

APPENDIX L

Building Noise and Vibration Analysis



Cherry Avenue Industrial Building

**NOISE AND VIBRATION ANALYSIS
CITY OF LONG BEACH**

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TABLE OF CONTENTS

TABLE OF CONTENTS	II
APPENDICES	III
LIST OF EXHIBITS	III
LIST OF TABLES	IV
LIST OF ABBREVIATED TERMS	V
EXECUTIVE SUMMARY	1
1 INTRODUCTION	3
1.1 Site Location	3
1.2 Project Description	3
1.3 Background	3
2 FUNDAMENTALS	7
2.1 Range of Noise	7
2.2 Noise Descriptors	8
2.3 Sound Propagation	8
2.4 Noise Control	9
2.5 Noise Barrier Attenuation	9
2.6 Land Use Compatibility With Noise	10
2.7 Community Response to Noise	10
2.8 Vibration	11
3 REGULATORY SETTING	13
3.1 State of California Noise Requirements	13
3.2 City of Long Beach General Plan Noise Element	13
3.3 Operational Noise Standards	15
3.4 Construction Noise Standards	17
3.5 Construction Vibration Standards	18
4 SIGNIFICANCE CRITERIA	19
4.1 Noise Level Increases (Threshold A)	19
4.2 Vibration (Threshold B)	20
4.3 CEQA Guidelines Not Further Analyzed (Threshold C)	20
4.4 Significance Criteria Summary	21
5 EXISTING NOISE LEVEL MEASUREMENTS	23
5.1 Measurement Procedure and Criteria	23
5.2 Noise Measurement Locations	23
5.3 Noise Measurement Results	24
6 METHODS AND PROCEDURES	27
6.1 FHWA Traffic Noise Prediction Model	27
6.2 Tenant Use Options	29
6.3 CadnaA Noise Prediction Model	31
7 OFF-SITE TRAFFIC NOISE ANALYSIS	33
7.1 Noise Contours	33
7.2 Existing Project Noise Increases	35
7.3 Opening Year Cumulative 2025 Noise Increases	35

7.4	Tenant Use Option Existing Noise Increases.....	36
7.5	Tenant Use Option Opening Year Cumulative 2025 Noise Increases.....	36
7.6	Reflected Traffic Noise Levels	36
8	RECEIVER LOCATIONS.....	41
9	OPERATIONAL NOISE IMPACTS	45
9.1	Project Site Design	45
9.2	Operational Noise Sources.....	45
9.3	Reference Noise Levels	45
9.4	Typical Operational Noise Levels	50
9.5	Typical Operational Noise Level Compliance.....	51
9.6	Maximum Operational Noise Levels	51
9.7	Maximum Operational Noise Level Compliance.....	52
9.8	Project Operational Noise Level Increases	53
10	CONSTRUCTION IMPACTS.....	55
10.1	Construction Noise Levels.....	55
10.2	Construction Reference Noise Levels	55
10.3	Construction Noise Analysis.....	58
10.4	Construction Noise Level Compliance	59
10.5	Project Construction Noise Mitigation Measures.....	61
10.6	Temporary Construction Noise Level Increases.....	62
10.7	Nighttime Concrete Pouring Activities.....	63
10.8	Construction Vibration Analysis.....	64
11	REFERENCES.....	66
12	CERTIFICATION	68

APPENDICES

APPENDIX 1.1: NOISE RESPONSE TO COMMENTS
APPENDIX 3.1: CITY OF LONG BEACH MUNICIPAL CODE
APPENDIX 5.1: STUDY AREA PHOTOS
APPENDIX 5.2: NOISE LEVEL MEASUREMENT WORKSHEETS
APPENDIX 7.1: OFF-SITE TRAFFIC NOISE CALCULATIONS
APPENDIX 7.2: TENANT USE OPTION OFF-SITE TRAFFIC NOISE CALCULATIONS
APPENDIX 7.3: CADNAA TRAFFIC NOISE REFLECTION CALCULATIONS
APPENDIX 9.1: CADNAA TYPICAL OPERATIONAL NOISE CALCULATIONS
APPENDIX 9.2: CADNAA PEAK OPERATIONAL NOISE CALCULATIONS
APPENDIX 10.1: CADNAA CONSTRUCTION NOISE CALCULATIONS
APPENDIX 10.2: MITIGATED CADNAA CONSTRUCTION NOISE CALCULATIONS

LIST OF EXHIBITS

EXHIBIT 1-A: LOCATION MAP.....	4
EXHIBIT 1-B: SITE PLAN.....	5
EXHIBIT 2-A: TYPICAL NOISE LEVELS.....	7

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION	10
EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION.....	12
EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS.....	25
EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS.....	42
EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS	46
EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS	56
EXHIBIT 10-B: CONSTRUCTION NOISE MITIGATION MEASURES.....	60

LIST OF TABLES

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS	1
TABLE 3-1: OPERATIONAL EXTERIOR NOISE STANDARDS	16
TABLE 3-2: OPERATIONAL INTERIOR NOISE STANDARDS	17
TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY	21
TABLE 5-1 AMBIENT NOISE LEVEL MEASUREMENTS	24
TABLE 6-1: OFF-SITE ROADWAY PARAMETERS	28
TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES	28
TABLE 6-3: TIME OF DAY VEHICLE SPLITS.....	29
TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX).....	29
TABLE 6-5: EXISTING WITH PROJECT VEHICLE MIX	30
TABLE 6-6: OYC 2025 WITH PROJECT VEHICLE MIX	30
TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS	33
TABLE 7-2: EXISTING WITH PROJECT CONTOURS	34
TABLE 7-3: OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT CONTOURS.....	34
TABLE 7-4: OPENING YEAR CUMULATIVE (2025) WITH PROJECT CONTOURS	35
TABLE 7-5: EXISTING PROJECT NOISE INCREASES.....	37
TABLE 7-6: OPENING YEAR CUMULATIVE (2025) NOISE INCREASES	38
TABLE 7-7: EXISTING PROJECT NOISE INCREASES BY TENANT USE OPTIONS	39
TABLE 7-8: OPENING YEAR CUMULATIVE (2025) NOISE INCREASES BY TENANT USE OPTION	40
TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS.....	47
TABLE 9-2: TYPICAL DAYTIME OPERATIONAL NOISE LEVELS.....	50
TABLE 9-3: TYPICAL NIGHTTIME OPERATIONAL NOISE LEVELS	50
TABLE 9-4: TYPICAL OPERATIONAL NOISE LEVEL COMPLIANCE	51
TABLE 9-5: PEAK OPERATIONAL NOISE LEVELS	52
TABLE 9-6: MAXIMUM OPERATIONAL NOISE LEVEL COMPLIANCE.....	52
TABLE 9-7: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES	53
TABLE 9-8: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES	54
TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS.....	57
TABLE 10-2: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY	58
TABLE 10-3: UNMITIGATED CONSTRUCTION NOISE LEVEL COMPLIANCE	59
TABLE 10-4: MITIGATED CONSTRUCTION NOISE LEVELS.....	59
TABLE 10-5: MITIGATED CONSTRUCTION NOISE LEVEL COMPLIANCE	60
TABLE 10-6: DAYTIME TEMPORARY CONSTRUCTION NOISE LEVEL INCREASES.....	63
TABLE 10-7: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT	64
TABLE 10-8: PROJECT CONSTRUCTION VIBRATION LEVELS	65

LIST OF ABBREVIATED TERMS

(1)	Reference
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
LBMC	City of Long Beach Municipal Code
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Cherry Avenue Industrial Building
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Cherry Avenue Industrial Building ("Project"). The Project site is located at the 5900 Cherry Avenue in the City of Long Beach. The proposed Project is to consist of a single 304,344 square foot speculative industrial building. 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 noise study has been prepared to satisfy applicable City of Long Beach noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Noise	7	<i>Less Than Significant</i>	-
Operational Noise	9	<i>Less Than Significant</i>	-
Construction Noise	10	<i>Potentially Significant</i>	<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 Cherry Avenue Industrial Building (“Project”). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed Project site is in the northern half of the City of Long Beach located at 5910 Cherry Avenue, approximately 650 feet north of the intersection of Cherry Avenue and South Street as shown on Exhibit 1-A. The Project site is bounded by Cherry Avenue to the west and Union Pacific rail lines to the east. Existing industrial development is located to the north and east of the Project site. Commercial development is located to the south and west of the Project site with areas of residential development located just beyond the commercial development to the west.

1.2 PROJECT DESCRIPTION

The proposed Project will include demolition of an existing industrial development facility. The facility is currently underutilized, with only portions of the site occupied by active tenants. The proposed Project would involve the construction of a single 304,344 square foot speculative industrial building as shown on Exhibit 1-B. At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related operational noise sources are expected to include: loading dock activity, tractor trailer parking activity, truck movements, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, backup alarms and parking lot sweeper activities. This report assumes the Project will operate 24-hours a day for seven days per week.

1.3 BACKGROUND

On April 18, 2023, the Law Office of Jordan R. Sisson prepared a letter appealing the City Planning Commission’s Site Plan Review approval of the proposed Project and the analysis previously conducted to support the proposed California Environmental Quality Act (CEQA) Class 32 exemption. The Appeal Letter included comments contesting the Class 32 exemption based on a review of specific technical areas (e.g., transportation, air quality, and noise). The noise-related comments were prepared by Dale La Forest & Associates based on a review of the May 6, 2022, Noise Impact Analysis prepared by Urban Crossroads, Inc. for the proposed Project. This Cherry Avenue Industrial Building Noise and Vibration Analysis has been revised in response to the Appeal Letter and in support of a new Environmental Impact Report (EIR) for entitlement of the speculative industrial building. In addition, we have prepared a detailed response to each of the Section comments of the Appeal Letter in Appendix 1.1.

EXHIBIT 1-A: LOCATION MAP

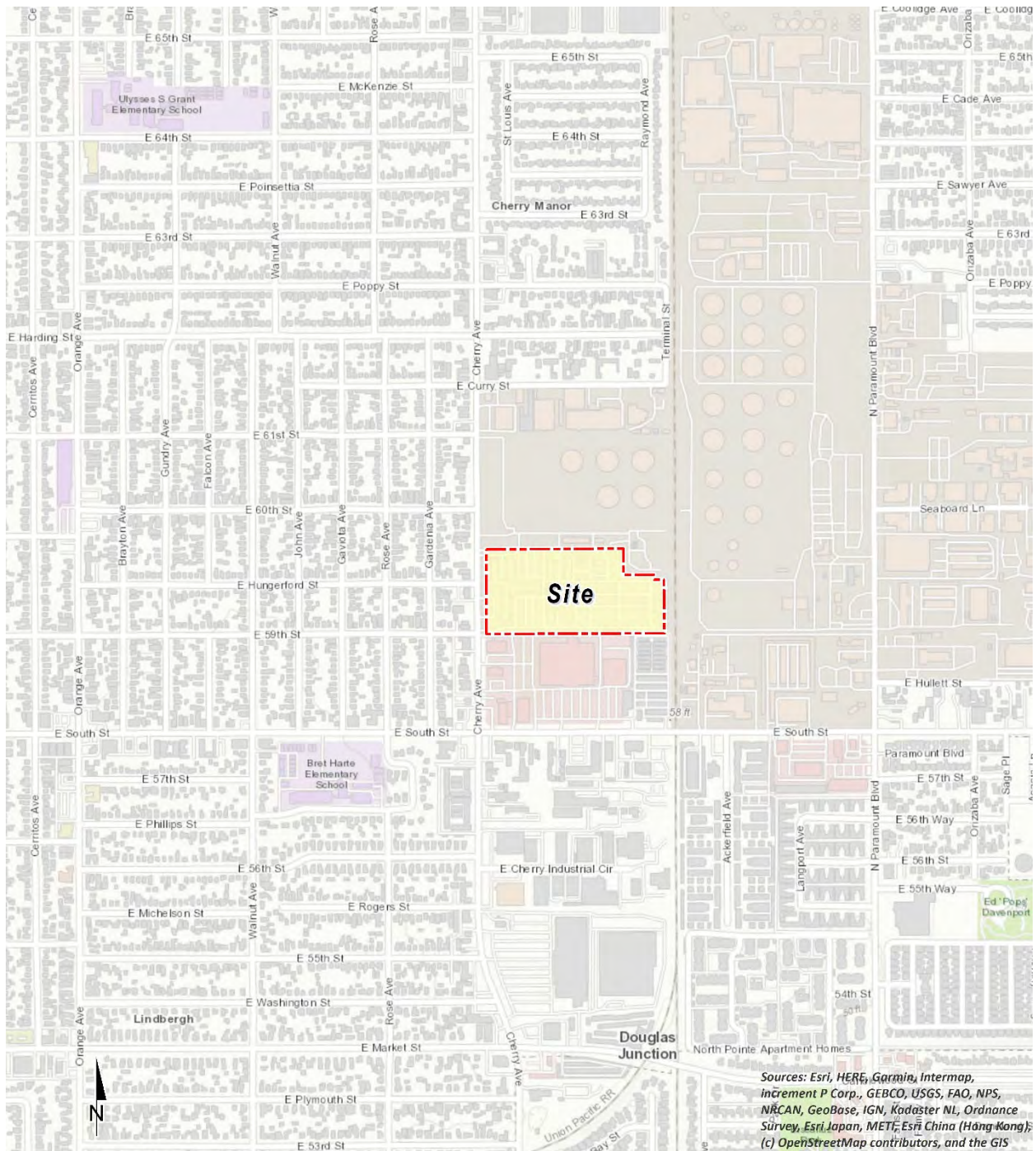
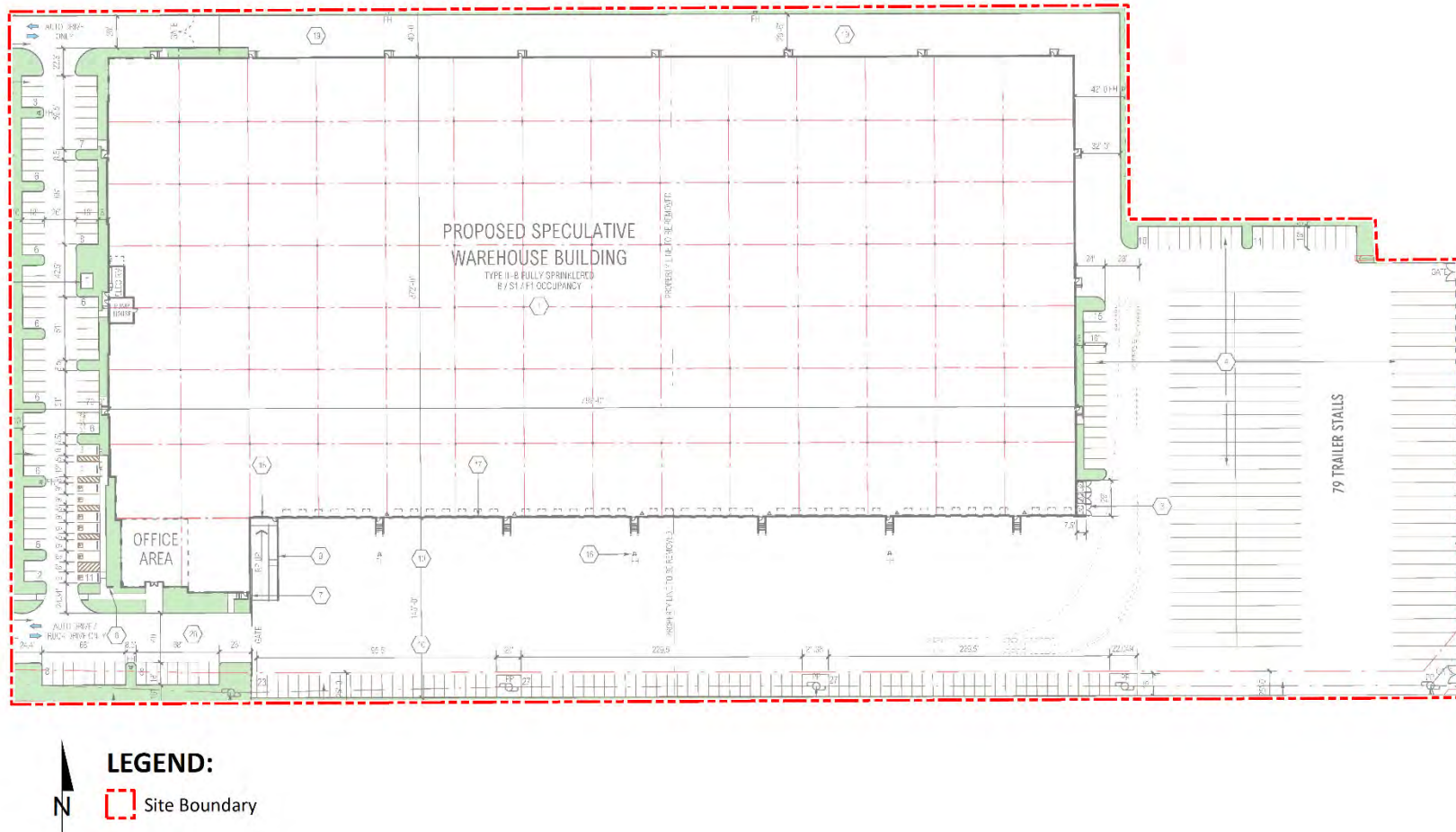


EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	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	LOUD	SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70		
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	MODERATE	SLEEP DISTURBANCE
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50		
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40	FAINT	NO EFFECT
QUIET SUBURBAN NIGHTTIME	LIBRARY	30		
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	VERY FAINT	
	BROADCAST/RECORDING STUDIO	10		
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. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

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

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

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

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

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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

2.5 NOISE BARRIER ATTENUATION

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

2.6 LAND USE COMPATIBILITY WITH NOISE

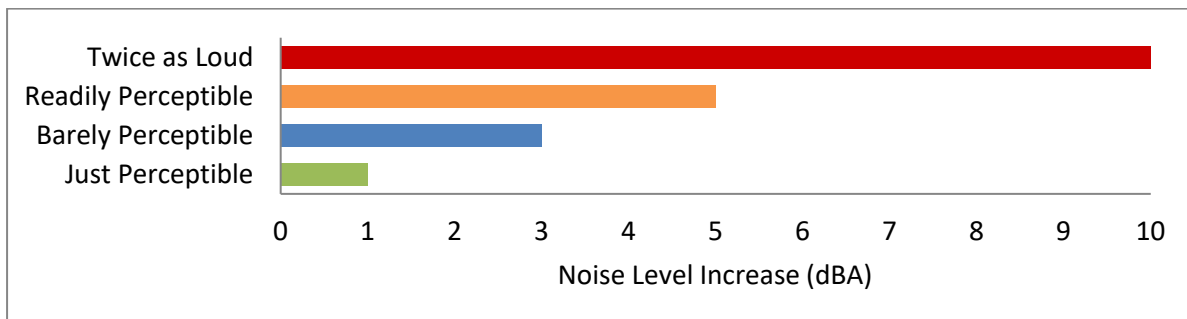
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development,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

2.7 COMMUNITY RESPONSE TO NOISE

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

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

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 VIBRATION

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

Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (8). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structures reduce vibration levels due to the coupling of the building to the soil.

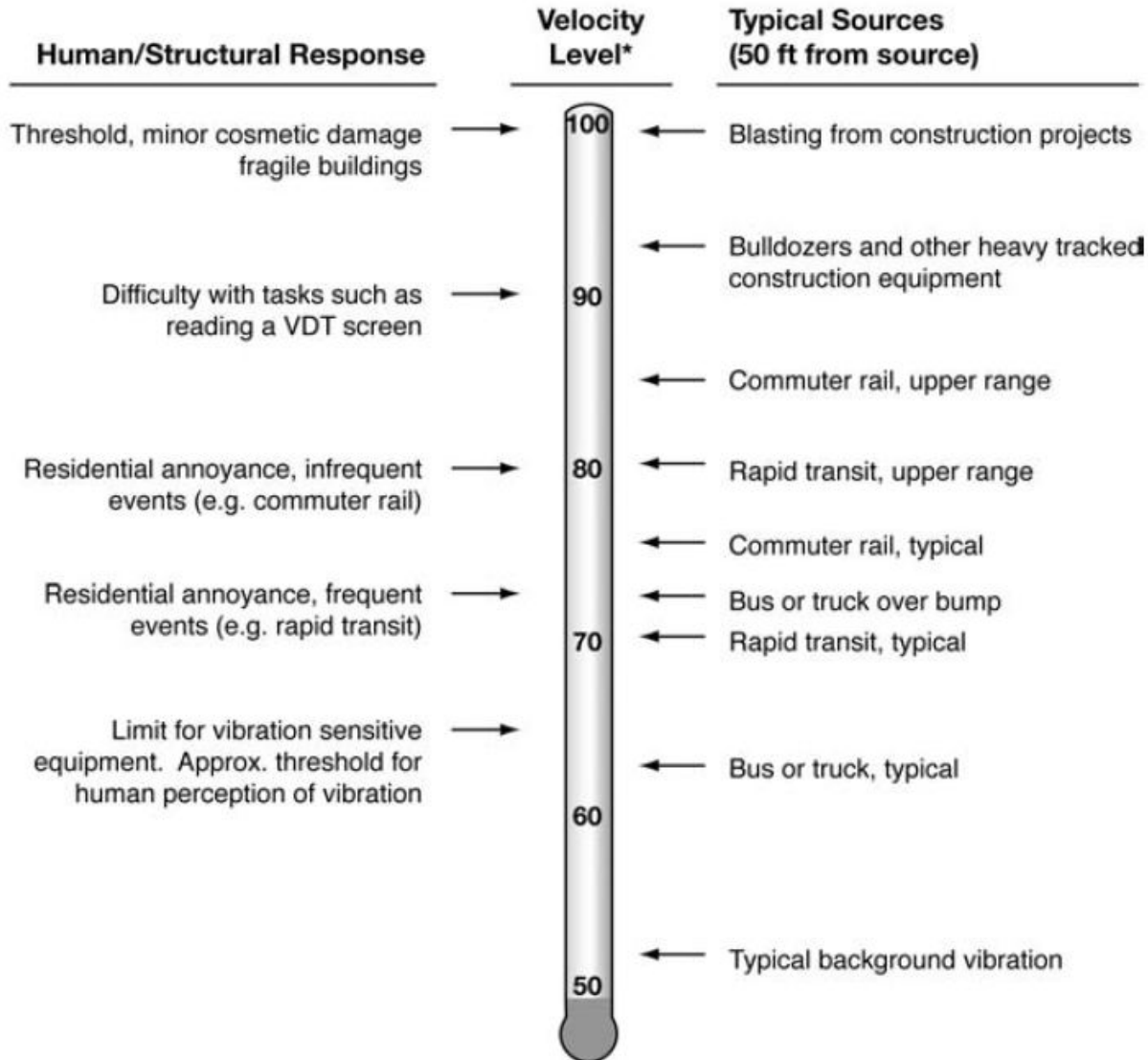
There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal (8). The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human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

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

As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity

level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

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



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

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

3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (10) OPR identifies suggested land use noise compatibility levels as part of its General Plan Guidelines. These suggested guidelines provide planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. The guidelines identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. In addition, the State through the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF LONG BEACH GENERAL PLAN NOISE ELEMENT

On June 6, 2023, the City of Long Beach adopted a revised Noise Element (2023 Noise Element) (11) replacing the previous Noise Element from the 1975 General Plan (1975 Noise Element). (12) The 2023 Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community and establishes allowable noise exposure levels from transportation sources (Table N-5) for all land uses. To protect City of Long Beach residents from excessive noise, the 2023 Noise Element contains the following policies related to the Project:

Policy N 3-1: Provide sufficient spatial separation between industrial uses and noise sensitive uses. Utilize mitigation measures where feasible to reduce the noise source, such as noise attenuation methods, interrupting the noise path, or insulating the receptor to minimize the exposure of noise sensitive uses to excessive industrial-related noise.

Policy N 3-2: Ensure new industrial uses are in compliance with the City's Noise Ordinance.

- Policy N 3-3: Encourage industrial and commercial activities to restrict their receiving operations to daytime periods.*
- Policy N 3-4: Enforce established hours and routes for delivery trucks and truck traffic.*
- Policy N 3-5: Where noise sensitive uses are located adjacent to industrial uses, reduce noise impacts through the use of noise barriers, restriction of operating hours, and investment in noise cancelling technology.*
- Policy N 5-1: In observance of requirements imposed by the California Air Resources Board (CARB), limit the idling of heavy trucks during nighttime hours to less than five minutes.*
- Policy N 5-2: Where feasible, require equipment enclosures for pumps and compressors that exceed Municipal Code noise standards.*
- Policy N 5-3: Encourage conduction of high-noise or high-vibration activities in a set window of time during the day.*
- Policy N 5-4: Industrial facility owners and/or operators should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.*
- Policy N 5-5: Commercial delivery truck traffic should avoid residential areas whenever feasible.*
- Policy N 5-6: Site design should consider sensitive receptor locations and place noise sources away from these uses when feasible.*
- Policy N 5-7: Encourage industrial operations to utilize on-site electrical sources to power equipment rather than diesel generators where feasible.*
- Policy N 12-1: Reduce construction, maintenance, and nuisance noise at the source, when possible, to reduce noise conflicts.*
- Policy N 12-2: Continue to limit the allowable hours for construction activities and maintenance operations near sensitive uses.*
- Policy N 12-3: As part of the City's Municipal Code, establish noise levels standards based on PlaceType and time of day, to which construction noise shall conform.*
- Policy N 12-4: Encourage off-site fabrication to reduce needed onsite construction activities and corresponding noise levels and duration.*
- Policy N 12-5: Require that all construction activities incorporate best business practices,*
- Schedule high-noise and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses.*
 - Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.*

- *Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible.*
- *The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible.*
- *The construction contractor should use on-site electrical sources to power equipment rather than diesel generators, where feasible.*
- *All residential units located within 500 ft of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 ft should also be posted at the construction site. All notices and the signs should indicate the dates and durations of construction activities, as well as provide a telephone number for a “noise disturbance coordinator.”*
- *A “noise disturbance coordinator” should be established by the project developer. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.*

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Cherry Avenue Industrial Building Project, stationary-source (operational) noise source activities are typically evaluated against standards established under the Municipal Code. While the General Plan provides the policy framework and vision for the future, the municipal code represents the controlling legal document containing specific, legally enforceable regulations that govern noise. The two documents work together, with the municipal code implementing the policies and goals set forth in the general plan.

