly Adjustment		22.7	19.5	20.5	25.5	31.5	42.4

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Park) Job Number: 11215

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,916.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	1,916.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	55.4	53.2	56.2	59.4	62.2	66.1
Distance Attenuation	1,916.0	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8
Shielding (Barrier Attenuation)	1,916.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		16.6	14.4	17.4	20.6	23.4	27.3
60 Minute Hourly Adjustment		16.6	14.4	17.4	20.6	23.4	27.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Source: Dog Park Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,229.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,229.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	62.8	58.5	61.0	65.2	72.6	78.6
Distance Attenuation	2,229.0	-53.0	-53.0	-53.0	-53.0	-53.0	-53.0
Shielding (Barrier Attenuation)	2,229.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		9.8	5.5	8.0	12.2	19.6	25.6
60 Minute Hourly Adjustment		9.8	5.5	8.0	12.2	19.6	25.6

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Source: Playground Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,151.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,151.0 feet	Noise Source Height:	4.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	63.4	61.7	64.1	67.0	69.7	73.9
Distance Attenuation	2,151.0	-52.7	-52.7	-52.7	-52.7	-52.7	-52.7
Shielding (Barrier Attenuation)	2,151.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		10.7	9.0	11.4	14.3	17.0	21.2
60 Minute Hourly Adjustment		10.7	9.0	11.4	14.3	17.0	21.2

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R8

Source: Park Trail Activities
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,021.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	2,021.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	57.7	52.7	56.8	59.0	59.1	69.9
Distance Attenuation	2,021.0	-34.6	-34.6	-34.6	-34.6	-34.6	-34.6
Shielding (Barrier Attenuation)	2,021.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.1	18.1	22.2	24.4	24.5	35.3
60 Minute Hourly Adjustment		23.1	18.1	22.2	24.4	24.5	35.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R9

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	759.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	759.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	759.0	-43.6	-43.6	-43.6	-43.6	-43.6	-43.6
Shielding (Barrier Attenuation)	759.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.6	30.8	32.5	33.8	34.1	34.6
39 Minute Hourly Adjustment		31.7	28.9	30.6	31.9	32.2	32.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R9

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	759.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	759.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	759.0	-28.1	-28.1	-28.1	-28.1	-28.1	-28.1
Shielding (Barrier Attenuation)	759.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.1	36.1	39.1	43.7	47.5	51.9
60 Minute Hourly Adjustment		39.1	36.1	39.1	43.7	47.5	51.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R9

Source: Parking Lot Vehicle Movements (Industria
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	639.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	639.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	639.0	-27.1	-27.1	-27.1	-27.1	-27.1	-27.1
Shielding (Barrier Attenuation)	639.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.1	21.9	22.9	27.9	33.9	44.8
60 Minute Hourly Adjustment		25.1	21.9	22.9	27.9	33.9	44.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R9

Project Name: Agua Mansa

Source: Parking Lot Vehicle Movements (Commer
Condition: Operational

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	757.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	757.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	56.7	60.7	63.7	67.1	79.5
Distance Attenuation	757.0	-32.7	-32.7	-32.7	-32.7	-32.7	-32.7
Shielding (Barrier Attenuation)	757.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		27.4	24.0	28.0	31.0	34.4	46.8
60 Minute Hourly Adjustment		27.4	24.0	28.0	31.0	34.4	46.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R10

Project Name: Agua Mansa

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	145.0 feet	Barrier Height:	20.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	135.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	145.0	-29.2	-29.2	-29.2	-29.2	-29.2	-29.2
Shielding (Barrier Attenuation)	10.0	-9.1	-9.1	-9.1	-9.1	-9.1	-9.1
Raw (Distance + Barrier)		38.9	36.1	37.8	39.1	39.4	39.9
39 Minute Hourly Adjustment		37.0	34.2	35.9	37.2	37.5	38.0

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R10

Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	611.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	611.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	611.0	-26.2	-26.2	-26.2	-26.2	-26.2	-26.2
Shielding (Barrier Attenuation)	611.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.0	38.0	41.0	45.6	49.4	53.8
60 Minute Hourly Adjustment		41.0	38.0	41.0	45.6	49.4	53.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R10

Source: Parking Lot Vehicle Movements (Industria
Condition: Operational

Project Name: Agua Mansa

Job Number: 11215

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	339.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	339.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	339.0	-23.0	-23.0	-23.0	-23.0	-23.0	-23.0
Shielding (Barrier Attenuation)	339.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.2	26.0	27.0	32.0	38.0	48.9
60 Minute Hourly Adjustment		29.2	26.0	27.0	32.0	38.0	48.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/17/2018

Observer Location: R10**Project Name:** Agua Mansa**Source:** Parking Lot Vehicle Movements (Commer**Job Number:** 11215**Condition:** Operational**Analyst:** A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	123.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	123.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	56.7	60.7	63.7	67.1	79.5
Distance Attenuation	123.0	-20.9	-20.9	-20.9	-20.9	-20.9	-20.9
Shielding (Barrier Attenuation)	123.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.2	35.8	39.8	42.8	46.2	58.6
60 Minute Hourly Adjustment		39.2	35.8	39.8	42.8	46.2	58.6

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