3.3.1 EXTERIOR NOISE LIMITS

Section 8.80.150 of the Long Beach Municipal Code (LBMC), *Exterior noise limits—Sound levels by receiving land use district*, regulates exterior noise limits by receiving land uses, which are delineated by noise districts, as shown in the Noise District Map found in LBMC Section 8.80.160. According to the General Plan Noise Element Draft Environmental Impact Report (DEIR) (13), proposed amendments to the Noise Ordinance include updates to the boundaries of the noise districts to better reflect and be consistent with the recently adopted General Plan Land Use Element (LUE) PlaceTypes. According to Figure 3-5 of the DEIR, the Project site is located within the Noise District 4 (Predominately Industrial), and the adjacent noise sensitive residential land use west of Cherry Avenue are located within Noise District 1 (Predominately Residential). The land uses north of South Street and east of Cherry Avenue including the County of Los Angeles Department of Animal Care and Control are located within Noise District 4.

To describe the predominately residential land use on Cherry Avenue west of the Project site, this noise study relies on District 1 (Predominately Residential) noise level standards to describe potential operational noise impacts at the noise sensitive use. For residential land use within District 1, the exterior noise level shall not exceed 50 dBA L_{50} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{50} during the nighttime hours (10:00 p.m. to 7:00 a.m.) for not more than 30 minutes in any hour. (14)

The exterior noise level 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. Further, Section 8.80.150[C] indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be increased in 5 dB increments as appropriate to encompass or reflect the ambient conditions. The LBMC defines *ambient noise level* as the composite of noise from all sources near and far representing the normal or existing level of environmental noise at a given location. The operational exterior noise level standards used in this noise study are summarized below and shown on Table 3-1.

TABLE 3-1: OPERATIONAL EXTERIOR NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standard (dBA) ¹				
			L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (<1 min)
City of Long Beach ²	District 1	7:00 a.m. to 10:00 p.m.	50	55	60	65	70
		10:00 p.m. to 7:00 a.m.	45	50	55	60	65
	District 4	Any Time	70	75	80	85	90

¹ The percent noise level is the level exceeded "n" percent of the time. L_{25} is the noise level exceeded 25% of the time.

² Section 8.80.150 of the City of Long Beach Municipal Code (Appendix 3.1).

The percentile noise descriptors are provided to ensure that the duration of the noise source is fully considered. However, due to the relatively constant intensity of the Project operational activities, the L_{50} or average L_{eq} noise level metrics best describe the typical loading dock activity, tractor trailer parking activity, truck movements, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, backup alarms and parking lot sweeper activities.

In addition, the L_{eq} noise level metric accounts for noise fluctuations over time by averaging the louder and quieter events and giving more weight to the louder events. In addition, due to the mathematical relationship between the median (L_{50}) and the mean (L_{eq}), the L_{eq} will always be larger than or equal to the L_{50} . The more variable the noise becomes, the larger the L_{eq} becomes in comparison to the L_{50} . Therefore, this noise study conservatively relies on the average L_{eq} sound level limits to describe the Project operational noise levels.

3.3.2 INTERIOR NOISE LIMITS

Section 8.80.170 of the LBMC, *Interior noise limits—Sound levels*, regulates the interior noise limits by receiving land uses. For the noise sensitive residential land use west of Cherry Avenue within Noise District 1, the interior noise level shall not exceed 45 dBA L_8 during the daytime hours (7:00 a.m. to 10:00 p.m.) and 35 dBA L_8 during the nighttime hours (10:00 p.m. to 7:00 a.m.). (14) The interior noise level standards shall apply for a cumulative period of 5 minutes (L_8) in any hour, as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than one minutes in any hour, or the standard plus 10 dBA or the maximum measured ambient for any period of time. Further, LBMC Section 8.80.170[C] indicates that if the existing ambient noise level already exceeds any of the interior noise level limit categories, then the standard shall be increased in 5 dB increments as appropriate to reflect the indoor ambient noise level. The operational interior noise level standards used in this noise study are summarized below and shown on Table 3-2.

TABLE 3-2: OPERATIONAL INTERIOR NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standard (dBA) ¹		
			L_8 (5 mins)	L_2 (1 min)	L_{max} (<1 min)
City of Long Beach ²	District 1	7:00 a.m. to 10:00 p.m.	45	50	55
		10:00 p.m. to 7:00 a.m.	35	40	45

¹ The percent noise level is the level exceeded "n" percent of the time. L_8 is the noise level exceeded 8% of the time.

² Section 8.80.170 of the City of Long Beach Municipal Code (Appendix 3.1).

3.3.3 BUILDING NOISE REDUCTION

The interior noise level is the difference between the predicted exterior noise level at the building facade and the estimated noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 10 dBA with *windows open* and 20 dBA noise reduction with *windows closed*. (4 p. 31) Since the nighttime interior residential noise levels standards of 35 dBA are within 10 dBA of the exterior residential noise level standards of 45 dBA, compliance with the exterior limits will also demonstrate compliance with the interior limits.

3.4 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the LBMC has established limits to the hours of operation. LBMC Section 8.80.202 restricts construction activity between the hours of 7:00 p.m. and 7:00 a.m. (15) In addition, the 2023 Noise Element includes strategies and policies that would reduce construction noise impacts. Policies N 12-1 through N 12-7 include measures to reduce construction noise at the sources, reduce noise conflicts, limit the allowable hours for construction activities near sensitive uses, establish noise level standards based on PlaceType as part of the City's Municipal Code, and encourage construction best practices that reduce noise. (13 pp. 4.2-31)

At this time, the City has not established quantitative construction noise standards. The 2023 Noise Element (11 p. 9) acknowledges that while the City does not typically rely on any specific federal noise regulations, the construction noise and vibration guidelines from the FTA *Transit Noise and Vibration Impact Assessment Manual* (8) may be used when local criteria are not established. According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use.

The FTA identifies two types of construction noise assessment criteria, general and detailed. For general construction noise assessments, the analysis is limited to the two noisiest pieces of equipment with an hourly daytime exterior noise level threshold for residential land use of 90 dBA $L_{eq(1hr)}$. (8 p. 179) However, for long-term construction projects that would expose sensitive receivers to noise for extended periods of time, the FTA considers a daytime 8-hour average exterior construction noise level of 80 dBA $L_{eq(8hr)}$. (8 p. 179) While the FTA daytime exterior construction noise level of 80 dBA L_{eq} is considered a reasonable threshold to assess construction noise level impacts, the 1975 Noise Element, indicates a construction noise level threshold of 70 dBA L_{eq} for locations “away from major roads and sources of industrial noise” may be appropriate (12 p. 95) Therefore, while this noise level was not adopted as a policy, to evaluate whether the Project will generate potentially significant noise levels at nearby noise sensitive residential receiver locations, this analysis conservatively relies on the lower exterior mobile construction noise level limit of 70 dBA L_{eq} from the 1975 Noise Element.

3.5 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (8) To limit vibration, LBMC Section 8.80.200[G] states that operating or permitting the operation of any device that creates vibration, which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 ft from the source if on a public space or public right-of-way, is prohibited.

To analyze vibration impacts associated with the Project, vibration-generating activities are appropriately evaluated against standards outlined in the 2023 Noise Element. The 2023 Noise Element references the FTA vibration standards for potential building damage from the maximum levels for a single ground-borne vibration event. FTA guidelines show that a vibration level of up to 102 VdB (equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage.

4 SIGNIFICANCE CRITERIA

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

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant*. (16) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. The LBMC Section 8.80.020 defines the *ambient noise level* as the composite of noise from all sources near and far representing the normal or existing level of environmental noise at a given location.

4.1.1 SUBSTANTIAL PERMANENT NOISE LEVEL INCREASES

The Federal Interagency Committee on Noise (FICON) (17) developed guidance to be used for the assessment of Project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

The FICON guidance provides an established source of criteria to assess the impacts of substantial permanent increase in ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived

acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (18 p. 2_48).

4.1.2 SUBSTANTIAL TEMPORARY OF PERIODIC NOISE LEVEL INCREASES

To control the noise-generating construction activities, the temporary noise level increases over the existing *ambient* conditions must be considered under CEQA Significance Threshold A. In California a *substantial* noise increase is considered to occur when the project's predicted noise level exceeds the existing noise level by 12 dBA or more. (19) The use of 12 dB was established in California many years ago and is based on the concept that a 10 dB increase generally is perceived as a doubling of loudness. (2 pp. 3-2) Therefore, if the Project-related construction noise levels generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA L_{eq} , then the Project construction noise level increases will be considered a *potentially significant impact*.

Although the Caltrans recommendations were specifically developed to assess traffic noise impacts, the 12 dBA L_{eq} *substantial* noise level increase threshold is used in California to address short-term temporary noise level increases. (19) However, the construction activities associated with the Cherry Avenue Industrial Building Project are likely to take several months and cannot reasonably be considered as a short-term temporary noise impact. Therefore, due to the expected duration of Project construction activities, a *barely perceptible* 5 dBA noise level increase threshold has been used to assess the construction related noise level increases.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Cherry Avenue Industrial Building, vibration-generating activities are appropriately evaluated using FTA vibration standards for potential damage to assess potential temporary construction-related impacts at adjacent building locations. FTA guidelines show that a vibration level of up to 102 VdB (equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is Long Beach Airport located roughly 2.4 miles southeast of the Project site. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive ¹	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational	Residential	Exterior Noise Level Standards ²	50 dBA Leq	45 dBA Leq
		Interior Noise Level Standards ³	45 dBA Leq	35 dBA Leq
	Industrial	Exterior Noise Level Standards ⁴	70 dBA Leq	
	Noise-Sensitive ¹	If ambient is < 60 dBA Leq ¹	≥ 5 dBA Leq Project increase	
		If ambient is 60 - 65 dBA Leq ¹	≥ 3 dBA Leq Project increase	
		If ambient is > 65 dBA Leq ¹	≥ 1.5 dBA Leq Project increase	
	Construction	Noise-Sensitive	Exterior Noise Level Threshold ⁵	70 dBA Leq
Exterior Noise Level Increase			5 dBA Leq	n/a
Vibration Level Threshold ⁶			0.5 PPV (in/sec)	

¹ FICON, 1992.

² District 1 - Predominately Residential (City of Long Beach Municipal Code Section 8.80.150 Table A). Section 8.80.150[C] indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be increased in 5 dB increments as appropriate to encompass or reflect the ambient conditions.

³ City of Long Beach Municipal Code Section 8.80.170 Table C

⁴ District 4 - Predominately Industrial (City of Long Beach Municipal Code Section 8.80.150 Table A)

⁵ City of Long Beach 1975 General Plan Noise Element p.95

⁶ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

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

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, long-term noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, April 13th, 2022. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. 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. (20)

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

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts.

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

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the equivalent or the hourly energy average sound levels (L_{eq}) to describe the existing *ambient* conditions. Table 5-1 provides the (energy average) noise levels used to describe 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. 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. The daytime and nighttime equivalent noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number.

TABLE 5-1 AMBIENT NOISE LEVEL MEASUREMENTS

Location ¹	Description	Ambient Noise Level (dBA L_{eq}) ²		Peak Noise Level (dBA L_{max}) ³	
		Daytime	Nighttime	Daytime	Nighttime
L1	Located northwest of the Project site near single-family residence at 2021 East Curry Street.	78.1	73.7	84.7	80.8
L2	Located southeast of the Project site south of South Street.	70.4	66.1	77.8	74.8
L3	Located southwest of the Project site near Crossroads Church at 1900 East South Street.	72.3	69.6	80.1	78.6
L4	Located southwest of the Project site near Intercity Fellowship Hall at 5881 Cherry Avenue.	67.9	64.9	75.8	73.7
L5	Located west of the Project site near single-family residence at 1919 East Hungerford Street.	67.8	65.3	75.6	72.8

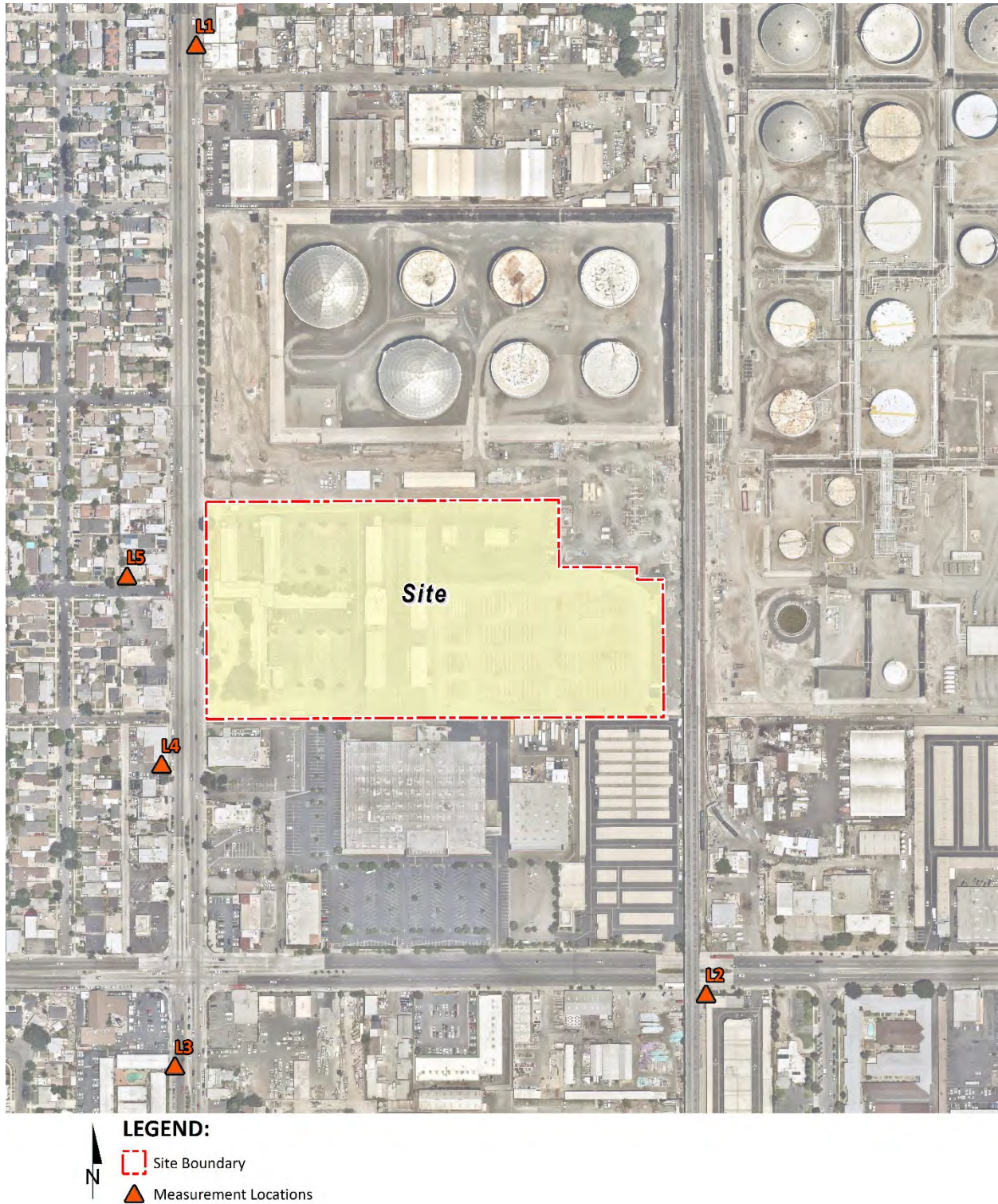
¹ See Exhibit 5-A for the noise level measurement locations.

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

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

Table 5-1 also presents the highest or maximum (L_{max}) noise level observed over the 24-hour period. Appendix 5.2 provides summary worksheets of the noise levels for each hour observed during the daytime and nighttime periods.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future transportation related noise environment. Consistent with the City of Long Beach *Land Use Compatibility Guidelines for Noise Exposure*, all transportation related noise levels are presented in terms of the 24-hour CNEL's.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (21) 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. (22) 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. (23) Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 13 off-site study area roadway segments, the distance from the centerline to adjacent receiving land use based on the functional roadway classifications per the City of Long Beach General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 are based on the *Cherry Avenue Industrial Building Traffic Analysis* prepared by Urban Crossroads, Inc. (24) for the following traffic conditions:

1. Existing Without Project
2. Existing With Project (E+P)
3. Opening Year Cumulative (2025) Without Project
4. Opening Year Cumulative (2025) With Project

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic analysis. The Project is anticipated to generate a net total of 1,448 two-way trips per day (actual vehicles) that includes 138 truck trips. The off-site traffic noise analysis does not include any credit or reduction from the for the existing uses at the Project site, therefore, likely overstates the Project traffic noise level contributions to the study area roadway segments.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Classification ¹	Receiving Land Use ²	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Cherry Av.	w/o SR-91 WB Ramps	Major Arterial	Sensitive	50'	40
2	Cherry Av.	n/o Artesia Blvd.	Major Arterial	Sensitive	50'	40
3	Cherry Av.	s/o Artesia Blvd.	Major Arterial	Sensitive	50'	40
4	Cherry Av.	n/o 60th St.	Major Arterial	Sensitive	50'	40
5	Cherry Av.	s/o 60th St.	Major Arterial	Sensitive	50'	40
6	Cherry Av.	n/o 59th St.	Major Arterial	Sensitive	50'	40
7	Cherry Av.	s/o 59th St.	Major Arterial	Sensitive	50'	40
8	Cherry Av.	s/o South Street	Major Arterial	Sensitive	50'	40
9	Artesia Blvd.	w/o Cherry Av.	Major Arterial	Sensitive	50'	40
10	Artesia Blvd.	e/o Cherry Av.	Major Arterial	Sensitive	50'	40
11	Curry St.	w/o Cherry Av.	Local	Sensitive	28'	25
12	South St.	w/o Cherry Av.	Major Arterial	Sensitive	50'	40
13	South St.	e/o Cherry Av.	Major Arterial	Non-Sensitive	50'	40

¹ Cherry Avenue Warehouse Traffic Analysis, Urban Crossroads, Inc.² Based on a review of existing aerial imagery.³ Distance to receiving land use is based upon the right-of-way distances.**TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES**

ID	Roadway	Segment	Average Daily Traffic Volumes ¹			
			Existing		OYC (2025)	
			Without Project	With Project	Without Project	With Project
1	Cherry Av.	w/o SR-91 WB Ramps	25,069	25,134	25,277	25,343
2	Cherry Av.	n/o Artesia Blvd.	12,179	12,886	12,285	12,991
3	Cherry Av.	s/o Artesia Blvd.	26,719	27,622	26,941	27,844
4	Cherry Av.	n/o 60th St.	29,377	30,313	29,612	30,549
5	Cherry Av.	s/o 60th St.	25,105	25,737	25,306	25,939
6	Cherry Av.	n/o 59th St.	25,647	26,374	25,852	26,580
7	Cherry Av.	s/o 59th St.	25,659	26,204	25,865	26,409
8	Cherry Av.	s/o South Street	27,116	27,320	27,484	27,687
9	Artesia Blvd.	w/o Cherry Av.	18,527	18,593	18,832	18,897
10	Artesia Blvd.	e/o Cherry Av.	17,440	17,571	17,736	17,867
11	Curry St.	w/o Cherry Av.	6,144	6,209	6,201	6,266
12	South St.	w/o Cherry Av.	19,471	19,537	19,957	20,023
13	South St.	e/o Cherry Av.	24,069	24,279	24,486	24,696

¹ Cherry Avenue industrial Traffic Analysis, Urban Crossroads, Inc.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix.

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

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits ¹			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	73.99%	12.39%	13.61%	100.00%
Medium Trucks	81.99%	2.57%	15.43%	100.00%
Heavy Trucks	77.43%	4.75%	17.82%	100.00%

¹ Based on the May 24, 2023, daily directional vehicle classification count collected on Cherry Avenue north of 60th Street (Cherry Avenue Warehouse Traffic Analysis, Urban Crossroads, Inc.)

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

TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Classification	Total % Traffic Flow ¹			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	96.16%	2.12%	1.72%	100.00%

¹ Based on the May 24, 2023, daily directional vehicle classification count collected on Cherry Avenue north of 60th Street (Cherry Avenue Warehouse Traffic Analysis, Urban Crossroads, Inc.)

6.2 TENANT USE OPTIONS

For informational and comparative purposes only, off-site traffic noise analysis has been evaluated assuming various industrial land use mixes. Since the Project is proposing a speculative industrial building, the entitlement of the proposed Project would allow for a variety of tenant use options. Consistent with the *Cherry Avenue Industrial Building Traffic Analysis* prepared by Urban Crossroads, Inc. (24) the off-site traffic noise analysis accounts for the following tenant use options trip generation:

TABLE 6-5: EXISTING WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cherry Av.	w/o SR-91 WB Ramps	96.17%	2.11%	1.71%	100.00%
2	Cherry Av.	n/o Artesia Blvd.	95.46%	2.18%	2.35%	100.00%
3	Cherry Av.	s/o Artesia Blvd.	95.86%	2.13%	2.00%	100.00%
4	Cherry Av.	n/o 60th St.	95.90%	2.13%	1.98%	100.00%
5	Cherry Av.	s/o 60th St.	95.96%	2.12%	1.91%	100.00%
6	Cherry Av.	n/o 59th St.	95.75%	2.16%	2.09%	100.00%
7	Cherry Av.	s/o 59th St.	96.16%	2.09%	1.75%	100.00%
8	Cherry Av.	s/o South Street	96.17%	2.11%	1.73%	100.00%
9	Artesia Blvd.	w/o Cherry Av.	96.18%	2.11%	1.71%	100.00%
10	Artesia Blvd.	e/o Cherry Av.	96.19%	2.10%	1.71%	100.00%
11	Curry St.	w/o Cherry Av.	96.20%	2.09%	1.70%	100.00%
12	South St.	w/o Cherry Av.	96.18%	2.11%	1.71%	100.00%
13	South St.	e/o Cherry Av.	96.14%	2.11%	1.75%	100.00%

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.**TABLE 6-6: OYC 2025 WITH PROJECT VEHICLE MIX**

ID	Roadway	Segment	With Project ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²
1	Cherry Av.	w/o SR-91 WB Ramps	96.17%	2.11%	1.71%	100.00%
2	Cherry Av.	n/o Artesia Blvd.	95.47%	2.18%	2.35%	100.00%
3	Cherry Av.	s/o Artesia Blvd.	95.87%	2.13%	2.00%	100.00%
4	Cherry Av.	n/o 60th St.	95.90%	2.13%	1.97%	100.00%
5	Cherry Av.	s/o 60th St.	95.96%	2.12%	1.91%	100.00%
6	Cherry Av.	n/o 59th St.	95.75%	2.16%	2.09%	100.00%
7	Cherry Av.	s/o 59th St.	96.16%	2.09%	1.75%	100.00%
8	Cherry Av.	s/o South Street	96.17%	2.11%	1.73%	100.00%
9	Artesia Blvd.	w/o Cherry Av.	96.18%	2.11%	1.71%	100.00%
10	Artesia Blvd.	e/o Cherry Av.	96.19%	2.10%	1.71%	100.00%
11	Curry St.	w/o Cherry Av.	96.20%	2.09%	1.70%	100.00%
12	South St.	w/o Cherry Av.	96.18%	2.11%	1.71%	100.00%
13	South St.	e/o Cherry Av.	96.14%	2.11%	1.75%	100.00%

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.

- Project: 1,448 two-way trips per day (actual vehicles) including 138 truck trips
- Tenant Use Option 1: 1,404 two-way trips per day (actual vehicles) including 78 truck trips
- Tenant Use Option 2: 338 two-way trips per day (actual vehicles) including 182 truck trips
- Tenant Use Option 3: 480 two-way trips per day (actual vehicles) including 70 truck trips
- Tenant Use Option 4: 416 two-way trips per day (actual vehicles) including 228 truck trips
- Tenant Use Option 5: 580 two-way trips per day (actual vehicles) including 171 truck trips
- Tenant Use Option 6: 596 two-way trips per day (actual vehicles) including 83 truck trips

The off-site traffic noise analysis for the trip generation for each of the tenant use options do not include any credit or reduction from the for the existing uses at the Project site, and, therefore, overstates the Project traffic noise level contributions to the study area roadway segments.

6.3 CADNAA NOISE PREDICTION MODEL

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

Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of the noise level at each receiver and the partial noise level contributions by individual noise sources. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.0 was used in the CadnaA noise analysis to account for hard ground surfaces. This approach creates a worst-case scenario for noise propagation with highly reflective surfaces and minimal sound-absorbing elements, which is rarely the case in the real world where many surface types occur between sources and receivers.

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7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *the Cherry Avenue Industrial Building Traffic Analysis* prepared by Urban Crossroads, Inc. (24) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at receiving land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. 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 7-4 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 13 study area roadway segments analyzed under each traffic condition. Appendix 7.1 includes a summary of the Project traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	69	149	320
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.0	43	92	198
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.4	72	155	334
4	Cherry Av.	n/o 60th St.	Sensitive	72.8	77	165	356
5	Cherry Av.	s/o 60th St.	Sensitive	72.1	69	149	321
6	Cherry Av.	n/o 59th St.	Sensitive	72.2	70	151	325
7	Cherry Av.	s/o 59th St.	Sensitive	72.2	70	151	325
8	Cherry Av.	s/o South Street	Sensitive	72.4	73	157	338
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.8	56	122	262
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.5	54	117	251
11	Curry St.	w/o Cherry Av.	Sensitive	64.6	12	26	57
12	South St.	w/o Cherry Av.	Sensitive	71.0	58	126	271
13	South St.	e/o Cherry Av.	Non-Sensitive	71.9	67	145	312

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

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

TABLE 7-2: EXISTING WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	69	149	321
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.8	49	105	226
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.8	77	166	357
4	Cherry Av.	n/o 60th St.	Sensitive	73.2	81	175	378
5	Cherry Av.	s/o 60th St.	Sensitive	72.4	72	156	336
6	Cherry Av.	n/o 59th St.	Sensitive	72.7	76	163	350
7	Cherry Av.	s/o 59th St.	Sensitive	72.3	71	154	331
8	Cherry Av.	s/o South Street	Sensitive	72.5	73	158	339
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.8	56	122	262
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.5	54	117	252
11	Curry St.	w/o Cherry Av.	Sensitive	64.6	12	27	57
12	South St.	w/o Cherry Av.	Sensitive	71.0	58	126	271
13	South St.	e/o Cherry Av.	Non-Sensitive	72.0	68	146	315

¹ Based on a review of existing aerial imagery.² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

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

TABLE 7-3: OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	69	149	322
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.0	43	92	199
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.4	72	156	336
4	Cherry Av.	n/o 60th St.	Sensitive	72.8	77	166	358
5	Cherry Av.	s/o 60th St.	Sensitive	72.1	69	150	322
6	Cherry Av.	n/o 59th St.	Sensitive	72.2	70	152	327
7	Cherry Av.	s/o 59th St.	Sensitive	72.2	70	152	327
8	Cherry Av.	s/o South Street	Sensitive	72.5	73	158	341
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.9	57	123	265
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.6	55	118	254
11	Curry St.	w/o Cherry Av.	Sensitive	64.7	12	27	57
12	South St.	w/o Cherry Av.	Sensitive	71.1	59	128	275
13	South St.	e/o Cherry Av.	Non-Sensitive	72.0	68	146	315

¹ Based on a review of existing aerial imagery.² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

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

TABLE 7-4: OPENING YEAR CUMULATIVE (2025) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	69	150	322
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.8	49	105	227
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.8	77	166	358
4	Cherry Av.	n/o 60th St.	Sensitive	73.2	82	176	380
5	Cherry Av.	s/o 60th St.	Sensitive	72.4	73	157	337
6	Cherry Av.	n/o 59th St.	Sensitive	72.7	76	163	352
7	Cherry Av.	s/o 59th St.	Sensitive	72.3	72	154	333
8	Cherry Av.	s/o South Street	Sensitive	72.5	74	159	342
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.9	57	123	265
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.6	55	118	255
11	Curry St.	w/o Cherry Av.	Sensitive	64.7	12	27	57
12	South St.	w/o Cherry Av.	Sensitive	71.1	59	128	275
13	South St.	e/o Cherry Av.	Non-Sensitive	72.1	69	148	319

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

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

7.2 EXISTING PROJECT NOISE INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report to fully analyze all the existing traffic scenarios identified in the *Cherry Avenue Industrial Building Traffic Analysis*. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 64.6 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 64.6 to 73.2 dBA CNEL. Table 7-5 shows that the Project off-site traffic noise level impacts will range from less than 0.0 to 0.8 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.3 OPENING YEAR CUMULATIVE 2025 NOISE INCREASES

Table 7-3 presents the Opening Year Cumulative 2025 without Project conditions CNEL noise levels. The Background 2025 without Project exterior noise levels are expected to range from 64.7 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year Cumulative 2025 with Project conditions will range from 64.7 to 73.2 dBA CNEL. Table 7-6 shows that the Project off-site traffic

noise level increases will range from less than 0.0 to 0.8 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.4 TENANT USE OPTION EXISTING NOISE INCREASES

Table 7-7 presents a summary of the off-site traffic CNEL noise level increases for each of the six-trip generation tenant use options outlined in Section 6.2. For Existing with Project conditions, Table 7-7 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.2 dBA CNEL. Consistent with the Existing Project Traffic Noise Level Increases presented in Section 7.2, the land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels with all six trip generation tenant use options. The tenant use options traffic noise level increase worksheets are included in Appendix 7.2

7.5 TENANT USE OPTION OPENING YEAR CUMULATIVE 2025 NOISE INCREASES

Table 7-8 presents a summary of the off-site traffic CNEL noise level increases for each of the six-trip generation tenant use options. For Opening Year Cumulative 2025 conditions, Table 7-8 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.2 dBA CNEL. Consistent with the Opening Year Cumulative 2025 Project Traffic Noise Level Increases presented in Section 7.3, the land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels with all six trip generation tenant use options.

7.6 REFLECTED TRAFFIC NOISE LEVELS

The construction of the proposed 51-foot-high Project industrial building may result in reflected traffic noise off the western building façade to the homes located west of the Project site, across Cherry Avenue. The Federal Highway Administration (FHWA) has shown that the reflection from barriers and buildings does not substantially increase noise levels. If all the traffic noise striking the Project building were reflected to the across Cherry Avenue, the increase would be theoretically limited to 3 dBA (i.e., two combined noise sources of equal level result in a 3 dBA increase). Further, not all the acoustical energy is reflected to the other side. Some of the energy would go over the building, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by the vehicles themselves. Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify this reflective increase have never shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear. (4 p. 60) Using the CadnaA noise prediction model previously described in Section 6.3, the reflected noise levels were calculated at the nearest noise sensitive residential receivers located west of Cherry Avenue. The analysis suggests a noise level increase of up to 0.3 dBA CNEL due to reflected traffic noise with the development of the Project. Therefore, any Project noise level increase due to the reflected traffic noise is considered *less than significant*. The reflected traffic noise levels calculations are included in Appendix 7.3.

TABLE 7-5: EXISTING PROJECT NOISE INCREASES

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ¹			Incremental Noise Level Increase Threshold ²	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	72.1	0.0	1.5	No
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.0	69.8	0.8	1.5	No
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.4	72.8	0.4	1.5	No
4	Cherry Av.	n/o 60th St.	Sensitive	72.8	73.2	0.4	1.5	No
5	Cherry Av.	s/o 60th St.	Sensitive	72.1	72.4	0.3	1.5	No
6	Cherry Av.	n/o 59th St.	Sensitive	72.2	72.7	0.5	1.5	No
7	Cherry Av.	s/o 59th St.	Sensitive	72.2	72.3	0.1	1.5	No
8	Cherry Av.	s/o South Street	Sensitive	72.4	72.5	0.1	1.5	No
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.8	70.8	0.0	1.5	No
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.5	70.5	0.0	1.5	No
11	Curry St.	w/o Cherry Av.	Sensitive	64.6	64.6	0.0	3.0	No
12	South St.	w/o Cherry Av.	Sensitive	71.0	71.0	0.0	1.5	No
13	South St.	e/o Cherry Av.	Non-Sensitive	71.9	72.0	0.1	3.0	No

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

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

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

TABLE 7-6: OPENING YEAR CUMULATIVE (2025) NOISE INCREASES

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ¹			Incremental Noise Level Increase Threshold ²	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	72.1	72.1	0.0	1.5	No
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	69.0	69.8	0.8	1.5	No
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	72.4	72.8	0.4	1.5	No
4	Cherry Av.	n/o 60th St.	Sensitive	72.8	73.2	0.4	1.5	No
5	Cherry Av.	s/o 60th St.	Sensitive	72.1	72.4	0.3	1.5	No
6	Cherry Av.	n/o 59th St.	Sensitive	72.2	72.7	0.5	1.5	No
7	Cherry Av.	s/o 59th St.	Sensitive	72.2	72.3	0.1	1.5	No
8	Cherry Av.	s/o South Street	Sensitive	72.5	72.5	0.0	1.5	No
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	70.9	70.9	0.0	1.5	No
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	70.6	70.6	0.0	1.5	No
11	Curry St.	w/o Cherry Av.	Sensitive	64.7	64.7	0.0	3.0	No
12	South St.	w/o Cherry Av.	Sensitive	71.1	71.1	0.0	1.5	No
13	South St.	e/o Cherry Av.	Non-Sensitive	72.0	72.1	0.1	3.0	No

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

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

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

TABLE 7-7: EXISTING PROJECT NOISE INCREASES BY TENANT USE OPTIONS

ID	Road	Segment	Receiving Land Use ¹	Tenant Use Option Noise Increase CNEL at Receiving Land Use (dBA) ²						Incremental Noise Level Increase Threshold ³	
				1	2	3	4	5	6	Limit	Exceeded?
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	0.8	1.0	0.4	1.2	0.9	0.5	1.5	No
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	0.4	0.5	0.2	0.6	0.4	0.2	1.5	No
4	Cherry Av.	n/o 60th St.	Sensitive	0.4	0.4	0.2	0.5	0.4	0.2	1.5	No
5	Cherry Av.	s/o 60th St.	Sensitive	0.3	0.3	0.2	0.4	0.3	0.2	1.5	No
6	Cherry Av.	n/o 59th St.	Sensitive	0.5	0.6	0.2	0.7	0.6	0.3	1.5	No
7	Cherry Av.	s/o 59th St.	Sensitive	0.1	0.1	0.1	0.1	0.1	0.1	1.5	No
8	Cherry Av.	s/o South Street	Sensitive	0.1	0.1	0.1	0.1	0.1	0.1	1.5	No
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
11	Curry St.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	3.0	No
12	South St.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
13	South St.	e/o Cherry Av.	Non-Sensitive	0.1	0.1	0.1	0.1	0.1	0.1	3.0	No

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

TABLE 7-8: OPENING YEAR CUMULATIVE (2025) NOISE INCREASES BY TENANT USE OPTION

ID	Road	Segment	Receiving Land Use ¹	Tenant Use Option Noise Increase CNEL at Receiving Land Use (dBA) ²						Incremental Noise Level Increase Threshold ³	
				1	2	3	4	5	6	Limit	Exceeded?
1	Cherry Av.	w/o SR-91 WB Ramps	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
2	Cherry Av.	n/o Artesia Blvd.	Sensitive	0.8	1.0	0.4	1.2	1.0	0.5	1.5	No
3	Cherry Av.	s/o Artesia Blvd.	Sensitive	0.4	0.5	0.2	0.6	0.5	0.3	1.5	No
4	Cherry Av.	n/o 60th St.	Sensitive	0.4	0.5	0.2	0.6	0.5	0.2	1.5	No
5	Cherry Av.	s/o 60th St.	Sensitive	0.3	0.4	0.2	0.5	0.4	0.2	1.5	No
6	Cherry Av.	n/o 59th St.	Sensitive	0.5	0.6	0.3	0.8	0.6	0.3	1.5	No
7	Cherry Av.	s/o 59th St.	Sensitive	0.1	0.1	0.1	0.2	0.1	0.1	1.5	No
8	Cherry Av.	s/o South Street	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
9	Artesia Blvd.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
10	Artesia Blvd.	e/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
11	Curry St.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	3.0	No
12	South St.	w/o Cherry Av.	Sensitive	0.0	0.0	0.0	0.0	0.0	0.0	1.5	No
13	South St.	e/o Cherry Av.	Non-Sensitive	0.1	0.1	0.0	0.1	0.1	0.0	3.0	No

¹ Based on a review of existing aerial imagery.² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

8 RECEIVER LOCATIONS

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

To describe the potential off-site Project noise levels, seven receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Due to the additional attenuation from distance and the shielding of intervening structures, other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 2021 East Curry Street, approximately 1,141 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive apartment community at 5700 Ackerfield Avenue approximately 858 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R2 is placed at the building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive Crossroads Church at 1900 East South Street, approximately 747 feet southwest of the Project site. However, as a non-residential use, no nighttime noise sensitive receivers exist at this location. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R3 is placed at the building façade. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS



- R4: Location R4 represents the existing noise sensitive Intercity Fellowship Hall at 5881 Cherry Avenue, approximately 107 feet southwest of the Project site. However, as a non-residential use, no nighttime noise sensitive receivers exist at this location. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing noise sensitive residence at 5916 Gardenia Avenue, approximately 231 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence at 5949 Cherry Avenue, approximately 132 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R6 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R7: Location R7 represents the Los Angeles County's Department of Animal Care and Control Building located at 5898 Cherry Avenue, approximately 48 feet south of the Project site. A review of this location shows that the Animal Care and Control Building is located within Noise District 4 (Predominately Industrial). This is consistent with the non-residential use associated with the site. As a non-residential use, no nighttime noise sensitive receivers exist at this location. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

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9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed Cherry Avenue Industrial Building Project. Exhibit 9-A of the Noise Study includes 16 individual noise sources to fully describe the potential reasonable worst-case noise environment.

9.1 PROJECT SITE DESIGN

To reduce the noise exposure to the noise sensitive residential areas near the Project site, several design features were considered as part of the site planning process. These design features include positioning the loading dock areas on the southern building façade. This orients the loading dock area away from the noise sensitive residences to the west. In addition, the building was specially designed by strategically extending the industrial building office area between the homes and the loading dock. The Project also includes a 10-foot-high screen wall further extending the barrier between the residential homes and the loading dock area.

9.2 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe the noise level impacts associated with the typical daytime and nighttime activities at the Project site since the future tenants are unknown. The on-site Project-related noise sources are expected to include: loading dock activity, tractor trailer parking activity, truck movements, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, backup alarms and parking lot sweeper activities.

9.3 REFERENCE NOISE LEVELS

To estimate the typical (dBA L_{eq}) and peak (dBA L_{max}) Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed speculative industrial building. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the reasonable worst-case noise environment with all the typical noise sources operating at the same time. These noise activities will likely vary throughout the day.

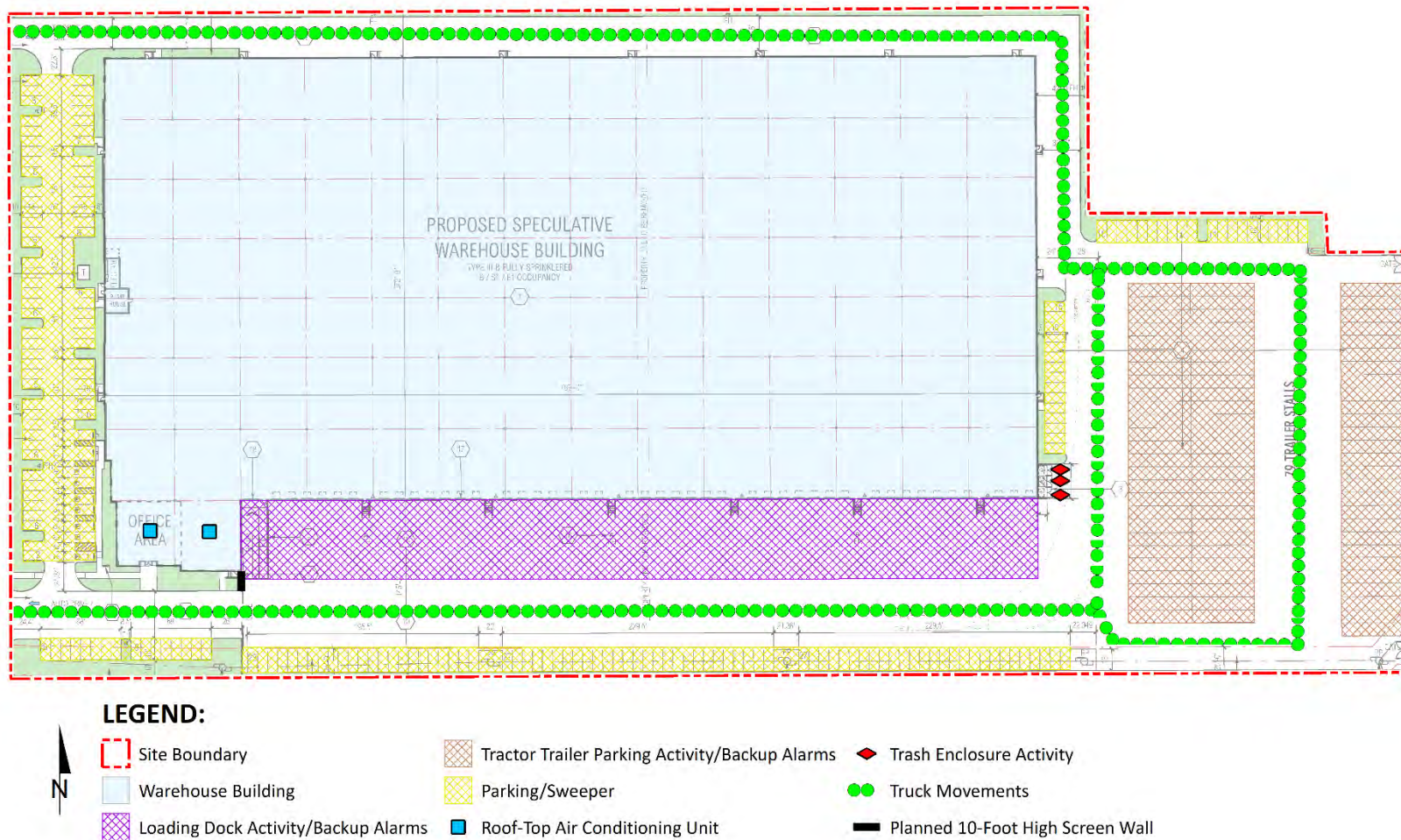
EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source ¹	Noise Source Height (Feet)	Minutes of Operating Activity per Hour ²		Reference Noise Level @ 50 Feet	
		Day	Night	dBA L _{eq}	dBA L _{max}
Loading Dock Activity	8'	60	60	65.7	74.8
Tractor Trailer Parking Activity	8'	60	60	62.8	71.2
Truck Movements	8'	60	60	59.8	68.0
Roof-Top Air Conditioning Units	5'	39	28	57.2	57.7
Trash Enclosure Activity	5'	30	15	56.8	71.1
Parking Lot Vehicle Movements	5'	60	60	52.6	56.2
Backup Alarm ³	8'	.5	.5	.5	75.1
Parking Lot Sweeper ⁴	6'	.5	.5	.5	81.0

¹ As measured by Urban Crossroads, Inc.

² Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.

³ ECCO 610N reverse backup alarm.

⁴ Tymco Regenerative Air Sweeper Standard Model 210.

⁵ Reference noise levels described using the maximum L_{max} noise levels.

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.

9.3.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (20)

9.3.2 LOADING DOCK ACTIVITY

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

a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

While peak noise events such as backup alarms may occur due to loading dock activities, these are fully accounted for and included in the base L_{eq} reference noise level measurement. The L_{max} describes the highest noise level representing a one second noise event or 1 second out of 86,400 seconds during a single 24-hour period. The loading dock reference noise level measurement of 65.7 dBA L_{eq} included an L_{max} noise level of 74.8 dBA L_{max} at 50 feet. This represents a difference of 9.1 dBA between the L_{eq} and L_{max} . However, a review of the City of Long Beach exterior noise standards indicates that no noise level (L_{max}) shall exceed the base ambient noise level plus 20 dBA. Therefore, at no time will the L_{max} exceed the operational noise source standards before first exceeding the base ambient L_{eq} criteria. In addition, the short-term nature of the L_{max} noise metric does not provide a meaningful comparison of the Project related incremental noise level increases above *ambient* (L_{eq}) which is required to address Threshold A of the CEQA Significance Guidelines.

9.3.3 TRACTOR TRAILER PARKING ACTIVITY

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

9.3.4 TRUCK MOVEMENTS

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

9.3.5 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 57.2 dBA L_{eq} . Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for an average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees

Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

9.3.6 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 56.8 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building.

9.3.7 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term reference noise level measurement was collected in the center of activity within the staff parking lot of a industrial distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L_{eq} . Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due to cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.3.8 BACKUP ALARMS (MAXIMUM)

A reference noise level of 75.1 dBA L_{max} at 50 feet is used to describe the highest backup alarm noise levels based on the ECCO 610N reverse mount backup alarm. This is based on a reference noise source level of 97 dBA at 4 feet. While the backup alarm noise levels are already included as part of the loading dock activity reference noise level measurement, additional backup alarm noise levels have been included to assess the maximum exterior noise levels.

9.3.9 PARKING LOT SWEEPER (MAXIMUM)

To estimate the maximum Project-related noise impacts, parking lot sweeper activities were included as part of the L_{max} noise impact analysis. The parking lot sweeper noise levels are estimated based on published TYMCO Standard Model 210 parking lot sweeper conditions during normal sweeping operations. At a distance of 50 feet, parking lot sweeper noise levels are estimated at 81.0 dBA L_{max} .

9.4 TYPICAL OPERATIONAL NOISE LEVELS

Using the typical reference noise levels to represent the proposed Project operations, 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. Table 9-2 shows the typical Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 36.3 to 63.5 dBA Leq. Appendix 9.1 includes the detailed noise model inputs and calculations used to estimate the typical Project operational noise levels presented in this section.

TABLE 9-2: TYPICAL DAYTIME OPERATIONAL NOISE LEVELS

Noise Source ¹	Operational Noise Levels by Receiver Location (dBA Leq)						
	R1	R2	R3	R4	R5	R6	R7
Loading Dock Activity	25.8	45.6	49.1	58.2	35.9	32.0	63.1
Tractor Trailer Parking Activity	35.1	40.0	35.5	45.3	26.6	27.3	48.0
Truck Movements	25.1	28.5	28.5	43.0	28.8	41.9	47.8
Roof-Top Air Conditioning Units	22.2	24.5	29.9	38.7	36.4	32.4	40.5
Trash Enclosure Activity	5.2	28.3	18.0	30.4	9.9	9.9	32.5
Parking Lot Vehicle Movements	21.6	23.3	25.3	42.5	34.3	37.2	48.7
Total (All Noise Sources)	36.3	46.8	49.4	58.7	40.9	43.9	63.5

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

Table 9-3 shows the typical Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 36.2 to 63.5 dBA Leq. The minor differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.

TABLE 9-3: TYPICAL NIGHTTIME OPERATIONAL NOISE LEVELS

Noise Source ¹	Operational Noise Levels by Receiver Location (dBA Leq)						
	R1	R2	R3	R4	R5	R6	R7
Loading Dock Activity	25.8	45.6	49.1	58.2	35.9	32.0	63.1
Tractor Trailer Parking Activity	35.1	40.0	35.5	45.3	26.6	27.3	48.0
Truck Movements	25.1	28.5	28.5	43.0	28.8	41.9	47.8
Roof-Top Air Conditioning Units	19.8	22.1	27.5	36.3	34.0	30.0	38.1
Trash Enclosure Activity	1.2	24.4	14.1	26.4	5.9	5.9	28.6
Parking Lot Vehicle Movements	21.6	23.3	25.3	42.5	34.3	37.2	48.7
Total (All Noise Sources)	36.2	46.8	49.4	58.7	40.1	43.8	63.5

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

9.5 TYPICAL OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the typical Project-only operational noise levels are evaluated against the exterior noise level thresholds adjusted to reflect the *ambient* noise levels at the nearest noise-sensitive receiver locations. Table 9-4 shows the operational noise levels associated with Cherry Avenue Industrial Building Project will not exceed the daytime and nighttime exterior noise level standards. Therefore, the typical operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 9-4: TYPICAL OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Measurement Location ²	Project Operational Noise Levels (dBA Leq) ³		Noise Level Standards (dBA Leq) ⁴		Noise Level Standards Exceeded? ⁵	
		Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	L1	36.3	36.2	78.1	73.7	No	No
R2	L2	46.8	46.8	70.4	66.1	No	No
R3	L3	49.4	49.4	72.3	69.6	No	No
R4	L4	58.7	58.7	67.9	64.9	No	No
R5	L5	40.9	40.1	67.8	65.3	No	No
R6	L5	43.9	43.8	67.8	65.3	No	No
R7	L4	63.5	63.5	70.0	70.0	No	No

¹ See Exhibit 8-A for the receiver locations.

² Reference noise level measurement locations as shown on Exhibit 5-A.

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

⁴ Exterior noise level standards, adjusted as needed to reflect the ambient L_{eq} conditions (see Table 5-1) per the City of Long Beach Municipal Section 8.80.150[C] (See Appendix 3.1)

⁵ Do the estimated Project operational noise source activities exceed the noise level standards?

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

9.6 MAXIMUM OPERATIONAL NOISE LEVELS

Using the reference peak noise levels that include backup alarms and parking lot sweeper to represent the peak Project operations, Urban Crossroads, Inc. calculated the maximum operational source noise levels that are expected to be generated at the Project site. Table 9-5 shows that the peak Project operational noise levels at the off-site receiver locations are expected to range from 54.4 to 78.5 dBA L_{max} . Appendix 9.2 includes the detailed noise model inputs and calculations used to estimate the peak Project operational noise levels presented in this section.

TABLE 9-5: PEAK OPERATIONAL NOISE LEVELS

Noise Source ¹	Operational Noise Levels by Receiver Location (dBA L _{max})						
	R1	R2	R3	R4	R5	R6	R7
Loading Dock Activity/Backup Alarms	34.9	54.7	58.2	67.3	45.0	41.1	72.2
Tractor Trailer Parking Activity/Backup Alarms	52.3	57.2	52.7	62.5	43.8	44.5	65.2
Truck Movements	33.3	36.7	36.7	51.2	37.0	50.1	56.0
Roof-Top Air Conditioning Units	23.6	25.9	31.3	40.1	37.8	33.8	42.0
Trash Enclosure Activity	21.5	44.7	34.4	46.8	26.2	26.2	48.9
Parking/Sweeper	49.9	51.6	53.6	70.8	62.6	65.5	77.0
Total (All Noise Sources)	54.4	60.0	60.4	72.9	62.8	65.7	78.5

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.2.

9.7 MAXIMUM OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only maximum operational noise levels are evaluated against exterior noise level thresholds adjusted to reflect the existing L_{max} noise levels at the nearest noise-sensitive receiver locations. This approach permits a comparison of the maximum noise levels with the appropriate L_{max} noise threshold. A comparison of the L_{eq} and L_{max} directly is not meaningful because each noise metric serves a different purpose, and each conveys different information. Table 9-6 shows that the maximum operational noise levels associated with Cherry Avenue Industrial Building Project will not exceed the daytime and nighttime exterior noise level standards adjusted to reflect the maximum ambient noise level. Therefore, the peak operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 9-6: MAXIMUM OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Land Use	Measurement Location ²	Peak Operational Noise Levels (dBA L _{max}) ³	Noise Level Standards (dBA L _{max}) ⁴		Noise Level Standards Exceeded? ⁵	
				Daytime	Nighttime	Daytime	Nighttime
R1	Residential	L1	54.4	84.7	80.8	No	No
R2	Residential	L2	60.0	77.8	74.8	No	No
R3	Church ⁶	L3	60.4	80.1	78.6	No	No
R4	Church ⁶	L4	72.9	75.8	73.7	No	No
R5	Residential	L5	62.8	75.6	72.8	No	No
R6	Residential	L5	65.7	75.6	72.8	No	No
R7	Industrial	L4	78.5	90.0	90.0	No	No

¹ See Exhibit 8-A for the receiver locations.

² Reference noise level measurement locations as shown on Exhibit 5-A.

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

⁴ Exterior L_{max} noise level standards, adjusted to as needed reflect the ambient L_{max} conditions (see Table 5-1) per the City of Long Beach Municipal Section 8.80.150[C] (See Appendix 3.1)

⁵ Do the estimated Project operational noise source activities exceed the noise level standards?

⁶ As a non-residential use, no nighttime noise sensitive receivers exist at this receiver location.

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

9.8 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations that may be potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

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

where “SPL1,” “SPL2,” etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-7 and 9-8, respectively. As indicated on Table 9-7, the Project will generate a daytime operational noise level increase ranging from 0.0 to 1.4 dBA L_{eq} at the nearest receiver locations. Table 9-6 shows that the Project will generate a nighttime operational noise level increase ranging from 0.0 to 2.4 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases would not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, Project related operational noise level increases at the sensitive receiver locations will be *less than significant*.

TABLE 9-7: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	36.3	L1	78.1	78.1	0.0	1.5	No
R2	46.8	L2	70.4	70.4	0.0	1.5	No
R3	49.4	L3	72.3	72.3	0.0	1.5	No
R4	58.7	L4	67.9	68.4	0.5	1.5	No
R5	40.9	L5	67.8	67.8	0.0	1.5	No
R6	43.9	L5	67.8	67.8	0.0	1.5	No
R7	63.5	L4	67.9	69.3	1.4	1.5	No

¹ See Exhibit 8-A for the receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

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

TABLE 9-8: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	36.2	L1	73.7	73.7	0.0	1.5	No
R2	46.8	L2	66.1	66.2	0.1	1.5	No
R3	49.4	L3	69.6	69.6	0.0	1.5	No
R4	58.7	L4	64.9	65.8	0.9	3.0	No
R5	40.1	L5	65.3	65.3	0.0	1.5	No
R6	43.8	L5	65.3	65.3	0.0	1.5	No
R7	63.5	L4	64.9	67.3	2.4	3.0	No

¹ See Exhibit 8-A for the receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

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

10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the limits of construction noise source activity in relation to the nearest sensitive receiver locations previously described in Section 8. According to Section 8.80.202 of the LBMC, construction noise which produces loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours between the hours of 7:00 p.m. and 7:00 a.m.

10.1 CONSTRUCTION NOISE LEVELS

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

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

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (25) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. Consistent with FTA guidance for detailed construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction activities expected for each stage, assuming all equipment operates at the same time.

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS

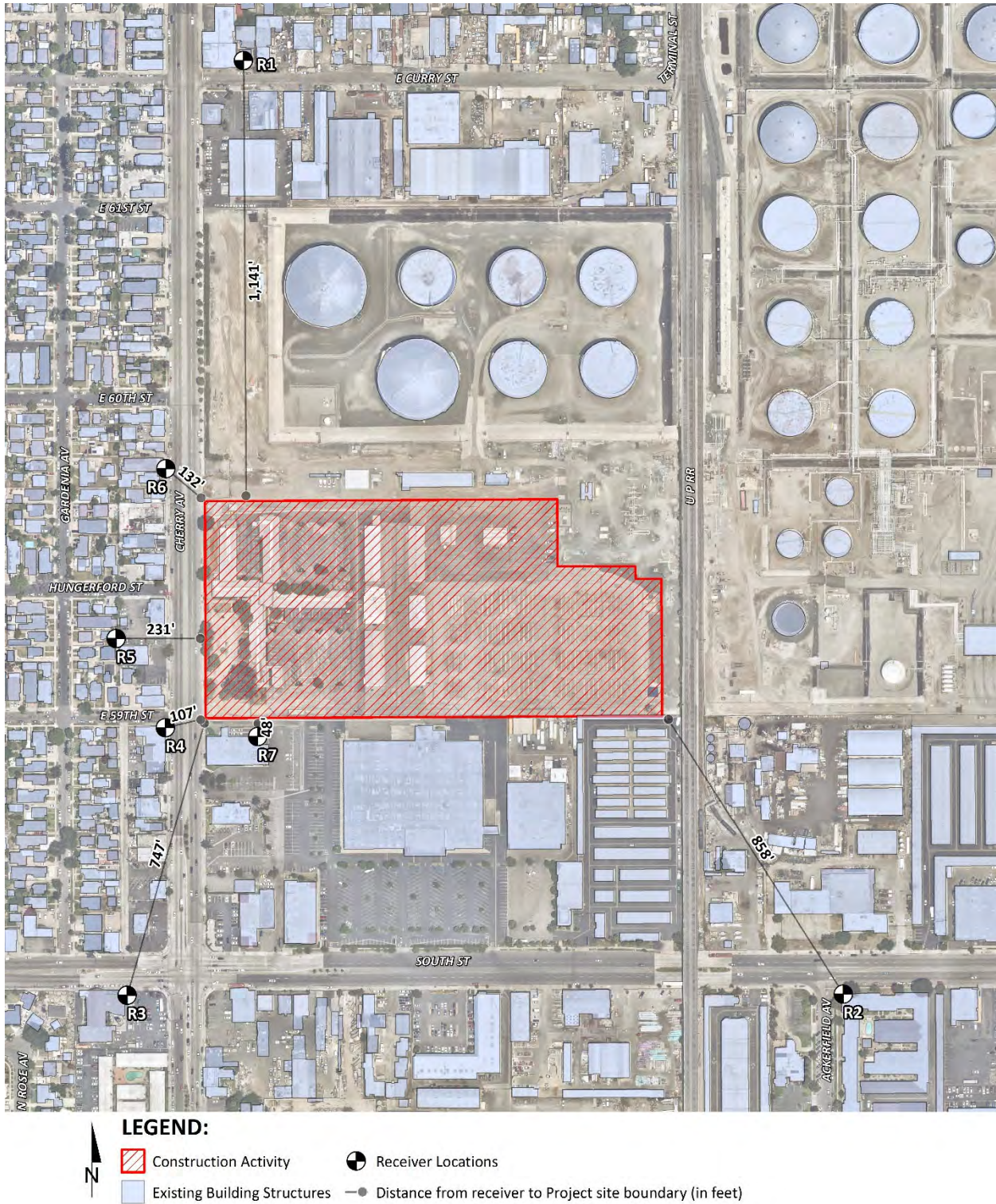


TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})	Composite Reference Noise Level (dBA L _{eq}) ²
Demolition/ Crushing	Concrete Saw	83	86.8
	Grapple (on backhoe)	83	
	Gradall	79	
Site Preparation	Tractor	80	84.0
	Backhoe	74	
	Grader	81	
Grading	Scraper	80	83.3
	Excavator	77	
	Dozer	78	
Building Construction	Crane	73	80.6
	Generator	78	
	Front End Loader	75	

Paving	Paver	74	77.8
	Dump Truck	72	
	Roller	73	
Architectural Coating	Man Lift	68	76.2
	Compressor (air)	74	
	Generator (<25kVA)	70	

¹ FHWA Road Construction Noise Model.

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

10.3 CONSTRUCTION NOISE ANALYSIS

Construction activities are typically evaluated as mobile sources since these activities tend to vary considerably, not only as the speed and power of the equipment varies, but also as the equipment constantly changes in terms of its distance from the receivers and its relative location. (26) However, to present a conservative analysis, the Project construction noise levels by stage were calculated using the loudest three pieces of construction equipment operating simultaneously at the limits of construction (project site boundary) nearest to the affected receivers. Since it is unlikely that multiple pieces of construction equipment can operate simultaneously near the limits of construction, this analysis likely overstates the potential Project related construction noise level impacts.

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts to the nearby sensitive receiver locations were completed. As shown on Table 10-2, the unmitigated construction noise levels are expected to range from 55.7 to 80.7 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA unmitigated construction noise model calculations.

TABLE 10-2: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})						
	Demolition/ Crushing	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels ²
R1	59.9	57.1	56.4	53.7	50.9	49.3	59.9
R2	55.7	52.9	52.2	49.5	46.7	45.1	55.7
R3	61.8	59.0	58.3	55.6	52.8	51.2	61.8
R4	80.7	77.9	77.2	74.5	71.7	70.1	80.7
R5	73.9	71.1	70.4	67.7	64.9	63.3	73.9
R6	80.5	77.7	77.0	74.3	71.5	69.9	80.5
R7	75.5	72.7	72.0	69.3	66.5	64.9	75.5

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

² Construction noise level calculations from the loudest three pieces of construction equipment operating simultaneously, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term impact at nearest receiver locations, a construction-related daytime noise level of 70 dBA L_{eq} from the 1975 Noise Element is used as a reasonable threshold to assess the construction noise impacts. The unmitigated construction noise analysis shows that the nearest receiver locations will exceed the daytime 70 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *potentially significant*.

TABLE 10-3: UNMITIGATED CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	59.9	70	No
R2	55.7	70	No
R3	61.8	70	No
R4	80.7	70	Yes
R5	73.9	70	Yes
R6	80.5	70	Yes
R7	75.5	n/a ⁵	No ⁵

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

² Highest construction noise level calculations based on distance from the project site boundary to the nearest receiver locations as shown on Table 10-2.

³ City of Long Beach 1975 General Plan Noise Element p.95 construction noise

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

⁵ Location R7 represents the Los Angeles County's Department of Animal Care and Control Building located at 5898 Cherry Avenue. As a non-residential use, no noise sensitive receivers exist at this location

Therefore, a minimum 12-foot-high temporary noise barrier at the western Project site boundary is required to reduce the construction noise at noise sensitive receiver locations R4, R5 and R6 west of Cherry Avenue as shown on Exhibit 10-B. Table 10-4 shows that the mitigated construction noise levels at the nearest noise sensitive receiver locations are expected to range from 54.7 to 69.6 dBA L_{eq} . Appendix 10.2 includes the mitigated construction CadnaA noise calculations.

TABLE 10-4: MITIGATED CONSTRUCTION NOISE LEVELS

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})						
	Demolition/ Crushing	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels ²
R1	56.2	53.4	52.7	50.0	47.2	45.6	56.2
R2	55.7	52.9	52.2	49.5	46.7	45.1	55.7
R3	54.7	51.9	51.2	48.5	45.7	44.1	54.7
R4	69.6	66.8	66.1	63.4	60.6	59.0	69.6

R5	63.6	60.8	60.1	57.4	54.6	53.0	63.6
R6	68.9	66.1	65.4	62.7	59.9	58.3	68.9
R7	72.7	69.9	69.2	66.5	63.7	62.1	72.7

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

² Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA mitigated construction noise model inputs are included in Appendix 10.2.

Table 10-5 shows that the mitigated construction noise levels will satisfy the City of Long Beach 70 dBA L_{eq} construction noise level standard at the nearest receiver locations. With the required 12-foot-high temporary noise barrier and the construction noise mitigation measures outlined below in Section 10.5, the construction noise impacts are considered *less than significant*.

TABLE 10-5: MITIGATED CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	56.2	70	No
R2	55.7	70	No
R3	54.7	70	No
R4	69.6	70	No
R5	63.6	70	No
R6	68.9	70	No
R7	72.7	n/a ⁵	No ⁵

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

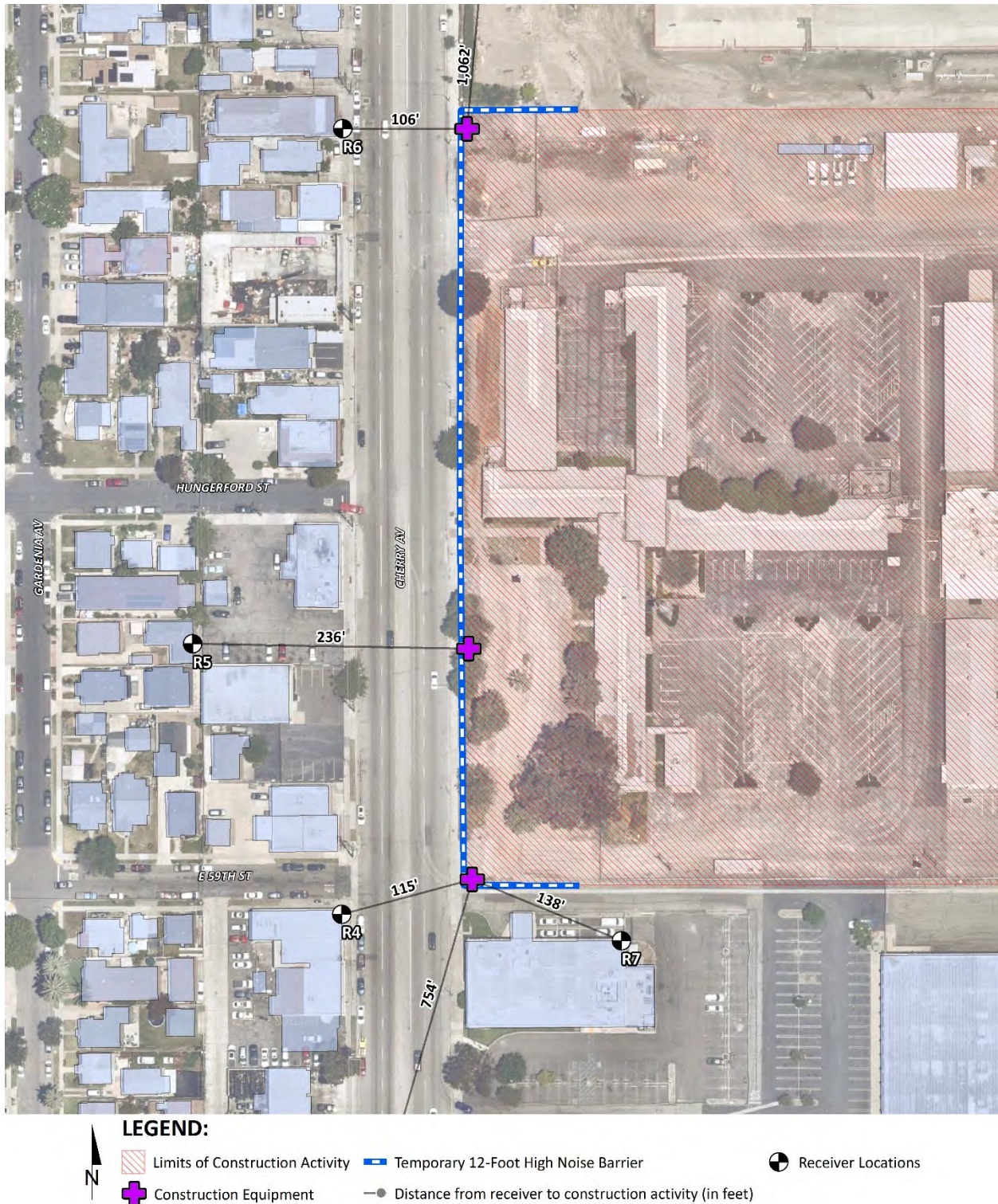
² Highest construction noise level calculations based on distance from the project site boundary to the nearest receiver locations as shown on Table 10-4.

³ City of Long Beach 1975 General Plan Noise Element p.95 construction noise

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

⁵ Location R7 represents the Los Angeles County's Department of Animal Care and Control Building located at 5898 Cherry Avenue. As a non-residential use, no noise sensitive receivers exist at this location.

EXHIBIT 10-B: CONSTRUCTION NOISE MITIGATION MEASURES



10.5 PROJECT CONSTRUCTION NOISE MITIGATION MEASURES

The following mitigation measures are required to reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses.

- MM-1 Install a minimum 12-foot-high temporary construction noise barrier along the western Project site boundary, and extending a minimum of 100 feet to the east long both the northern and southern property lines starting from Cherry Avenue, for the duration of Project construction as shown on Exhibit 10-B. The noise control barriers must have a solid face from top to bottom. The noise control barriers must meet the minimum height and be constructed as follows:
1. The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.
 2. The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
 3. The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- MM-2 All construction activities shall comply with LBMC Section 8.80.202 restricting construction activity to the hours between 7:00 p.m. and 7:00 a.m. (15)
- MM-3 Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.
- MM-4 All stationary construction equipment shall be placed in such a manner so that emitted noise is directed away from any sensitive receivers.
- MM-5 Construction equipment staging areas shall be located at the greatest feasible distance between the staging area and the nearest sensitive receivers.
- MM-6 The construction contractor shall limit equipment and material deliveries to the same hours specified for construction equipment for MM-2.
- MM-7 Electrically powered air compressors and similar power tools shall be used, when feasible, in place of diesel equipment.
- MM-8 No music or electronically reinforced speech from construction workers shall be allowed.

10.6 TEMPORARY CONSTRUCTION NOISE LEVEL INCREASES

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the mitigated Project construction noise levels were combined with the existing ambient noise levels measurements at the off-site receiver locations. The difference between the combined Project-construction and ambient noise levels is used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the ambient daytime conditions are presented on Table 10-6.

TABLE 10-6: DAYTIME TEMPORARY CONSTRUCTION NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Construction Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	56.2	L1	78.1	78.1	0.0	5	No
R2	55.7	L2	70.4	70.5	0.1	5	No
R3	54.7	L3	72.3	72.4	0.1	5	No
R4	69.6	L4	67.9	71.8	3.9	5	No
R5	63.6	L5	67.8	69.2	1.4	5	No
R6	68.9	L5	67.8	71.4	3.6	5	No
R7	72.7	L4	67.9	73.9	6.0	n/a ⁸	No ⁸

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

² Total Project daytime construction noise levels as shown on Table 10-2.

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

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

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

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

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

⁸ Location R7 represents the Los Angeles County's Department of Animal Care and Control Building located at 5898 Cherry Avenue. As a non-residential use, no noise sensitive receivers exist at this location.

A temporary noise level increase of 12 dBA is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used to assess the Project-construction noise level increases. (19) However, the construction activities associated with the Cherry Avenue Industrial Building Project are likely to take several months and cannot reasonably be considered as a short-term temporary noise impact. Therefore, due to the expected duration of construction, a *barely perceptible* 5 dBA noise level increase threshold has been used to assess the potential impacts associated with the daytime construction related noise level increases.

As indicated in Table 10-6, the Project will contribute construction noise level increases ranging from 0.0 to 3.9 dBA L_{eq} during the daytime hours at the closest sensitive receiver locations. Since the reasonable worst-case temporary noise level increases of up to 3.6 dBA L_{eq} during Project construction will not exceed the 5 dBA L_{eq} noise level increase significance threshold, the construction noise level increases are considered *less than significant* temporary noise impacts.

10.7 NIGHTTIME CONCRETE POURING ACTIVITIES

Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours. However, LBMC Section 8.80.202 restricts construction activity to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and after 9:00 a.m. on Saturdays with no activity permitted on Sundays. The applicant has indicated that no nighttime concrete pouring activities are needed to support the Project development. Therefore, all concrete pouring activities shall be restricted to the hours 7:00 a.m. to 7:00 p.m. on weekdays and after 9:00 a.m. on Saturdays with no activity permitted on Sundays.

10.8 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-7. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by Caltrans. To calculate the vibration of equipment at distance Caltrans provides the following equation: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.1}$

TABLE 10-7: 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	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source level of construction equipment provided on Table 10-7 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-8 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 48 to 1,141 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.00 to 0.08 PPV (in/sec). Based on maximum acceptable continuous vibration threshold of 0.50 PPV (in/sec), the typical Project construction vibration levels will fall below the thresholds at all the sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

TABLE 10-8: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver ¹	Distance to Const. Activity (Feet) ²	Typical Construction Vibration Levels PPV (in/sec) ³						Thresholds PPV (in/sec) ⁴	Thresholds Exceeded? ⁵
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	1,141'	0.00	0.00	0.00	0.00	0.00	0.00	0.50	No
R2	858'	0.00	0.00	0.00	0.00	0.00	0.00	0.50	No
R3	747'	0.00	0.00	0.00	0.00	0.00	0.00	0.50	No
R4	107'	0.00	0.00	0.01	0.01	0.02	0.02	0.50	No
R5	231'	0.00	0.00	0.00	0.00	0.01	0.01	0.50	No
R6	132'	0.00	0.00	0.01	0.01	0.02	0.02	0.50	No
R7	48'	0.00	0.01	0.03	0.03	0.08	0.08	0.50	No

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

² Distance from receiver location to Project construction boundary (Project site boundary).

³ Based on the Vibration Source Levels of Construction Equipment (Table 10-5).

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

⁵ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
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14. —. *City of Long Beach Municipal Code, Chapter 8.80 - Noise.*
15. —. *Municipal Code, Section 8.80.202 Construction Activity - Noise Regulations.*
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21. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.

22. **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.
23. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
24. **Urban Crossroads, Inc.** *Cherry Avenue Industrial Traffic Analysis.* December 2023.
25. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.
26. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Construction Noise Handbook.* Final Report August 2006.

12 CERTIFICATION

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

Bill Lawson, P.E., INCE
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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 San Diego • March, 2018
Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 1.1:

NOISE RESPONSE TO COMMENTS

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DATE: September 18, 2023
TO: Amy Harbin, City of Long Beach
FROM: Bill Lawson, PE, INCE, Urban Crossroads
JOB NO: 14715-06 RTC Memo

CHERRY AVENUE WAREHOUSE NOISE RESPONSE TO COMMENTS

Urban Crossroads, Inc. is pleased to provide the following Response to Comments for the Cherry Avenue Warehouse (**Project**), which is located in the City of Long Beach. A letter dated April 18, 2023, from the Law Office of Jordan R. Sisson appealing the City Planning Commission's site plan review approval of the proposed warehouse located at 5910 Cherry Avenue and the analysis previously conducted to support the proposed California Environmental Quality Act (**CEQA**) Class 32 exemption was received in advance of the April 18, 2023, City Council Hearing and withdrawal of the Project's application. The Appeal letter included comments contesting the Class 32 exemption based on a review of specific technical areas (e.g., transportation, air quality, and noise). Noise-related comments were prepared by Dale La Forest & Associates based on a review of the May 6, 2022, *Noise Impact Analysis* prepared by Urban Crossroads, Inc. A detailed response to the main issues raised in the comment letter is provided below. A copy of the comment letter dated March 30, 2023, is provided in Attachment A.

COMMENT - SECTION II

The City and Applicant agreed to Project-specific noise mitigation in Conditions of Approval (COA-20 and COA-58) that directly conflicts with CEQA's absolute bar against mitigation measures for categorical exemptions. Thus, by its own practice, the City appears to admit that there is a fair argument that the Project will cause potentially significant noise impacts. The close proximity and age of adjacent homes west of Cherry Avenue constitutes an unusual circumstance related to construction noise impacts, which supports the conclusion that a categorical exemption is inappropriate for the Project. Even the City's proposed Conditions of Approval will not adequately reduce the warehouse's noise impacts to a less-than-significant level. Condition #20 regarding nighttime noise levels and trucking use is too vague and ineffective. Condition #58 which requires the property be maintained in a quiet condition and maintained so as not to be detrimental to adjacent properties and occupant is also too vague to be effective.

RESPONSE - SECTION II

In response to Section II and other comments in the Dale La Forest & Associates letter dated March 30, 2023, the Project noise study has been substantially revised and updated. However, consistent with the original May 6, 2022, *Cherry Avenue Warehouse Noise Impact Analysis* prepared by Urban Crossroads, Inc. the Project-related off-site traffic noise, operational noise, construction noise and vibration impacts are considered less than significant and, therefore, no Project-specific noise mitigation measures are needed.

COMMENT - SECTION III

The Project will generate noise levels that exceed many of the applicable thresholds of significance and will therefore create significant noise impacts to its neighbors.

RESPONSE - SECTION III

This comment in addition to many others throughout the letter completely fails to acknowledge that the nearest noise sensitive uses west of the Project site are located adjacent to Cherry Avenue. As a four-lane Major Arterial roadway, Cherry Avenue represents the primary source of noise within the study area that overshadows noise source activities from the Project site. Consequently, the existing homes west of Cherry Avenue are significantly influenced by the existing traffic noise levels with or without the development of the Project. In addition, the Project site is currently developed with an existing industrial land use with similar noise sources as the proposed warehouse use.

The Noise Study demonstrates that the Project will not exceed the applicable thresholds of significance consistent with the Appendix G CEQA Guidelines. Section 3 of the updated Project Noise Study references the recently adopted 2023 City of Long General Plan Noise Element. In addition, the revised Noise study was developed using the applicable noise criteria outlined in the 2023 Noise Element and the Long Beach Municipal Code (LBMC) to establish the appropriate thresholds necessary to satisfy CEQA Guidelines.

The comment letter outlines the LBMC criteria but conveniently fails to recognize that these standards shall be increased in 5 dB increments as appropriate to encompass or reflect the ambient conditions (Section 8.80.150[C]). In effect, the existing ambient noise levels become the standard, negating the need for any reductions for impulsive noise, repetitive speech, or music. The commenter also suggests that the *Project applicant has not submitted sufficient noise measurements of existing ambient noise levels*. This ignores the long-term 24-hour measurements included in Section 5, presented on Exhibit 5-A, listed on Table 5-1. The measurement summary provided in Appendix 5.2 includes the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods.

COMMENT - SECTION IV

The threshold of significance for construction noise should be 70 dBA L_{eq} in the daytime and 65 dBA L_{eq} at nighttime to avoid significant noise impacts, not the excessive daytime 80 dBA L_{eq} standard and 70 dBA L_{eq} nighttime standard employed by the Project's Noise Study.

RESPONSE - SECTION IV

To control noise impacts associated with the construction of the proposed Project, the LBMC has established limits to the hours of operation. LBMC Section 8.80.202 restricts construction activity between the hours of 7:00 p.m. and 7:00 a.m. In addition, the 2023 Noise Element includes strategies and policies that would reduce construction noise impacts. Policies N 12-1 through N 12-7 include measures to reduce construction noise at the sources, reduce noise conflicts, limit the allowable hours for construction activities near sensitive uses, establish noise level standards based on PlaceType as part of the City's Municipal Code, and encourage construction best practices that reduce noise.

At this time, the City has not established quantitative construction noise standards. The 2023 Noise Element acknowledges that while the City does not typically rely on any specific federal noise regulations, the construction noise and vibration guidelines from the FTA Transit Noise and Vibration Impact Assessment Manual may be used when local criteria are not established. According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use.

The FTA identifies two types of construction noise assessment criteria, general and detailed. For general construction noise assessments, the analysis is limited to the two noisiest pieces of equipment with an hourly daytime exterior noise level threshold for residential land use of 90 dBA $L_{eq}(1hr)$. However, for long-term construction projects that would expose sensitive receivers to noise for extended periods of time, the FTA considers a daytime 8-hour average exterior construction noise level of 80 dBA $L_{eq}(8hr)$. While the FTA daytime exterior construction noise level of 80 dBA L_{eq} is considered a reasonable threshold to assess construction noise level impacts, the 1975 Noise Element indicates a construction noise level threshold of 70 dBA L_{eq} for locations "away from major roads and sources of industrial noise" may be appropriate. Therefore, while this noise level was not adopted as a policy, to evaluate whether the Project will generate potentially significant noise levels at nearby noise sensitive residential receiver locations, this analysis conservatively relies on the lower exterior mobile construction noise level limit of 70 dBA L_{eq} from the 1975 Noise Element.

COMMENT - SECTION V

The proposed nighttime construction of the concrete slab pour activities would generate significant noise impact at neighboring homes.

RESPONSE - SECTION V

Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours. However, LBMC Section 8.80.202 restricts construction activity to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and after 9:00 a.m. on Saturdays with no activity permitted on Sundays. The applicant has indicated that no nighttime concrete pouring activities are needed to support the Project development.

Therefore, all concrete pouring activities shall be restricted to the daytime hours 7:00 a.m. to 7:00 p.m. on weekdays and after 9:00 a.m. on Saturdays with no activity permitted on Sundays.

COMMENT - SECTION VI

Backup alarms mandated on heavy equipment and trucks could create noise levels at the nearest home of about 83 dBA L_{max} (when adjusted with a 5 dB penalty for a pure tone per LBMC § 8.18.160). The City's maximum daytime noise standard is 70 dBA L_{max} . Backup alarms could exceed this threshold by 13 dB, resulting in a significant noise impact.

RESPONSE - SECTION VI

The comment here again misrepresents the City's maximum daytime noise standard. Section 8.80.150[C] indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be increased in 5 dB increments as appropriate to encompass or reflect the ambient conditions. In addition, the operational noise analysis in the revised noise study has been expanded to evaluate the maximum (L_{max}) noise levels associated with backup alarms and parking lot sweepers.

A reference noise level of 75.1 dBA L_{max} at 50 feet is used to describe the highest backup alarm noise levels based on the ECCO 610N reverse mount backup alarm. While the backup alarm noise levels are already included as part of the loading dock activity reference noise level measurement, additional backup alarm noise levels have been included in the revised noise study to assess the maximum exterior noise levels.

To demonstrate compliance with local noise regulations, the maximum Project-only operational noise levels including the backup alarms are evaluated against exterior noise level thresholds adjusted to reflect the existing L_{max} noise levels at the nearest noise-sensitive receiver locations. This approach permits a comparison of the maximum noise levels with the appropriate L_{max} noise threshold. A comparison of the L_{eq} and L_{max} directly is not meaningful because each noise metric serves a different purpose, and each conveys different information. The revised analysis demonstrates that the maximum operational noise levels associated with Cherry Avenue Warehouse Project will not exceed the daytime and nighttime exterior noise level standards adjusted to reflect the maximum ambient noise level. Therefore, the maximum operational noise impacts are considered less than significant at the nearby noise-sensitive receiver locations.

COMMENT - SECTION VII

Project trucking would expose the adjacent Los Angeles County's Department of Animal Care and Control building to noise levels from passing heavy trucks in its driveway about 160 feet from this building to maximum noise levels of about 85 dBA L_{max} . The City's threshold of significance for maximum noise level exposure for such a commercial building is 75 dBA L_{max} . The 10 dBA exceedance of this threshold indicates a significant noise impact at that commercial property.

RESPONSE - SECTION VII

Animal care and control buildings are generally considered noise sources and in no way should the Los Angeles County's Department of Animal Care and Control Building be considered a sensitive receiver demanding further analysis. However, for information purposes to respond to this comment, Receiver Location R7 has been added to the analysis to represent the Los Angeles

County's Department of Animal Care and Control Building located at 5898 Cherry Avenue, approximately 48 feet south of the Project site. A review of this location shows that the Animal Care and Control Building is located within Noise District 4 (Predominately Industrial). This is consistent with the non-residential use associated with the site. As a non-residential use, no nighttime noise sensitive receivers exist at this location. The analysis shows that the Project will not exceed any of the established significance thresholds at the Los Angeles County's Department of Animal Care and Control Building.

COMMENT - SECTION VIII

The 50-foot tall massive western wall of the warehouse will increase traffic noise levels by about 2 dBA at homes west of Cherry Avenue by reflecting existing and – Project-added traffic noise toward those homes. Because these homes are already exposed to traffic noise levels in excess of the City's 65 dBA standard for residential uses, any Project-related increase in noise levels greater than 1.5 dB is considered a significant noise impact (FICON; Noise Study pp. 19-20; CalTrans, FHA).

RESPONSE - SECTION VIII

The construction of the proposed 51-foot-high Project warehouse building may result in reflected traffic noise off the western building façade to the homes located west of the Project site, across Cherry Avenue. The Federal Highway Administration (FHWA) has shown that the reflection from barriers and buildings does not substantially increase noise levels. If all the traffic noise striking the Project building were reflected back to the across Cherry Avenue, the increase would be theoretically (completely smooth surface exactly perpendicular to the receiver) limited to 3 dBA (i.e., two combined noise sources of equal level result in a 3 dBA increase). Further, not all the acoustical energy is reflected to the other side. Some of the energy would go over the building, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by the vehicles themselves. Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify this reflective increase have never shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear. It should be noted these cases are based on long straight barriers with near perpendicular alignment to the measurement point, representing rare real world worst-case conditions.

Using the CadnaA noise prediction model previously described in Section 6.2, the reflected noise levels were calculated at the nearest noise sensitive residential receivers located west of Cherry Avenue. The analysis suggests a noise level increase of up to 0.3 dBA CNEL in the off-site traffic noise levels due to reflected traffic noise with the development of the Project. Therefore, any Project noise level increase due to the reflected traffic noise is considered less than significant. The reflected traffic noise levels calculations are included in Appendix 7.2. This additional evaluation demonstrates why this analysis is typically unnecessary.

COMMENT - SECTION IX

The City's maximum exterior noise standard for homes west of Cherry Avenue at nighttime is 65 dBA L_{max} (LBMC § 8.80.150(B)(5)). The possible use of mechanical sweeper/vacuums in the parking lot and driveways west of the warehouse could generate noise levels at the nearest homes up to

200 feet away from such pavement cleaning of 67.5 dBA L_{max} , thus exceeding the nighttime threshold of significance and creating a significant noise impact at some homes.

RESPONSE - SECTION IX

To estimate the maximum Project-related noise impacts, parking lot sweeper activities were included as part of the L_{max} noise impact analysis. The parking lot sweeper noise levels are estimated based on published TYMCO Standard Model 210 parking lot sweeper conditions during normal sweeping operations. At a distance of 50 feet, parking lot sweeper noise levels are estimated at 81.0 dBA L_{max} .

To demonstrate compliance with local noise regulations, the maximum Project-only operational noise levels including the parking lot sweeper are evaluated against exterior noise level thresholds adjusted to reflect the existing L_{max} noise levels at the nearest noise-sensitive receiver locations. Table 9-6 shows that the maximum operational noise levels associated with Cherry Avenue Warehouse Project will not exceed the daytime and nighttime exterior noise level standards adjusted to reflect the maximum ambient noise level. Therefore, the maximum operational noise impacts are considered less than significant at the nearby noise-sensitive receiver locations.

COMMENT - SECTION X

The Project's Noise Study is incomplete, inaccurate, entirely conclusory, is based on insufficient measurement locations, and likely contains artificially inflated ambient noise levels due to errors in the noise level measurements that were taken and their inconsistent exceedance of noise level data in the General Plan Noise Element. The noise discussion utterly fails to meet the evaluation standards set by the City's Noise Ordinance or other public agencies, nor is consistent with other noise studies conducted within the City.

RESPONSE - SECTION X

The noise study has been developed using standard industry best practices as necessary to demonstrate compliance with standards established in the local general plan or noise ordinance. This comment suggests that the noise study and specifically the noise measurements likely contain artificially inflated ambient noise levels due to errors. However, the comment fails to identify any errors, omissions, or issues with the noise measurements beyond this unsupported claim. The following claims in the comment also seem to be unsupported within the comment letter. As to the adequacy of the noise level measurements conducted by Urban Crossroads and presented in the noise study, the commenter fails to acknowledge that the *ambient* noise level as defined in LBMC Section 8.80.020 represents the composite of noise from all sources near and far representing the normal or existing level of environmental noise at a given location. Use of *ambient* noise is necessary to calculate the temporary or permanent noise increases from the Project as required by the CEQA Guidelines Environmental Checklist. Using any other noise metric such as the L_{90} is inappropriate and does not represent the existing *ambient* conditions as required by LBMC Section 8.80.020 and CEQA.

COMMENT - SECTION XI

The Project applicant fails to demonstrate that all technically feasible noise attenuation measures are incorporated into the Project and relies on the City's Noise Ordinance as a substitute to the significance thresholds provided under the City's and other applicable noise standards. The Project's paltry noise analysis failed to provide any meaningful information to allow the City to adequately consider standard mitigation measures provided under applicable CEQA guidance documents, many of which have been incorporated into numerous City projects via enforceable Conditions of Approval. This constitutes a sharp deviation of the City's practice for similarly-situated projects and must be corrected in a CEQA-compliant MND or EIR—just like other projects of this nature.

RESPONSE - SECTION XI

In response to the Dale La Forest & Associates comment letter dated March 30, 2023, the Project noise study has been substantially revised and updated. However, consistent with the original May 6, 2022, *Cherry Avenue Warehouse Noise Impact Analysis* prepared by Urban Crossroads, Inc. the off-site traffic, operational noise, construction noise and vibration impacts are considered less than significant and, therefore, no Project-specific noise mitigation measures are needed.

If you have any questions or comments, I can be reached at blawson@urbanxroads.com

ATTACHMENT A: CONSULTANT COMMENTS DATED APRIL 5, 2023

Figure 1
Photo of dozens of homes and some businesses across Cherry Avenue from Project site.



I. EXECUTIVE SUMMARY

As explained herein in this report, I have made the following conclusions about the Cherry Avenue Warehouse Project. (Section references are to my narrative discussion *infra* in this letter):

Section II (pp. 5-6):¹ The City and Applicant agreed to Project-specific noise mitigation in Conditions of Approval (COA-20 and COA-58) that directly conflicts with CEQA’s absolute bar against mitigation measures for categorical exemptions. Thus, by its own practice, the City appears to admit that there is a fair argument that the Project will cause potentially significant noise impacts. The close proximity and age of adjacent homes west of Cherry Avenue constitutes an unusual circumstance related to construction noise impacts, which supports the conclusion that a categorical exemption is inappropriate for the Project.

Even the City’s proposed Conditions of Approval will not adequately reduce the warehouse’s noise impacts to a less-than-significant level. Condition #20 regarding nighttime noise levels and trucking use is too vague and ineffective. Condition #58 which requires the property be maintained in a quiet condition and maintained so as not to be detrimental to adjacent properties and occupant is also too vague to be effective.

Section III (pp. 6-10) The Project will generate noise levels that exceed many of the applicable thresholds of significance, and will therefore create significant noise impacts to its neighbors. These noise standards are described in this section.

¹ Herein, page citations are either to the document’s stated pagination (referenced by “p. ##”) or to the pages’ location within the referenced PDF document (referenced by “PDF-- ##”). Websites and documents cited herein were accessed in February, 2023 and copies of which will be made available to City officials if requested.

Section IV (pp. 11-13) The threshold of significance for construction noise should be 70 dBA L_{eq} in the daytime and 65 dBA L_{eq} at nighttime to avoid significant noise impacts, not the excessive daytime 80 dBA L_{eq} standard and 70 dBA L_{eq} nighttime standard employed by the Project's Noise Study.

Section V.1 (pp. 15-17) The proposed nighttime construction of the concrete slab pour activities would generate significant noise impact at neighboring homes. Those maximum nighttime construction noise levels at a nearest residence of 76.5 dBA L_{max} would exceed the City's maximum 65 dBA L_{max} nighttime threshold of significance (LBM § 8.80.150(B)(5)).

Section V.2 (pp. 17-18) Average nighttime construction noise levels of 72 dBA L_{eq} at nearest residence 220 feet away would exceed the City's 45 dBA L_{50} threshold of significance. (LBM § 8.80.150(B)(1)). Similarly, at more than a dozen homes up to 400 feet away from the concrete slab pour work, nighttime average construction noise levels in excess of 67 dBA L_{eq} would also exceed the City's maximum 45 dBA L_{50} threshold of significance.

Section V.3 (pp. 18- 19) In interior rooms of nearby homes during the Project's concrete slab pour work, nighttime construction noise levels of 52 dBA L_{eq} would exceed the City's maximum 35 dBA L_{eq} nighttime interior noise level threshold of significance (LBM § 8.80.170(A), Table C). Even at more distant homes up to 400 feet away if not blocked by intervening structures, their interior room noise levels could reach 47 dBA L_{eq} at nighttime and also exceed the 35 dBA L_{eq} threshold. Those same construction noise levels if that work is conducted in the daytime would exceed the City's daytime threshold of 45 dBA L_{eq} (LBM § 8.80.170(A)). They would also exceed the General Plan's maximum acceptable indoor noise standards of 45 dBA L_{dn} (daytime) and 35 dBA L_{dn} (nighttime), (Noise Element, p. 137, Table 11).

Section V.4 (p. 19) The magnitude of the *increase* in noise levels at the nearest homes would be significant during nighttime concrete pour activities. The existing average noise level at the nearest homes is about 65.3 dBA L_{eq} at nighttime. That construction noise heard at those homes could add about 72.5 dBA L_{eq} , resulting in over a 7 dB *increase* during nighttime construction on the concrete pour activities. That increase is significant because it would exceed the 1.5 dBA threshold identified for conditions at these homes where ambient is greater than 65 dBA L_{eq} (FICON; also Noise Study, p. 21, Table 4-1).

Section V.5 (pp. 20-21) Concrete pour activities could generate a 24-hour day-night average noise level of 78.5 dBA L_{dn} at the nearest home, and 73.3 dBA L_{dn} or more at more distant dozens of homes within 400 feet of the concrete pour location. Those noise levels would exceed the threshold of significance for 24-hour day-night average noise levels is 70 dBA L_{dn} . (OPR, General Plan Guidelines, 2003) A noise level louder than that is considered to be "normally unacceptable" for the nearby residences. This Project could generate noise levels of 78.5 dBA L_{dn} at the nearest home, and 73.3 dBA L_{dn} or more at more distant dozens of homes within 400 feet of the concrete pour location. Exceedance of this standard would be a significant noise impact. Even if no concrete pour work or other construction was done at nighttime, meaning that construction work would only occur in the daytime hours, the 24-hour day-night average noise level could be over 70 dBA L_{dn} at the nearest house 220 feet from the concrete pour location and would thus be a significant noise impact.

Section VI (pp. 22-23): Backup alarms mandated on heavy equipment and trucks could create noise levels at the nearest home of about 83 dBA L_{max} (when adjusted with a 5 dB penalty for a pure tone per LBMC § 8.18.160). The City's maximum daytime noise standard is 70 dBA L_{max} . Backup alarms could exceed this threshold by 13 dB, resulting in a significant noise impact.

Section VII (pp. 24- 25): Project trucking would expose the adjacent Los Angeles County's Department of Animal Care and Control building to noise levels from passing heavy trucks in its driveway about 160 feet from this building to maximum noise levels of about 85 dBA L_{max} . The City's threshold of significance for *maximum* noise level exposure for such a commercial building is 75 dBA L_{max} . The 10 dBA exceedance of this threshold indicates a significant noise impact at that commercial property.

Section VIII (pp. 26-28): The 50-foot tall massive western wall of the warehouse will increase traffic noise levels by about 2 dBA at homes west of Cherry Avenue by reflecting existing and – Project-added traffic noise toward those homes. Because these homes are already exposed to traffic noise levels in excess of the City's 65 dBA standard for residential uses, any Project-related increase in noise levels greater than 1.5 dB is considered a significant noise impact (FICON; Noise Study pp. 19-20; CalTrans, FHA).

Section IX (pp. 28-29): The City's maximum exterior noise standard for homes west of Cherry Avenue at nighttime is 65 dBA L_{max} (LBMC § 8.80.150(B)(5)). The possible use of mechanical sweeper/vacuums in the parking lot and driveways west of the warehouse could generate noise levels at the nearest homes up to 200 feet away from such pavement cleaning of 67.5 dBA L_{max} , thus exceeding the nighttime threshold of significance and creating a significant noise impact at some homes.

Section X (p. 30): The Project's Noise Study is incomplete, inaccurate, entirely conclusory, is based on insufficient measurement locations, and likely contains artificially-inflated ambient noise levels due to errors in the noise level measurements that were taken and their inconsistent exceedance of noise level data in the General Plan Noise Element. The noise discussion utterly fails to meet the evaluation standards set by the City's Noise Ordinance or other public agencies, nor is consistent with other noise studies conducted within the City.

Section XI (pp. 31-36): The Project applicant fails to demonstrate that all technically feasible noise attenuation measures are incorporated into the Project, and relies on the City's Noise Ordinance as a substitute to the significance thresholds provided under the City's and other applicable noise standards. The Project's paltry noise analysis failed to provide any meaningful information to allow the City to adequately consider standard mitigation measures provided under applicable CEQA guidance documents, many of which have been incorporated into numerous City projects via enforceable Conditions of Approval. This constitutes a sharp deviation of the City's practice for similarly-situated projects and must be corrected in a CEQA-compliant MND or EIR—just like other projects of this nature.

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APPENDIX 3.1:

CITY OF LONG BEACH MUNICIPAL CODE

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CHAPTER 8.80 NOISE

8.80.010 Policy.

- A. In order to control unnecessary, excessive and annoying noise and vibration in the City, it is declared to be the policy of the City to prohibit such noise and vibration generated from or by all sources as specified in this Chapter. It shall be the policy of the City to maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the City where noise levels are above acceptable values.
- B. It is determined that certain noise levels and vibrations are detrimental to the public health, welfare and safety, and are contrary to the public interest. Therefore, the City Council does ordain and declare that creating, maintaining, causing or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this Chapter is a public nuisance and shall be punishable as such.
- C. The City Council in adopting this Chapter is aware of the areas of noise control which are preempted by other jurisdictions. Enforcement of these regulations is understood by the City Council to be restricted, in addition to other limitations, by the following:
 1. It is not the intent of this Chapter to control aircraft noise at the Long Beach Airport. Federal law controls noise levels of aircraft in flight; and where federal preemption does not apply to aircraft on the ground, the appropriate provisions of the California Noise Law (Title 4, California Administrative Code, Subchapter 6) would be applicable to deal with this subject matter.
 2. Local noise control of motor vehicles or motorboats operating on public rights-of-way is preempted by State or federal laws and regulations.
 3. Noise in occupational environments is controlled by the California Department of Industrial Relations, whose Division of Industrial Safety enforces the 1973 California Occupational Safety and Health Act (CALOSHA).

(Ord. C-5371 § 1 (part), 1977: prior code § 4430)

8.80.020 Definitions.

All terminology used in this Chapter, if not defined in this Section, shall have the same meaning as defined by applicable publications of the American National Standards Institute (ANSI), or its successor body.

1. "A-weighted sound level" means the sound pressure level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dB(A) or dBA.
2. "Agricultural property" means a parcel of real property which is not developed for any use other than agricultural purposes. Its size shall be construed to be a minimum of ten (10) contiguous acres.
3. "Ambient noise level" means the composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
4. "Commercial area" means any area occupied by businesses which sell, rent, trade, or store goods, or which provide a service.

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5. "Commercial purpose" means the use, operation or maintenance of any sound amplifying equipment for the purpose of advertising any business, goods, or services, or for the purpose of attracting the attention of the public, or soliciting patronage of customers to any performance, show, entertainment, exhibition, or event, or for the purpose of demonstrating such sound equipment.
 6. "Construction" means any site preparation, assembly, erection, substantial repair, alteration, or similar action, but excluding demolition.
 7. "Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.
 8. "Decibel (dB)" means a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) micropascals (twenty (20) micronewtons per square meter).
 9. "Demolition" means any dismantling, intentional destruction or removal of structures, utilities, public or private right-of-way surfaces or similar property.
 10. "Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage which demands immediate action.
 11. "Emergency work" means any work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency.
 12. "Fixed noise source" means a stationary device which creates sound while fixed or motionless, including, but not limited to, residential, agricultural, industrial, and commercial machinery and equipment, pumps, fans, compressors, air conditioners, and refrigeration equipment.
 13. "Gross vehicle weight rating (GVWR)" means the value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors are separable, the gross combination weight rating, which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle shall be used.
 14. "Impulsive sound" means sound of short duration, usually less than one (1) second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and the discharge of firearms.
 15. "Industrial area" means any area occupied by land uses whose primary operation involves manufacturing, assembling, processing, or otherwise treating raw materials, semifinished products, or finished products, for packaging and distribution to either wholesale or retail markets.
 16. "Intrusive noise" means that noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency and time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.
 17. "Licensed" means the issuance of a formal license or a permit by a City authority; or, where no permits or licenses are issued, the sanctioning of the activity by the City as noted in the public record.
 18. "Mobile noise source" means any noise source other than a fixed noise source.
 19. "Motor carrier vehicle engaged in interstate commerce" means any vehicle for which regulations apply pursuant to Section 18 of the Federal Noise Control Act of 1972 (P. L. 92-574), as amended, pertaining to motor carriers engaged in interstate commerce.
 20. "Motor vehicle" includes any and all self-propelled vehicles as defined in the California Motor Vehicle Code, including all on-highway type motor vehicles subject to registration under said code, and all off-highway type motor vehicles subject to identification under said code.

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21. "Motorboat" means any vessel which operates on water and which is propelled by a motor, including, but not limited to, boats, barges, amphibious craft, waterski-towing devices and hovercrafts.
 22. "Muffler or sound dissipative device" means a device for abating the sound of escaping gases of an internal combustion engine.
 23. "Noise" means any sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans.
 24. "Noise control office" means the City agency designated by the City Manager having the lead responsibility and authority to enforce this Chapter and to grant variances.
 25. "Noise control officer" means the City official appointed by the City Manager to direct the noise control office.
 26. "Noise disturbance" means any sound which (a) endangers or injures the safety or health of humans or animals, or (b) annoys or disturbs a reasonable person of normal sensitivities, or (c) endangers or injures personal or real property.
 27. "Noise sensitive zone" means any area designated pursuant to Section 8.80.030 for the purpose of insuring exceptional quiet.
 28. "Noise source" means a disturbance-causing operation which originates from a single unit or noise generating mechanism which operates simultaneously. Example of a single noise source is the combination of motor, pump, and compressor; oil drilling rig; or a power plant with several boilers.
 29. "Noise zone" means defined areas or regions of a generally consistent land use community wherein the ambient noise levels are generally similar (within a range of five (5) decibels). Typically, most sites within any given noise zone will be of comparable proximity to major noise sources.
 30. "Noncommercial purpose" means the use, operation or maintenance of any sound equipment for other than a commercial purpose, including, but not limited to, philanthropic, political, patriotic and charitable purposes.
 31. "Person" means any individual, association, partnership or corporation, and includes any officer, employee, department, agency or instrumentality of a State or any political subdivision of a State.
 32. "Powered model vehicle" means any self-propelled airborne, waterborne, or land-borne plane, vessel or vehicle which is not designed to carry persons, including, but not limited to, any model airplane, boat, car or rocket.
 33. "Public right-of-way" means any street, avenue, boulevard, highway, sidewalk or alley or similar place which is owned or controlled by a governmental entity.
 34. "Public space" means any real property or structures thereon which are owned or controlled by a governmental entity.
 35. "Pure tone" means any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this Chapter, a pure tone shall exist if the one-third ($\frac{1}{3}$) octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two (2) contiguous one-third ($\frac{1}{3}$) octave bands by five (5) decibels for center frequencies of five hundred (500) hertz and above and by eight (8) decibels for center frequencies between one hundred sixty (160) and four hundred (400) hertz and by fifteen (15) decibels for center frequencies less than or equal to one hundred twenty-five (125) hertz.
 36. "Real property boundary" means an imaginary line along the ground surface, and its vertical extension, which separates the real property owned by one (1) person from that owned by another person, but not including intra-building real property divisions.

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37. "Residential area" means any area wherein the dominant land use is devoted to maintenance, preservation, or propagation of residential dwelling units.
 38. "RMS sound pressure" means the square root of the time averaged square of the sound pressure, denoted P_{rms} .
 39. "Sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.
 40. "Sound amplifying equipment" means any machine or device for the amplification of the human voice, or music, or any other sound, excluding standard automobiles when used and heard only by the occupants of the vehicle in which the device is installed and, as used in this Chapter, warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.
 41. "Sound level" means the weighted sound pressure level obtained by the use of a sound level meter and frequency weighting network, such as A, B or C, as specified in American National Standards Institute specifications for sound level meters (ANSI S1.4-1971 or the latest approved revision thereof). If the frequency weighting employed is not indicated, the A-weighting shall apply.
 42. "Sound level meter" means an instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement of sound levels, which satisfies the requirements pertinent for type S2A meters in American National Standards Institute specifications for sound level meters, S1.4-1971, or the most recent revision thereof.
 43. "Sound pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given point in space, as produced by sound energy.
 44. "Sound pressure level" means twenty (20) times the logarithm to the base ten of the ratio of the RMS sound pressure to the reference pressure of twenty (20) micropascals ($20 \times 10^6 \text{ N/M}^2$). The sound pressure level is denoted L_p or SPL and is expressed in decibels.
 45. "Sound truck" means any motor vehicle or any other vehicle, regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any sound amplifying equipment.
 46. "Vibration" means mechanical motion of the earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. For purposes of this Chapter, the magnitude of the vibration shall be stated as the acceleration in "g" units (1 g is equal to 32.2 ft/sec^2 , $9.81 \text{ meters/sec}^2$).
 47. "Weekday" means any day, Monday through Friday, which is not a federal holiday.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.1)

8.80.030 Administration and enforcement.

The noise program established by this Chapter shall be administered by the noise control office as designated by the City Manager. An official within the noise control office shall be appointed as the Noise Control Officer and shall be a person with sufficient knowledge of environmental acoustics to enforce noise regulations. All departments with noise regulation responsibilities may, based on circumstance and need, carry out the duties of the Noise Control Officer to help ensure that noise complaints from the public are timely and adequately addressed. This includes but is not limited to taking noise measurements and acting as a case manager, upon receiving a noise complaint; coordinating with the Noise Control Officer and relevant departments as appropriate

based on the circumstance; and conducting other actions necessary to facilitate resolution of the noise complaint. Further, the City is committed to annually reviewing the provisions of this ordinance.

(ORD-23-0027 § 1, 2023; Ord. C-5371 § 1 (part), 1977: prior code § 4430.2(a))

8.80.040 Noise control office—Powers.

In order to implement and enforce this Chapter and for the general purpose of noise abatement and control, the noise control office shall have, in addition to any other authority vested in it, the power to:

- A. Studies. Conduct, or cause to be conducted, studies, research, and monitoring related to noise, including joint cooperative investigation with public or private agencies, and make application for and accept grants;
- B. Education.
 - 1. Conduct programs of public education regarding:
 - a. The cause and effect of noise and general methods of abatement and control of noise, and
 - b. The actions prohibited by this Chapter and the procedures for reporting violations, and
 - 2. Encourage the participation of public interest groups in related public information efforts,
 - 3. Provide for training of field inspectors and other technical personnel concerned with noise abatement (in conformance with standards for technical qualifications as established by the State Office of Noise Control).
- C. Coordination and Cooperation.
 - 1. Coordinate the noise control activities of all municipal departments,
 - 2. Cooperate where practicable with all appropriate State and federal agencies,
 - 3. Cooperate or combine where practicable with appropriate County and municipal agencies,
 - 4. Advise on the availability of low noise emission products for replacement or retrofit of existing or planned City owned or operated equipment,
 - 5. Enter into contract with the approval of the City Manager for the provision of technical and enforcement services;
- D. Actions of Other Departments. Request any other department or agency responsible for a proposed or final standard, regulation or similar action to consult on the advisability of revising the action, if there is reason to believe that the action is not consistent with this Chapter;
- E. Public and Private Projects. On all public and private projects which are likely to cause sound in violation of this Chapter and which are subject to mandatory review or approval by other departments or agencies, or which under the environmental review process are judged to be likely to violate these regulations:
 - 1. Review to determine compliance with the intent and provisions of this Chapter,
 - 2. Recommend sound analysis which identify existing and projected noise sources and associated sound levels,
 - 3. Recommend usage of adequate measures to avoid violation of any provision of this Chapter;
- F. Inspections. Upon presentation of proper credentials, enter and/or inspect any private property, place, report, or records at any time when granted permission by the owner, or by some other person with

apparent authority to act for the owner. When permission is refused or cannot be obtained, a search or inspection warrant may be obtained from a court of competent jurisdiction upon showing of probable cause to believe that a violation of this Chapter may exist. Such inspection may include administration of any necessary tests;

- G. Product Performance Standard Recommendations. Develop and recommend (to the City Council or other City agency) provision regulating the use and operation of any product, including the description of maximum sound emission levels of such product, but not in such a manner as to conflict with federal or State new product regulations;
- H. Noise Sensitive Zone Recommendation and Enforcement. Prepare recommendations to be approved by the City Council, for the designation of noise sensitive zones which contain noise sensitive activities and to enforce the provisions of Sections 8.80.150 through 8.80.180 on City Council designated noise sensitive zones;
- I. Noise Zone Definition. Prepare recommendations, based upon noise survey data and analytical studies, to be approved by the City Council, for the designation of zones of similar ambient environmental noise within regions of generally consistent land use. These zones shall be identified in terms of their day and nighttime ambient noise levels by the classifications given in Section 8.80.160, Table A;
- J. Zoning Changes. Prior to the approval of any zoning change:
 - 1. Review the noise impact of the zoning change by identifying existing and projected noise sources and the associated sound levels,
 - 2. Require usage of adequate measures on noise sources identified in subdivision 1 of this subsection which will be in violation of any provision of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.2 (b))

8.80.050 Noise Control Officer—Duties.

In order to effectively implement and enforce this Chapter, the Noise Control Officer shall, within a reasonable time:

- A. Investigate and Pursue Violations. Investigate and pursue possible violations of this Chapter;
- B. Delegation of Authority. Delegate functions, where appropriate under this Chapter, to personnel within the noise control office and to other departments, subject to the approval of the City Manager;
- C. Community Noise Element.
 - 1. Assist in the preparation or revision thereof of the City noise element of the general plan as required by Government Code Section 65302 (g), following guidelines set forth by the State Office of Noise Control,
 - 2. Assist in or review the total transportation planning of the City, including planning for new roads and highways, bus routes, airports, and other systems for public transportation, to insure that proper consideration is taken with regard to the impact of sound levels and that the policies set forth in the noise element are adhered to,
 - 3. Provide ongoing assistance to local agencies in determining possible mitigating measures for current or future noise problems;
- D. Airport Noise Exposure. Assist the department of aeronautics in developing a plan for noise compatible land use in the vicinity of the Long Beach Airport and maintain consistency with the provisions and policies of the noise element of the general plan;

E. State and Federal Laws and Regulations.

1. Prepare and publish with the approval of the City Council a list of those products manufactured to meet specified noise emission limits under federal, State or community law for which tampering enforcement will be conducted, and
2. Make recommendations for modification or amendments to this Chapter to insure consistency with all State and federal laws and regulations;

F. Administer Grants, Funds and Gifts. Administer noise program grants, funds and gifts from public and private sources, including the State and federal governments;

G. Monitoring Responsibilities. Notwithstanding the preemption by federal and State agencies of the enforcement powers over certain activities, such as those at the Long Beach Airport and at the Long Beach Marine Stadium, the Noise Control Officer shall monitor noise generated by such preempted activities and report any violations of State or federal regulations to the appropriate enforcement agencies and to the City Council.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.2 (c))

8.80.060 City departments—Policy conformance.

All departments shall, to the fullest extent consistent with their authorities under other ordinances administered by them, carry out their programs in such a manner as to further the policies stated in Section 8.80.010.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (a))

8.80.070 City departments—Cooperation.

All departments shall cooperate with the noise control office to the fullest extent in enforcing the noise regulations of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (b))

8.80.080 City departments—Legal compliance.

All departments engaged in any activities which result or may result in the emission of noise, shall comply with federal and State laws and regulations, as well as the provisions of this Chapter, respecting the control and abatement of noise to the same extent that any person is subject to such laws and regulations.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (c))

8.80.090 City departments—Project approval.

Each department whose duty it is to review and approve new projects or changes to existing projects that result, or may result, in the emission of noise shall consult with the noise control office prior to any such approval.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (d))

8.80.100 City departments—Review of actions.

If at any time the Noise Control Officer has reason to believe that a standard, regulation, or action or proposed standard, regulation or action of any department respecting noise does not conform to the intent of Section 8.80.010, he may request such department to review and report to him on the advisability of revising such standard or regulation to conform.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (e))

8.80.110 City departments—Contract compliance.

Any written agreement, purchase order, or instrument whereby the City is committed to the expenditure of funds in return for work, labor, services, supplies, equipment, materials, or any combination of the foregoing, shall not be entered into unless such agreement, purchase order, or instrument contains provisions requiring that any equipment or activities which are subject to the provisions of this Chapter will be operated, constructed, conducted, or manufactured without causing violation of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (f))

8.80.120 City departments—Low noise emission product use.

Any product which has been certified by the Administrator of the United States Environmental Protection Agency pursuant to Section 15 of the Noise Control Act of 1972 as a low noise emission product and which is determined to be suitable for use as a substitute shall be used in preference to any other product where economically feasible.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (g))

8.80.130 Disturbing noises prohibited.

- A. Notwithstanding any other provision of this Chapter, and in addition thereto, it is unlawful for any person to willfully make or continue, or cause to be made or continued, a loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.
- B. The standards which shall be considered in determining whether a violation of the provisions of this Section exist shall include, but not be limited to the following:
 - 1. The sound level of the objectionable noise;
 - 2. The sound level of the ambient noise;
 - 3. The proximity of the noise to residential sleeping facilities;
 - 4. The nature and zoning of the area within which the noise emanates;
 - 5. The density of the inhabitation of the area within which the noise emanates;
 - 6. The time of day or night the noise occurs;
 - 7. The duration of the noise and its tonal, informational or musical content;
 - 8. Whether the noise is continuous, recurrent, or intermittent;
 - 9. Whether the noise is produced by a commercial or noncommercial activity.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.4)

8.80.140 Noise measurement procedure.

The measurement procedure presented in this Section assumes that personnel performing the noise measurements have been trained in the use of the instruments and in interpretation of measured data. Upon receipt of a complaint from a citizen, the Noise Control Officer, or his agent, equipped with sound level measurement equipment satisfying the requirements specified in Section 8.80.020, shall investigate the complaint. The investigation shall consist of a measurement and the gathering of data to adequately define the noise problem as specified in the California Office of Noise Control Model Enforcement Manual, and shall include the following:

- A. Nonacoustic Data.
 - 1. Type of noise source;
 - 2. Location of noise source relative to complainant's property;
 - 3. Time period during which noise source is considered by complainant to be intrusive;
 - 4. Total duration of noise produced by noise source;
 - 5. Date and time of noise measurement survey.
- B. Procedure. Utilizing the A weighting scale of the sound level meter and the slow meter response, the noise level shall be measured at a position or positions along the complainant's property line closest to the noise source or at the location along the boundary line where the noise level is at a maximum. In general, the microphone shall be located five feet (5') above the ground; ten feet (10') or more from the nearest reflective surface, where possible. However, in those cases where another elevation is deemed appropriate, the latter shall be utilized. If the noise complaint is related to interior noise levels, interior noise measurements shall be made at a point at least four feet (4') from the wall, ceiling or floor nearest the noise source with windows in the normal seasonal configuration. Calibration of the instrument being used shall be performed immediately prior to and following the recording of any noise data utilizing the acoustic calibrator.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.5)

8.80.150 Exterior noise limits—Sound levels by receiving land use district.

- A. The noise standards for the various land use districts identified by the noise control office as presented in Table A in Section 8.80.160 shall, unless otherwise specifically indicated, apply to all such property within a designated district.
- B. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:
 - 1. The noise standard for that land use district as specified in Table A in Section 8.80.160 for a cumulative period of more than thirty (30) minutes in any hour; or
 - 2. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or
 - 3. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or

4. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or
 5. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.
- C. If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Subsection B of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- D. If the measurement location is on a boundary between two (2) different districts, the noise level limit applicable shall be the arithmetic mean of the two (2) districts.
- E. If possible, the ambient noise shall be measured at the same location along the property line utilized in Subsection B of this Section, with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the offending noise from the source is inaudible. If the difference between the noise levels with noise source operating and not operating is six (6) decibels or greater, then the noise measurement of the alleged source can be considered valid with a small correction applied to account for the contribution of the ambient noise. The correction is to be applied in accordance with data shown in Table B in Section 8.80.160.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.6 (a))

8.80.160 Exterior noise limits—Correction for character of sound.

In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth in Table A shall be reduced by five (5) decibels.

Table A
EXTERIOR NOISE LIMITS

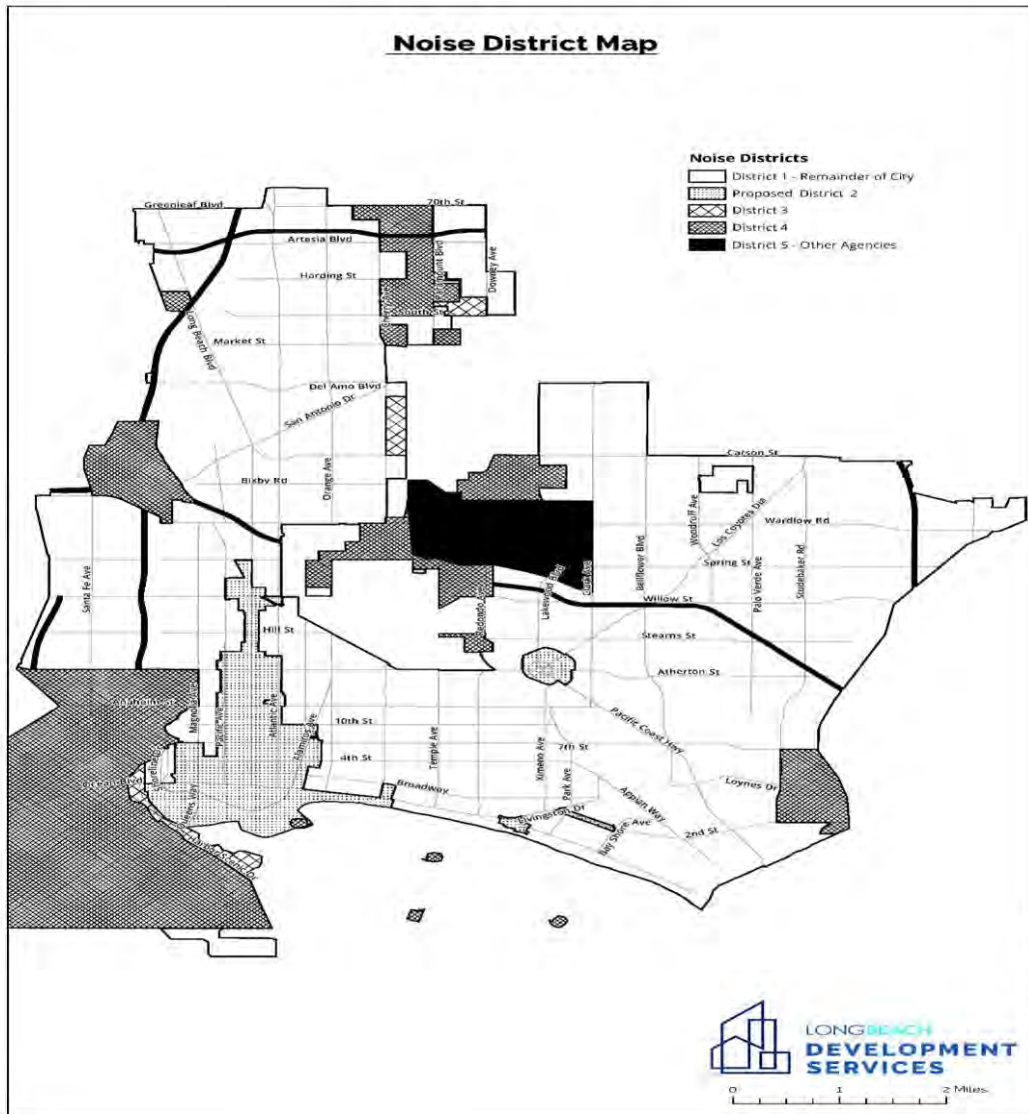
Receiving Land Use District*	Time Period	Noise Level** (dBA)
District One	Night:	
	10:00 p.m.—7:00 a.m.	45
	Day:	
	7:00 a.m.—10:00 p.m.	50
District Two	Night:	
	10:00 p.m.—7:00 a.m.	55
	Day:	
	7:00 a.m.—10:00 p.m.	60
District Three	Any time	65
District Four	Any time	70

District Five	Regulated by other agencies and laws	
*District One:	Predominantly residential with other land use types also present	
District Two:	Mixed-use or predominantly commercial with other land use types also present	
Districts Three and Four:	Predominantly industrial with other land types use also present	
District Five:	Airport, freeways and waterways regulated by other agencies	

** Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

Table B
BACKGROUND NOISE CORRECTION

Difference between total noise and background noise alone (decibels)	Amount to be subtracted from
6—8	1
9—10	.5



(ORD-23-0027 §§ 2, 3, 2023; ORD-09-0030, § 1(exh. A), 2009; Ord. C-7959 § 1 (exh. A), 2004; Ord. C-5371 § 1 (part), 1977: prior code § 4430.6(b))

8.80.170 Interior noise limits—Sound levels.

- A. The interior noise standards for various land use districts as presented in Table C shall apply, unless otherwise specifically indicated, within the structures located in designated zones with windows in their normal seasonal configuration.

TABLE C

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
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All	Residential	10:00 p.m.—7:00 a.m. 7:00 a.m.—10:00 p.m.	35 45
All	Mixed-use	10:00 p.m.—7:00 a.m. 7:00 a.m.—10:00 p.m.	45 50
All	School	7:00 a.m.—10:00 p.m. (While school is in session)	45
Hospital, designated noise sensitive zones		Any time	40

- B. No person shall operate, or cause to be operated, any source of sound indoors at any location within the incorporated limits of the City or allow the creation of any indoor noise which causes the noise level when measured inside the receiving dwelling unit to exceed:
1. The noise standard for that land use district as specified in Table C for a cumulative period of more than five (5) minutes in any hour; or
 2. The noise standard plus five decibels (5 dB) for a cumulative period of more than one (1) minute in any hour; or
 3. The noise standard plus ten decibels (10 dB) or the maximum measured ambient, for any period of time.
- C. If the measured indoor ambient level exceeds that permissible within any of the first two (2) noise limit categories in this Section, the allowable noise exposure standard shall be increased in five decibel (5 dB) increments in each category as appropriate to reflect the indoor ambient noise level. In the event the indoor ambient noise level exceeds the third noise limit category, the maximum allowable indoor noise level under said category shall be increased to reflect the maximum indoor ambient noise level.

(ORD-23-0027 § 4, 2023; Ord. C-5371 § 1 (part), 1977: prior code § 4430.7(a))

8.80.180 Interior noise limits—Correction for character of sound.

In the event the alleged offensive noise contains a steady audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying information content, the standard limits set forth in Table C in Section 8.80.170 shall be reduced by five decibels (5 dB).

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.7(b))

8.80.190 Noise disturbances—Prohibited.

No person shall unnecessarily make, continue or cause to be made or continued, any noise disturbance.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.8(a))

8.80.200 Noise disturbances—Acts specified.

The following acts, and the causing or permitting thereof, are declared to be in violation of this Chapter:

- A. Radios, television sets, musical instruments and similar devices. Operating, playing or permitting the operation or playing of any radio, television set, phonograph, drum, musical instrument, or similar device which produces or reproduces sound:
 - 1. Between the hours of ten p.m. and seven a.m. the following day in such a manner as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Sections 8.80.150 or 8.80.170 except for activities for which a variance has been issued by the noise control office,
 - 2. In such a manner as to exceed the levels set forth in Table A in Section 8.80.160, measured at a distance of at least fifty feet (50') (fifteen (15) meters) from such device operating on a public right-of-way or public space;
- B. Loudspeakers (amplified sound). Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device between the hours of ten p.m. and seven a.m. the following day, such that the sound therefrom creates a noise disturbance across a residential real property line, or at any time violates the provisions of Sections 8.80.150 or 8.80.170, except for any noncommercial public speaking, public assembly or other activity for which a variance has been issued by the noise control office;
- C. Street sales. Offering for sale, selling anything or advertising by shouting or outcry within any residential or commercial area or noise sensitive zone of the City except by variance issued by the noise control office. The provisions of this subsection shall not be construed to prohibit the selling by outcry of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses or other similar licensed public entertainment events;
- D. Animals and birds. Owning, possessing or harboring any animal or bird which frequently or for continued duration howls, barks, meows, squawks, or makes other sounds which create a noise disturbance across a residential or commercial real property line or within a noise sensitive zone. This provision shall not apply to public zoos;
- E. Loading and unloading. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ten p.m. and seven a.m. the following day in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of Sections 8.80.150 and 8.80.170;
- F. Repealed;
- G. Vibration. Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (150') (forty-six (46) meters) from the source if on a public space or public right-of-way. For the purposes of this subsection, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be .001 g's in the frequency range 0—30 hertz and .003 g's in the frequency range between thirty and one hundred hertz;
- H. Explosives, firearms and similar devices. Using or firing explosives, firearms, firecrackers or similar devices such that the sound therefrom creates a noise disturbance across a real property line, or within a noise sensitive zone, public space or public right-of-way, without first obtaining a variance issued by the noise control office or other appropriate regulatory agency;

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- I. Powered model vehicles. Operating or permitting the operation of powered model vehicles:
 - 1. Between the hours of seven p.m. and seven a.m. the following day so as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Sections 8.80.150 or 8.80.170,
 - 2. In such a manner as to exceed the levels set forth in Table A in Section 8.80.160 measured at a distance not less than one hundred feet (100') (thirty (30) meters) from any point on the path of a vehicle operating on public space or public right-of-way;
 - J. Stationary nonemergency signaling devices.
 - 1. Sounding or permitting the sounding of any electronically amplified signal from any stationary bell, chime, siren, whistle, or similar device, intended primarily for nonemergency purposes, from any place, for more than ten (10) seconds in any hourly period,
 - 2. Houses of religious worship and chimes in the civic center shall be exempt from the operation of this provision,
 - 3. Sound sources covered by this provision and not exempted under Subsection 8.80.200.J.2 of this Section may be exempted by a variance issued by the noise control office;
 - K. Emergency signaling devices.
 - 1. The intentional sounding or permitting the sounding outdoors of any fire, burglar or civil defense alarm, siren, whistle or similar stationary emergency signaling device, except for emergency purposes or for testing, as provided in Subsection 8.80.200.K.2 of this Section,
 - 2. a. Testing of a stationary emergency signaling device shall not occur before seven a.m. or after seven p.m. Any such testing shall only use the minimum cycle test time. In no case shall such test time exceed ten (10) seconds,
 - b. Testing of the complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device shall not occur more than once in each calendar month. Such testing shall not occur before seven a.m. or after ten p.m. The time limit specified in Subsection 8.80.200.K.2.a of this Section shall not apply to such complete system testing,
 - 3. Sounding or permitting the sounding of any exterior burglar or fire alarm unless such alarm is automatically terminated within fifteen (15) minutes of activation;
 - L. Noise sensitive zones.
 - 1. Creating or causing the creation of any sound within any noise sensitive zone, so as to exceed the specified land use noise standards set forth in Sections 8.80.150 and 8.80.170, or
 - 2. Creating or causing the creation of any sound within or adjacent to any noise sensitive zone containing a hospital, nursing home, school, court or other designated use so as to interfere with the functions of such activity or annoy the patients or participants of such activity;
 - M. Domestic power tools.
 - 1. Operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between ten p.m. and seven a.m. the following day so as to create a noise disturbance across a residential or commercial real property line,
 - 2. Any motor, machinery, pump, etc., shall be sufficiently enclosed or muffled and maintained so as not to create a noise disturbance,

3. Operating leaf blowers, consisting of portable power equipment used in any landscape maintenance, construction, property repair or property maintenance for the purpose of blowing, dispersing or redistributing dust, dirt, leaves, grass clippings, cuttings, or trimmings from plants, trees or other debris is unlawful if operated within any residential area or in any nonresidential area within four hundred feet (400') of any residential area in the City between the hours after eight p.m. and before eight a.m. Monday through Friday, after five p.m. and before nine a.m. on Saturdays, and after five p.m. and before eleven a.m. on Sundays and legal holidays. Notwithstanding the provisions of Section 8.80.380, violations of this Subsection 8.80.200.M.3 shall be infractions except as specifically provided in this Section. The first violation in any one (1) year period shall be subject to a fine of fifty dollars (\$50.00); a second violation in any one (1) year period shall be subject to a fine of seventy-five dollars (\$75.00); a third violation in any one (1) year period shall be subject to a fine of one hundred dollars (\$100.00). A fourth or subsequent violation of this Subsection in any one (1) year period may be filed as a misdemeanor. Notwithstanding the provisions of any other Section in this Chapter, the provisions of this subsection may be enforced by a Police Officer;

- N. Air-conditioning or air refrigerating equipment. Operating or permitting the operation of any air-conditioning or air refrigerating equipment in such a manner as to exceed any of the following sound levels measured as specified in the American Society of Heating, Refrigeration and Air Conditioning Engineers Code of Recommended Practices:

Measurement Location	Units Installed Before 1-1-80 dB (A)	Units Installed On Or After 1-1-80 dB (A)
Any point on neighboring property line, five feet above grade level, no closer than three feet from any wall	60	55
Center of neighboring patio five feet above grade level, no closer than three feet from any wall	55	50
Outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from any other surface	55	50

In case of conflict, the interior noise standards as specified in Section 8.80.170 shall nonetheless apply;

- O. Places of public entertainment. Operating or permitting to be operated any loudspeaker or other source of sound in any place of public entertainment that exceeds the levels shown in Table D at any point normally occupied by a customer, without a conspicuous and legible sign stating

"WARNING, SOUND LEVELS WITHIN MAY CAUSE PERMANENT HEARING IMPAIRMENT."

Table D
MAXIMUM LEVELS ALLOWED IN PLACES
OF PUBLIC ENTERTAINMENT

Duration Per Day Continuous Hours	Noise Level dB (A)
8	85
6	86
4	88
3	89
2	91

1 ½	92
1	94
½	97
¼ or less	100

P. Tampering. The following acts or the causing thereof are prohibited:

1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any noise control device or element of design or noise label of any product identified under Subsection 8.80.040.G and Subsection 8.80.050.C. The Noise Control Officer may, by regulation, list those acts which constitute violation of this provision,
2. The use of a product, identified under Subsection 8.80.040.G and Subsection 8.80.050.C, which has had a noise control device or element of design or noise label removed or rendered inoperative with knowledge that such action has occurred.

(Ord. C-7745 § 1, 2001; Ord. C-7175 § 1, 1994; Ord. C-6474 § 2, 1988; Ord. C-6036 § 1, 1984; Ord. C-5371 § 1 (part), 1977: prior code § 4430.8(b))

8.80.202 Construction activity—Noise regulations.

The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.

- A. Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. and seven a.m. the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.
- B. Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. on Friday and nine a.m. on Saturday and after six p.m. on Saturday, except for emergency work authorized by the Building Official.
- C. Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.
- D. Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.
- E. Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between nine a.m. and six p.m., and it shall designate the specific dates when it is allowed.

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- F. Enforcement. Notwithstanding the provisions of Sections 8.80.370 and 8.80.380, this Section may be enforced by a Police Officer.

Any person who violates any provision of this Section is guilty of a misdemeanor and shall be fined in an amount not to exceed five hundred dollars (\$500.00), or be imprisoned for a period not to exceed one hundred eighty (180) days, or by both such fine and imprisonment. Each day that a violation occurs shall constitute a separate offense and shall be punishable as such.

Whenever an employee is prosecuted for a violation of this noise control ordinance, the court shall, at the request of the employee, take appropriate action to make the landowner, construction company owner, contractor, subcontractor or employer a codefendant.

(Ord. C-6488 § 1, 1988; Ord. C-6474 § 1, 1988)

8.80.210 Refuse collection vehicles.

No person shall collect refuse with a refuse collection vehicle between the hours of seven p.m. and seven a.m. the following day in a residential area or noise sensitive zone.

(Ord. C-5371 § 1 (part), 1981: prior code § 4430.9(a))

8.80.220 Motor vehicle horns.

It is unlawful for any person within the City to sound a vehicular horn within any residential zone except as a warning signal, as provided in the Vehicle Code of the State.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(b))

8.80.230 Recreational motorized vehicles operating off the public right-of-way.

No person shall operate or cause to be operated any recreational motorized vehicle off a public right-of-way in such a manner that the sound level emitted therefrom violates the provisions of Sections 8.80.150 and 8.80.170. This Section shall apply to all recreational motorized vehicles, whether or not duly licensed and registered, including, but not limited to, commercial or noncommercial racing vehicles, motorcycles, go-carts, amphibious craft, campers, and dune buggies, but not including motorboats.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(c))

8.80.240 Vehicle, motorboat or aircraft repair and testing.

- A. Repairing, rebuilding, modifying or testing any motor vehicle, motorboat or aircraft in such a manner as to create a noise disturbance across a residential real property line, or at any time to violate the provisions of Sections 8.80.150 or 8.80.170 shall not be permitted except where said activities are directly related to officially sanctioned events.
- B. This provision shall not apply to aircraft within the airport property or within any other aviation-related property abutting it.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(d))

8.80.250 Exemption—Emergencies.

The provisions of this Chapter shall not apply to:

- A. The emission of sound for the purpose of alerting persons to the existence of an emergency; or
- B. The emission of sound in the performance of emergency work.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(a))

8.80.260 Exemption—Oil and gas wells.

The provisions of this Chapter shall not apply to:

- A. Normal well servicing, remedial or maintenance work performed within an existing well which does not involve drilling or redrilling and which is restricted to the hours between seven a.m. and seven p.m., exclusive of weekends and holidays, in residential areas;
- B. Any drilling or redrilling work which is done in full compliance with Subsection 8.80.040.E and Sections 8.80.060 through 8.80.120, and with the soundproofing and all other requirements of Section 12.32.030.

(Ord. C-5576 § 1, 1980; Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(b))

8.80.270 Exemption—Warning devices.

Warning devices necessary for the protection of public safety as, for example, police, fire and ambulance sirens and train horns shall be exempted from the provisions of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(c))

8.80.280 Exemption—Entertainment events.

The provisions of this Chapter shall not apply to occasional outdoor or indoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a permit or license or other entitlement issued by the City relative to the staging of said events.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (d))

8.80.290 Exemption—From exterior noise standards.

The provisions of Section 8.80.150 shall not apply to activities covered by the following Sections:

- A. Section 8.80.200 C, street sales;
- B. Section 8.80.200 D, animals and birds;
- C. Section 8.80.200 J, stationary nonemergency signaling devices;
- D. Section 8.80.200 K, emergency signaling devices;
- E. Section 8.80.200 M, domestic power tools;
- F. Section 8.80.200 N, air conditioning or air refrigerating equipment; and

G. Section 8.80.210, refuse collection vehicles.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (e))

8.80.300 Abatement of nonconforming industrial noise sources.

- A. Intent. It is the intent of this Section to recognize that the eventual abatement, as expeditiously and as fairly as possible, of existing noise sources that are not in conformity with the provisions of this Chapter is as important as the prohibition of new noise sources that would violate the provisions of this Chapter. It is the intent of this Section that any abatement of nonconforming industrial noise sources shall be effected so as to avoid any undue hardship.
- B. Abatement. All existing nonconforming industrial noise sources shall be granted an amortization period of ten (10) years from the effective date of this Chapter to bring their existing facilities into compliance with this Chapter; provided, that:
1. They are located in industrial districts delineated in the City zoning ordinance or are located in accordance with a valid special use permit at the time of adoption of this Chapter;
 2. They are not changed to another industrial use during the amortization period;
 3. They are not altered so as to increase or intensify their noise generation;
 4. If they are structurally expanded during the amortization period, the new portion must immediately meet the standards of this Chapter;
 5. If they should be rebuilt after damage or destruction of more than fifty percent (50%) of the preexisting value, they must be rebuilt in such a manner as to immediately meet the standards of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (f))

8.80.310 Exemption—Federal or State preempted activities.

The provisions of this Chapter shall not apply to any other activity to the extent regulation thereof has been preempted by State or federal law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(g))

8.80.320 Conflicting regulations.

- A. These regulations are not intended to abrogate or impair the provisions of any other section of this Code which is not in conflict with the provisions of this Chapter. However, where these regulations are more restrictive than those of other laws, regulations or covenants, these regulations shall control.
- B. Upon written request, the noise control office is authorized to issue official interpretations of this Chapter without public hearing.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (h))

8.80.330 Exemption—Public health, welfare and safety activities.

The provisions of this Chapter shall not apply to construction maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best

interests of the public and to protect the public health, welfare and safety, including, but not limited to, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, vacuuming catchbasins, repairing of damaged poles, removal of abandoned vehicles, repairing of water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, sidewalks, etc.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (i))

8.80.340 Variance—Exemption from regulations.

- A. The Noise Control Officer is authorized to grant variances for exemption from any provision of this Chapter, subject to limitations as to area, noise levels, time limits, and other terms and conditions as the Noise Control Officer determines are appropriate to protect public health, safety and welfare from the noise emanating therefrom. This Section shall in no way affect the obligation to obtain any permit or license required by law for such activities.
- B. Any person seeking a variance shall file an application with the noise control office. The application shall contain information which demonstrates that bringing the source of sound or activity for which the variance is sought into compliance with this Chapter would create an unreasonable hardship on the applicant, on the community, or on other persons. The application shall be accompanied by a fee in the amount set by resolution of the City Council. A separate application shall be filed for each noise source; provided, however, that several fixed sources on a single property may be combined into one (1) application. Notice of an application for a variance shall be published according to rules established by the noise control office; all residents whom the Noise Control Officer determines may be adversely affected by the noise shall be notified. Any individual who claims to be adversely affected by the issuance of the variance may file a statement with the noise control office containing any information to support his claim. If at any time the Noise Control Officer finds that a sufficient controversy exists regarding an application, a public hearing will be held.
- C. In determining whether to grant or deny the application, the Noise Control Officer shall balance the hardship on the applicant, the community, or other persons by not granting the variance against the adverse impact on the health, safety and welfare of persons affected, the adverse impact on property affected, and any other adverse impact by granting the variance. Applicants for variances and persons contesting variances may be required to submit such information as the noise control office may reasonably require. In granting or denying an application, the Noise Control Officer shall keep a public record of the decision and the reasons for denying or granting the variance.
- D. A variance shall be granted by written notice to the applicant containing all necessary conditions, including a time limit on the permitted activity. The variance shall not become effective until all conditions are agreed to by the applicant. Noncompliance with any condition of the variance shall terminate the variance.
- E. The term of a variance may not exceed three hundred sixty-five (365) days from the date of issuance. An application for extension of time limits specified in a variance or for modification of other substantial conditions shall be treated as an application for a new variance.
- F. The Noise Control Officer will issue guidelines defining the procedures to be followed in applying for a variance and the criteria to be considered in deciding whether to grant a variance.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(a))

8.80.350 Variance—Time to comply.

Within ninety (90) days following the effective date of this Chapter, the owner of any commercial or industrial source of sound may apply to the noise control office for a time variance to comply with the provisions

of this Chapter. The Noise Control Officer shall have the authority, consistent with these Sections 8.80.340 through 8.80.360, to grant a time variance (not to exceed one hundred eighty (180) days from the effective date of this Chapter). The same procedures and considerations by the Noise Control Officer as provided in Section 8.80.340 shall likewise apply.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(b))

8.80.360 Variance—Appeal to decision.

Within ten (10) days after notice by the Noise Control Officer or denial or conditional approval of a variance, or within ten (10) days after the effective date of the revocation of a variance by the Noise Control Officer, the affected person may appeal to the City Council, in writing. The City Council, after notice and a public hearing, may sustain, reverse or modify the decision of the Noise Control Officer; such order may be made subject to specified conditions.

- A. Filing Fee. The appeal shall be filed in triplicate with the City Clerk at the City Hall, 333 West Ocean Boulevard, Long Beach, California, along with the payment of a fee in the amount set by resolution of the City Council. A copy of the appeal shall also be served on the Noise Control Officer.
- B. Contents of Appeal. An appeal to review a denial or conditional approval of a variance shall contain the application, a copy of the Noise Control Officer's action setting forth the reasons for the denial or the conditions of the approval, and the reasons for appeal. An appeal to review a variance revocation shall include a copy of the variance, the Noise Control Officer's revocation notice, and his reasons for revocation, and the reasons for appeal.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(c))

8.80.370 Violation—Presumed.

Any noise exceeding the level limit which can be attributed to a specific facility in a designated noise district as specified in Sections 8.80.150 through 8.80.180, or the prohibited actions specified in Sections 8.80.190 and 8.80.200 shall be presumed to be a violation of the provisions of these regulations. Enforcement of noise control regulations shall be undertaken only upon receipt of a written sworn complaint made by a person who resides or owns property within the noise district into which the alleged noise intrudes.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(a))

8.80.380 Violation—Penalty.

Any person found in violation of any of the provisions of this Chapter upon a documented determination and the failure to comply with an abatement order or other notice issued by the Noise Control Officer and subsequently convicted in a court of competent jurisdiction for such violation will be deemed guilty of a misdemeanor and shall be fined in an amount not to exceed five hundred dollars (\$500.00), or be imprisoned for a period not to exceed one hundred eighty (180) days, or by both such fine and imprisonment. Each day (after the Noise Control Officer has made a documented determination and has issued an abatement order) that a violation is permitted to continue shall constitute a separate offense and shall be punishable as such.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(b))

8.80.390 Violation—Abatement order.

- A. Except as provided in Subsection 8.80.390.B, in lieu of issuing a notice of violation as provided in Section 8.80.400, the Noise Control Officer may issue an order requiring the abatement of a sound source alleged to be in violation within a reasonable time period and according to guidelines adopted by the noise control office.
- B. An abatement order shall not be issued for any violation when the Noise Control Officer or other enforcement agency has reason to believe that there will not be compliance with an abatement order.
- C. No further action shall be taken in the event that the cause of the violation has been removed and the condition abated or fully corrected within the time period specified in the written notice.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(c))

8.80.400 Violation—Notice.

Except where a person is acting in good faith to comply with an abatement order issued pursuant to Subsection 8.80.390.A, violation of any provision of this Chapter shall be cause for a notice of violation to be issued by the Noise Control Officer or other responsible enforcement official according to procedures which the noise control office may prescribe. Thereafter, the City may resort to any other appropriate legal action as provided by law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(d))

8.80.410 Violation—Additional remedies.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provision of this Chapter, which operation or maintenance causes or creates sound levels or vibration exceeding the allowable limits as specified in this Chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction. Additionally, no provision of this Chapter shall be construed to impair any common law or statutory cause of action, or legal remedy therefrom, of any person for injury or damage arising from any violation of this Chapter or from other law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(e))

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APPENDIX 5.1:

STUDY AREA PHOTOS

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JN: 14715 Study Area Photos



L1_E
33, 52' 0.240000"118, 10' 6.670000"



L1_N
33, 52' 0.230000"118, 10' 6.830000"



L1_S
33, 52' 0.230000"118, 10' 6.670000"



L1_W
33, 52' 0.270000"118, 10' 6.610000"



L2_E
33, 51' 35.960000"118, 9' 50.900000"



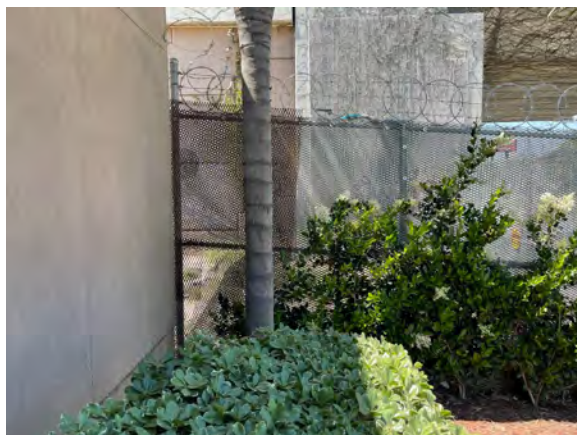
L2_N
33, 51' 35.990000"118, 9' 50.840000"

JN: 14715 Study Area Photos



L2_S

33, 51' 35.950000" 118, 9' 50.870000"



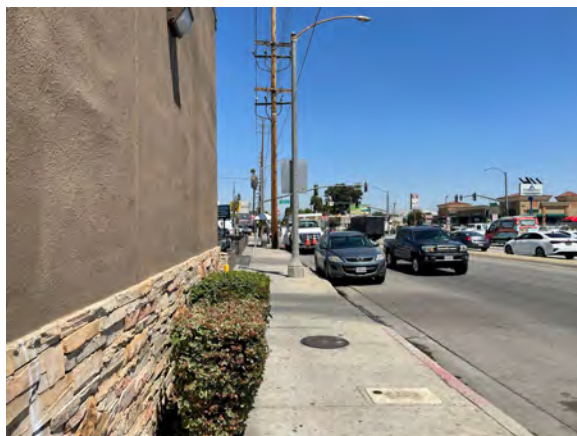
L2_W

33, 51' 35.990000" 118, 9' 50.930000"



L3_E

33, 51' 34.150000" 118, 10' 7.410000"



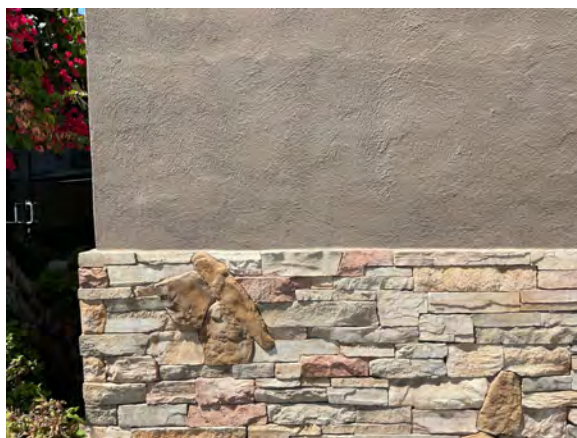
L3_N

33, 51' 34.130000" 118, 10' 7.210000"



L3_S

33, 51' 34.130000" 118, 10' 7.380000"



L3_W

33, 51' 34.130000" 118, 10' 7.430000"

JN: 14715 Study Area Photos



L4_E
33, 51' 41.820000"118, 10' 7.630000"



L4_N
33, 51' 41.850000"118, 10' 7.630000"



L4_S
33, 51' 41.840000"118, 10' 7.630000"



L4_W
33, 51' 41.820000"118, 10' 7.650000"



L5_E
33, 51' 46.670000"118, 10' 8.810000"



L5_N
33, 51' 46.670000"118, 10' 8.700000"

JN: 14715 Study Area Photos



L5_S

33, 51' 46.650000"118, 10' 8.750000"



L5_W

33, 51' 46.670000"118, 10' 8.810000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

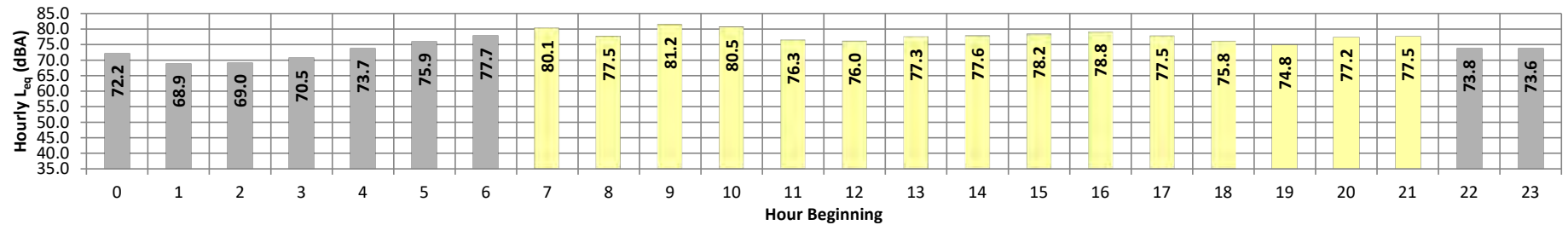
Date: Wednesday, April 13, 2022
Project: Cherry Ave. Warehouse

Location: L1 - Located northwest of the Project site near single-
Source: family residence at 2021 East Curry Street.

Meter: Piccolo II

JN: 14715
Analyst: A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	72.2	82.9	55.2	82.5	81.8	80.1	77.4	71.3	65.6	57.5	56.1	55.3	72.2	10.0	82.2	
	1	68.9	78.8	52.5	78.3	77.5	75.8	74.6	68.9	62.6	54.5	53.4	52.6	68.9	10.0	78.9	
	2	69.0	79.5	52.4	79.1	78.3	76.3	74.7	68.4	62.0	53.8	53.1	52.5	69.0	10.0	79.0	
	3	70.5	80.6	54.3	80.2	79.5	77.8	76.3	70.3	63.8	55.9	55.1	54.5	70.5	10.0	80.5	
	4	73.7	82.1	59.2	81.8	81.1	79.7	78.7	74.8	70.3	61.2	60.0	59.3	73.7	10.0	83.7	
	5	75.9	83.8	61.3	83.4	82.8	81.5	80.6	77.4	73.2	64.3	62.7	61.5	75.9	10.0	85.9	
	6	77.7	84.8	66.1	84.4	83.9	82.7	81.8	79.1	75.9	68.8	67.5	66.4	77.7	10.0	87.7	
Day	7	80.1	90.3	68.4	89.8	89.3	87.0	84.1	79.4	76.6	71.2	70.0	68.6	80.1	0.0	80.1	
	8	77.5	84.8	68.0	84.4	83.7	81.9	80.9	78.6	76.1	70.6	69.4	68.3	77.5	0.0	77.5	
	9	81.2	88.3	69.7	87.8	87.2	85.8	85.0	82.6	79.8	72.8	71.4	70.0	81.2	0.0	81.2	
	10	80.5	91.2	65.2	90.7	90.2	87.7	85.1	79.4	76.2	68.8	67.1	65.5	80.5	0.0	80.5	
	11	76.3	83.5	65.6	83.2	82.7	81.4	80.5	77.4	74.3	68.5	67.3	65.9	76.3	0.0	76.3	
	12	76.0	84.5	64.1	84.1	83.4	81.4	79.9	76.8	73.7	67.1	65.8	64.4	76.0	0.0	76.0	
	13	77.3	85.9	65.7	85.4	84.7	82.7	81.4	78.2	75.1	68.9	67.5	66.0	77.3	0.0	77.3	
	14	77.6	85.9	66.9	85.3	84.4	82.1	81.3	78.8	75.8	69.7	68.3	67.1	77.6	0.0	77.6	
	15	78.2	85.5	67.1	85.0	84.5	83.2	82.3	79.5	76.3	70.0	68.7	67.5	78.2	0.0	78.2	
	16	78.8	86.7	68.7	86.3	85.5	83.8	82.7	79.7	77.2	71.5	70.2	68.9	78.8	0.0	78.8	
	17	77.5	85.5	68.3	85.0	84.2	82.1	81.0	78.6	76.1	70.4	69.4	68.4	77.5	0.0	77.5	
	18	75.8	84.7	65.3	83.7	82.1	80.1	79.3	76.9	74.5	67.9	66.5	65.5	75.8	0.0	75.8	
	19	74.8	81.1	64.9	80.7	80.4	79.4	78.7	76.1	73.4	67.4	66.3	65.2	74.8	5.0	79.8	
	20	77.2	84.4	65.6	84.0	83.5	81.9	81.2	78.5	75.7	68.3	67.0	65.8	77.2	5.0	82.2	
21	77.5	85.3	65.4	84.9	84.2	82.4	81.5	78.8	75.7	68.4	66.8	65.6	77.5	5.0	82.5		
Night	22	73.8	81.4	61.3	81.0	80.5	79.4	78.5	75.1	70.8	63.8	62.8	61.7	73.8	10.0	83.8	
	23	73.6	83.4	57.6	83.0	82.1	80.2	78.7	74.1	69.0	60.1	58.8	57.7	73.6	10.0	83.6	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA) Daytime (7am-10pm) Nighttime (10pm-7am)			
Day	Min	74.8	81.1	64.1	80.7	80.4	79.4	78.7	76.1	73.4	67.1	65.8	64.4	24-Hour	76.9	78.1	73.7
	Max	81.2	91.2	69.7	90.7	90.2	87.7	85.1	82.6	79.8	72.8	71.4	70.0				
Energy Average		78.1	Average:		85.4	84.7	82.9	81.6	78.6	75.8	69.4	68.1	66.8				
Night	Min	68.9	78.8	52.4	78.3	77.5	75.8	74.6	68.4	62.0	53.8	53.1	52.5	76.9	78.1	73.7	
	Max	77.7	84.8	66.1	84.4	83.9	82.7	81.8	79.1	75.9	68.8	67.5	66.4				
Energy Average		73.7	Average:		81.5	80.8	79.3	77.9	73.3	68.1	60.0	58.8	58.0				

24-Hour Noise Level Measurement Summary

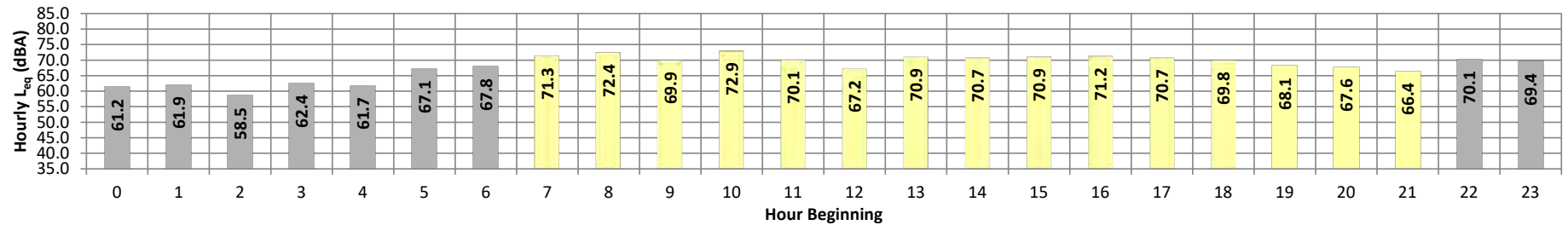
Date: Wednesday, April 13, 2022
Project: Cherry Ave. Warehouse

Location: L2 - Located southeast of the Project site south of South
Source: Street.

Meter: Piccolo II

JN: 14715
Analyst: A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	61.2	74.1	44.0	73.6	72.4	68.5	65.7	59.0	51.6	45.1	44.6	44.2	61.2	10.0	71.2	
	1	61.9	75.9	44.0	74.6	73.7	69.6	65.7	57.7	48.9	44.6	44.3	44.1	61.9	10.0	71.9	
	2	58.5	70.1	43.2	69.9	69.3	66.8	64.1	54.9	48.2	43.8	43.6	43.3	58.5	10.0	68.5	
	3	62.4	72.5	49.8	72.1	71.5	69.7	68.3	62.0	54.4	50.2	50.1	49.9	62.4	10.0	72.4	
	4	61.7	72.3	49.4	72.0	71.5	69.4	67.7	60.1	54.3	50.4	50.0	49.5	61.7	10.0	71.7	
	5	67.1	79.1	51.1	78.8	78.2	74.7	71.3	64.6	59.3	52.5	51.8	51.3	67.1	10.0	77.1	
	6	67.8	75.9	54.1	75.6	75.3	74.0	73.0	68.8	64.3	56.4	55.2	54.2	67.8	10.0	77.8	
Day	7	71.3	80.0	58.4	79.5	79.1	77.6	75.8	72.0	68.6	61.2	59.9	58.7	71.3	0.0	71.3	
	8	72.4	82.9	59.7	82.3	81.6	79.3	76.6	71.8	69.2	63.1	61.4	60.0	72.4	0.0	72.4	
	9	69.9	78.5	58.4	78.0	77.2	75.4	74.0	70.8	67.8	61.2	59.9	58.6	69.9	0.0	69.9	
	10	72.9	84.8	56.7	84.1	83.2	80.7	77.7	70.5	67.5	60.6	59.2	57.2	72.9	0.0	72.9	
	11	70.1	78.5	57.6	78.1	77.6	75.6	74.3	70.7	67.9	61.6	59.9	57.9	70.1	0.0	70.1	
	12	67.2	75.4	55.6	74.7	73.9	72.4	71.4	68.1	65.3	59.0	57.3	55.9	67.2	0.0	67.2	
	13	70.9	81.0	56.4	80.4	79.8	77.6	75.5	70.4	67.2	60.6	58.3	56.7	70.9	0.0	70.9	
	14	70.7	79.4	56.6	79.0	78.5	76.7	75.1	71.2	68.1	60.8	58.8	56.9	70.7	0.0	70.7	
	15	70.9	79.8	58.1	79.4	78.7	76.4	74.6	71.6	69.0	61.8	60.0	58.3	70.9	0.0	70.9	
	16	71.2	79.6	59.7	79.2	78.7	76.9	75.3	71.7	69.1	63.2	61.6	59.9	71.2	0.0	71.2	
	17	70.7	78.6	58.5	78.3	77.8	75.7	74.3	71.5	69.2	62.4	60.5	58.8	70.7	0.0	70.7	
	18	69.8	77.5	56.5	77.1	76.7	74.8	73.6	71.0	68.4	61.0	59.0	56.9	69.8	0.0	69.8	
	19	68.1	75.9	54.5	75.5	75.1	73.4	72.3	69.3	66.1	57.8	56.3	54.8	68.1	5.0	73.1	
	20	67.6	76.2	52.0	75.8	75.2	73.5	72.1	68.5	65.2	56.8	54.3	52.4	67.6	5.0	72.6	
	21	66.4	74.9	51.1	74.6	74.2	72.6	71.1	67.4	63.3	54.0	52.6	51.3	66.4	5.0	71.4	
Night	22	70.1	81.8	48.3	81.3	80.4	77.9	75.8	66.9	61.3	52.3	50.9	48.7	70.1	10.0	80.1	
	23	69.4	82.5	45.9	82.1	81.3	78.2	72.1	63.8	57.5	47.9	46.7	46.1	69.4	10.0	79.4	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA) Daytime (7am-10pm) Nighttime (10pm-7am)			
Day	Min	66.4	74.9	51.1	74.6	73.9	72.4	71.1	67.4	63.3	54.0	52.6	51.3	24-Hour	69.2	70.4	66.1
	Max	72.9	84.8	59.7	84.1	83.2	80.7	77.7	72.0	69.2	63.2	61.6	60.0				
Energy Average		70.4	Average:		78.4	77.8	75.9	74.3	70.4	67.5	60.3	58.6	57.0				
Night	Min	58.5	70.1	43.2	69.9	69.3	66.8	64.1	54.9	48.2	43.8	43.6	43.3				
	Max	70.1	82.5	54.1	82.1	81.3	78.2	75.8	68.8	64.3	56.4	55.2	54.2				
Energy Average		66.1	Average:		75.6	74.8	72.1	69.3	62.0	55.5	49.2	48.6	47.9				

24-Hour Noise Level Measurement Summary

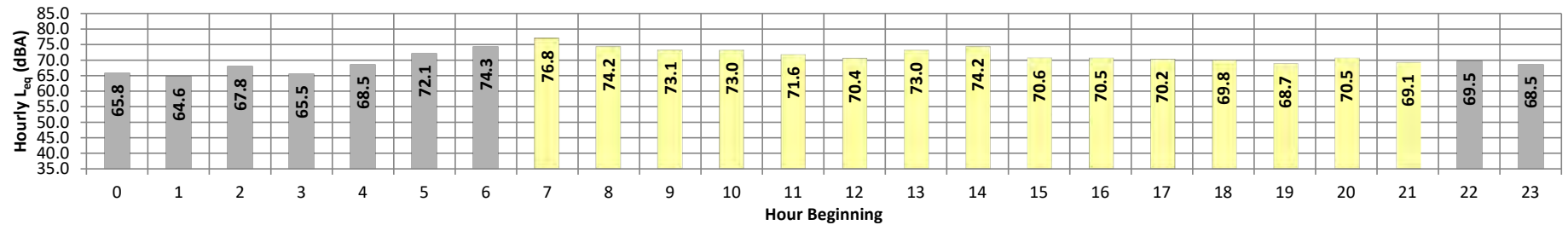
Date: Wednesday, April 13, 2022
Project: Cherry Ave. Warehouse

Location: L3 - Located southwest of the Project site near Crossroads
Source: Church at 1900 East South Street.

Meter: Piccolo II

JN: 14715
Analyst: A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	65.8	79.2	51.8	78.2	77.0	72.8	70.3	62.7	57.6	52.8	52.3	51.9	65.8	10.0	75.8	
	1	64.6	76.4	49.7	75.8	74.8	72.2	70.2	62.4	56.4	51.0	50.3	49.8	64.6	10.0	74.6	
	2	67.8	80.9	48.0	80.3	79.3	76.0	72.9	62.7	56.8	49.0	48.5	48.2	67.8	10.0	77.8	
	3	65.5	78.0	49.2	77.4	76.0	72.3	70.6	64.2	56.6	50.6	49.8	49.3	65.5	10.0	75.5	
	4	68.5	79.1	54.6	78.5	77.6	75.3	73.7	68.5	62.7	56.0	55.3	54.8	68.5	10.0	78.5	
	5	72.1	84.0	57.9	83.0	81.7	78.8	76.9	71.8	66.3	59.3	58.7	58.1	72.1	10.0	82.1	
	6	74.3	85.7	59.6	84.8	83.5	80.4	78.7	74.6	69.5	61.7	60.6	59.8	74.3	10.0	84.3	
Day	7	76.8	85.3	63.6	84.6	83.8	81.9	81.0	78.4	74.5	66.6	65.2	63.8	76.8	0.0	76.8	
	8	74.2	82.7	61.1	82.1	81.3	79.2	78.0	75.3	72.8	63.8	62.3	61.3	74.2	0.0	74.2	
	9	73.1	82.6	59.5	81.9	81.2	78.9	77.2	73.9	70.7	61.4	60.3	59.7	73.1	0.0	73.1	
	10	73.0	84.7	58.9	83.4	81.9	78.7	77.1	73.0	69.8	61.2	60.0	59.1	73.0	0.0	73.0	
	11	71.6	83.1	58.2	81.6	79.1	76.1	74.6	71.4	68.2	60.1	59.2	58.4	71.6	0.0	71.6	
	12	70.4	82.7	59.6	82.0	80.7	76.5	75.2	70.5	67.3	61.6	60.5	59.8	70.4	0.0	70.4	
	13	73.0	84.7	61.8	83.7	82.2	78.8	76.7	72.7	69.3	63.7	62.6	62.0	73.0	0.0	73.0	
	14	74.2	84.4	59.6	83.2	82.2	80.6	79.8	74.5	67.8	62.0	61.1	59.9	74.2	0.0	74.2	
	15	70.6	81.5	59.4	80.6	79.5	76.6	74.4	70.6	67.3	61.2	60.3	59.6	70.6	0.0	70.6	
	16	70.5	80.5	59.2	79.9	79.0	76.4	74.5	71.0	67.5	61.2	60.1	59.4	70.5	0.0	70.5	
	17	70.2	79.6	59.6	79.0	78.4	76.1	74.4	70.5	67.5	62.2	60.9	60.0	70.2	0.0	70.2	
	18	69.8	79.1	59.3	78.5	77.7	75.8	74.1	70.3	67.1	61.5	60.3	59.5	69.8	0.0	69.8	
	19	68.7	77.8	57.9	77.2	76.7	74.4	72.9	69.5	65.7	59.8	59.0	58.1	68.7	5.0	73.7	
	20	70.5	81.2	63.2	80.7	79.8	76.8	74.5	69.7	66.8	64.1	63.8	63.4	70.5	5.0	75.5	
21	69.1	79.1	57.4	78.4	77.3	75.0	73.7	69.8	65.3	59.1	58.3	57.7	69.1	5.0	74.1		
Night	22	69.5	80.2	54.4	79.8	79.3	76.8	74.7	68.7	63.5	56.1	55.2	54.5	69.5	10.0	79.5	
	23	68.5	80.2	52.8	79.4	78.5	76.1	74.0	67.1	61.0	54.2	53.6	53.0	68.5	10.0	78.5	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA) Daytime (7am-10pm) Nighttime (10pm-7am)			
Day	Min	68.7	77.8	57.4	77.2	76.7	74.4	72.9	69.5	65.3	59.1	58.3	57.7	24-Hour	71.5	72.3	69.6
	Max	76.8	85.3	63.6	84.6	83.8	81.9	81.0	78.4	74.5	66.6	65.2	63.8				
Energy Average		72.3	Average:		81.1	80.1	77.5	75.9	72.1	68.5	61.9	60.9	60.1				
Night	Min	64.6	76.4	48.0	75.8	74.8	72.2	70.2	62.4	56.4	49.0	48.5	48.2		71.5	72.3	69.6
	Max	74.3	85.7	59.6	84.8	83.5	80.4	78.7	74.6	69.5	61.7	60.6	59.8				
Energy Average		69.6	Average:		79.7	78.6	75.6	73.5	67.0	61.2	54.5	53.8	53.3				

24-Hour Noise Level Measurement Summary

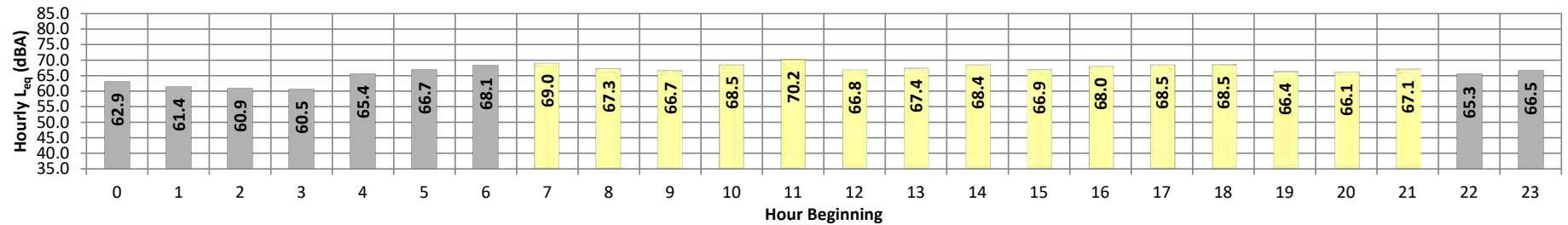
Date: Wednesday, April 13, 2022
Project: Cherry Ave. Warehouse

Location: L4 - Located southwest of the Project site near Intercity
Source: Fellowship Hall at 5881 Cherry Avenue.

Meter: Piccolo II

JN: 14715
Analyst: A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	62.9	75.0	49.5	74.4	73.5	70.1	67.6	61.0	55.5	50.5	49.9	49.6	62.9	10.0	72.9	
	1	61.4	72.4	50.1	72.0	71.3	68.7	66.5	60.0	54.5	50.8	50.5	50.2	61.4	10.0	71.4	
	2	60.9	72.0	49.1	71.6	71.0	68.4	66.4	59.0	53.1	49.7	49.4	49.2	60.9	10.0	70.9	
	3	60.5	70.7	49.5	70.3	69.5	67.4	66.0	60.1	54.2	50.0	49.8	49.6	60.5	10.0	70.5	
	4	65.4	75.5	51.2	75.1	74.5	72.6	71.0	65.5	59.1	52.2	51.7	51.3	65.4	10.0	75.4	
	5	66.7	76.6	54.6	76.1	75.4	73.0	71.2	67.3	62.5	55.9	55.2	54.7	66.7	10.0	76.7	
	6	68.1	78.3	55.4	77.7	76.9	74.2	72.2	68.4	64.6	58.1	56.8	55.6	68.1	10.0	78.1	
Day	7	69.0	77.8	59.8	77.3	76.6	74.1	72.9	69.4	66.8	62.6	61.5	60.2	69.0	0.0	69.0	
	8	67.3	75.1	57.7	74.7	74.1	72.7	71.3	68.2	65.2	60.4	59.3	58.2	67.3	0.0	67.3	
	9	66.7	75.4	56.0	75.0	74.5	72.3	70.7	67.1	64.4	58.7	57.4	56.3	66.7	0.0	66.7	
	10	68.5	79.3	58.8	78.6	77.7	75.1	72.8	67.6	64.9	60.6	59.8	59.0	68.5	0.0	68.5	
	11	70.2	78.9	60.1	78.2	77.2	75.1	74.1	71.3	68.1	62.2	61.2	60.3	70.2	0.0	70.2	
	12	66.8	75.9	56.7	75.4	74.7	72.4	70.9	67.3	64.3	59.0	58.0	57.0	66.8	0.0	66.8	
	13	67.4	76.3	57.2	75.9	75.4	73.6	71.4	67.7	65.0	59.6	58.4	57.3	67.4	0.0	67.4	
	14	68.4	78.5	57.0	78.1	77.4	75.0	73.9	67.4	64.7	60.1	58.6	57.2	68.4	0.0	68.4	
	15	66.9	76.2	58.1	75.6	74.9	72.5	70.5	66.9	64.7	60.4	59.4	58.3	66.9	0.0	66.9	
	16	68.0	76.8	59.2	76.3	75.5	73.4	71.7	68.1	66.1	62.2	60.9	59.5	68.0	0.0	68.0	
	17	68.5	78.9	59.0	78.3	77.5	74.7	72.1	67.7	65.7	61.6	60.5	59.3	68.5	0.0	68.5	
	18	68.5	78.2	58.7	77.7	76.7	74.2	72.2	68.6	66.0	61.1	59.9	58.9	68.5	0.0	68.5	
	19	66.4	76.2	55.8	75.7	74.8	71.9	69.7	66.5	64.1	58.7	57.3	56.0	66.4	5.0	71.4	
	20	66.1	75.9	55.7	75.3	74.7	72.5	70.3	65.9	63.3	58.1	57.0	55.9	66.1	5.0	71.1	
	21	67.1	76.7	55.1	76.3	75.6	73.6	71.7	67.2	64.0	57.3	56.2	55.2	67.1	5.0	72.1	
Night	22	65.3	74.7	52.8	74.4	73.9	71.7	70.1	65.9	61.3	54.3	53.5	52.9	65.3	10.0	75.3	
	23	66.5	78.8	50.9	78.2	77.4	73.7	71.4	64.0	59.1	52.1	51.5	51.1	66.5	10.0	76.5	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA) Daytime (7am-10pm) Nighttime (10pm-7am)			
Day	Min	66.1	75.1	55.1	74.7	74.1	71.9	69.7	65.9	63.3	57.3	56.2	55.2	24-Hour	67.0	67.9	64.9
	Max	70.2	79.3	60.1	78.6	77.7	75.1	74.1	71.3	68.1	62.6	61.5	60.3				
Energy Average		67.9	Average:		76.6	75.8	73.5	71.8	67.8	65.2	60.2	59.0	57.9				
Night	Min	60.5	70.7	49.1	70.3	69.5	67.4	66.0	59.0	53.1	49.7	49.4	49.2	67.0	67.9	64.9	
	Max	68.1	78.8	55.4	78.2	77.4	74.2	72.2	68.4	64.6	58.1	56.8	55.6				
Energy Average		64.9	Average:		74.4	73.7	71.1	69.2	63.5	58.2	52.6	52.0	51.6				

24-Hour Noise Level Measurement Summary

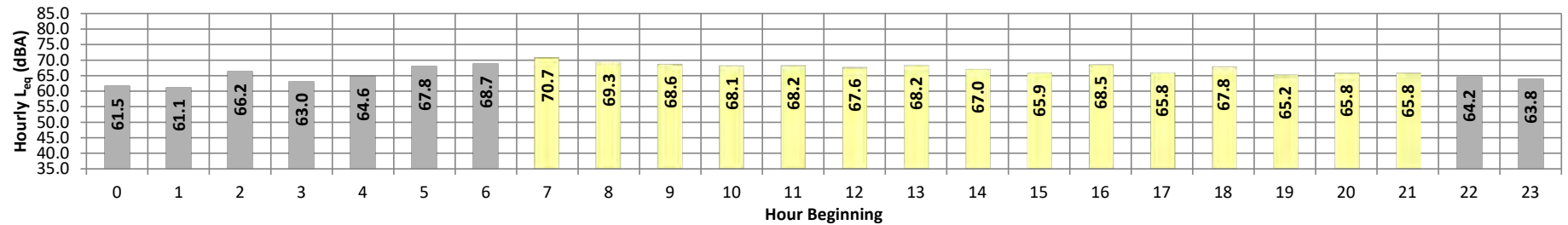
Date: Wednesday, April 13, 2022
Project: Cherry Ave. Warehouse

Location: L5 - Located west of the Project site near single-family
Source: residence at 1919 East Hungerford Street.

Meter: Piccolo II

JN: 14715
Analyst: A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	61.5	72.9	49.7	72.3	71.3	68.2	66.5	60.6	55.6	50.7	50.2	49.8	61.5	10.0	71.5
	1	61.1	71.6	50.0	71.0	70.1	67.4	65.6	60.9	57.1	52.2	51.3	50.4	61.1	10.0	71.1
	2	66.2	74.8	52.1	74.2	73.4	71.0	69.8	67.1	64.5	57.3	55.4	53.1	66.2	10.0	76.2
	3	63.0	72.5	50.1	71.9	71.2	69.1	67.7	63.4	59.4	53.0	51.6	50.4	63.0	10.0	73.0
	4	64.6	74.3	52.3	73.8	73.0	70.9	69.7	65.2	59.9	53.3	52.8	52.4	64.6	10.0	74.6
	5	67.8	77.1	57.0	76.6	75.6	73.2	71.9	68.7	65.1	59.5	58.4	57.3	67.8	10.0	77.8
Day	6	68.7	77.0	58.6	76.4	75.5	73.4	72.4	69.7	66.7	61.2	60.1	58.9	68.7	10.0	78.7
	7	70.7	81.2	62.0	80.2	78.9	75.2	73.6	70.9	68.7	64.6	63.6	62.2	70.7	0.0	70.7
	8	69.3	77.9	59.5	77.3	76.5	74.2	72.8	70.0	67.6	62.2	61.1	59.8	69.3	0.0	69.3
	9	68.6	76.4	57.3	75.9	75.2	73.2	72.3	69.8	67.0	60.4	59.0	57.6	68.6	0.0	68.6
	10	68.1	78.6	56.9	77.8	76.7	73.6	71.7	68.3	65.7	59.8	58.5	57.1	68.1	0.0	68.1
	11	68.2	79.0	57.0	78.0	76.8	74.0	72.2	68.2	65.0	59.5	58.4	57.3	68.2	0.0	68.2
	12	67.6	76.7	57.7	76.2	75.4	72.8	71.1	68.1	65.6	60.3	59.2	57.9	67.6	0.0	67.6
	13	68.2	79.4	57.0	78.5	77.4	74.0	71.6	67.8	65.4	59.6	58.5	57.2	68.2	0.0	68.2
	14	67.0	75.1	59.7	74.6	73.6	71.5	70.3	67.6	65.6	61.6	60.7	59.9	67.0	0.0	67.0
	15	65.9	73.5	56.9	73.0	72.1	70.2	69.1	66.8	64.6	59.6	58.6	57.1	65.9	0.0	65.9
	16	68.5	81.0	57.5	80.2	79.5	75.1	71.6	66.0	64.1	60.0	58.9	57.8	68.5	0.0	68.5
	17	65.8	74.7	56.8	74.2	73.1	70.5	69.0	66.4	64.3	59.6	58.2	57.0	65.8	0.0	65.8
	18	67.8	79.2	56.0	78.6	77.5	74.2	71.9	66.7	64.0	58.9	57.7	56.3	67.8	0.0	67.8
	19	65.2	74.2	55.7	73.4	72.3	69.8	68.8	66.0	63.5	58.0	57.0	55.9	65.2	5.0	70.2
	20	65.8	74.7	57.3	74.1	73.3	71.0	69.6	66.2	63.8	59.3	58.4	57.6	65.8	5.0	70.8
	21	65.8	77.0	54.2	76.3	75.2	72.0	69.3	65.3	62.2	56.3	55.2	54.3	65.8	5.0	70.8
Night	22	64.2	73.3	52.3	72.8	72.2	70.4	69.1	65.0	60.4	53.8	53.1	52.5	64.2	10.0	74.2
	23	63.8	75.0	50.4	74.2	73.3	70.6	69.0	63.3	58.6	51.9	51.2	50.5	63.8	10.0	73.8
Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%			
Day	Min	65.2	73.5	54.2	73.0	72.1	69.8	68.8	65.3	62.2	56.3	55.2	54.3	24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
	Max	70.7	81.2	62.0	80.2	79.5	75.2	73.6	70.9	68.7	64.6	63.6	62.2			
Energy Average		67.8	Average:		76.5	75.6	72.8	71.0	67.6	65.1	60.0	58.9	57.7	67.0	67.8	65.3
Night	Min	61.1	71.6	49.7	71.0	70.1	67.4	65.6	60.6	55.6	50.7	50.2	49.8			
	Max	68.7	77.1	58.6	76.6	75.6	73.4	72.4	69.7	66.7	61.2	60.1	58.9			
Energy Average		65.3	Average:		73.7	72.8	70.5	69.1	64.9	60.8	54.8	53.8	52.8			

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,069 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,081 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 50 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 74.0% 12.4% 13.6% 96.16%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	658			
CNEL:			69	149	320	690			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,134 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,086 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					
					Vehicle Type		Day	Evening	Night	Daily
					Autos: 74.0% 12.4% 13.6% 96.17%					
					Medium Trucks: 82.0% 2.6% 15.4% 2.11%					
					Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
					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: 43.589					
					Medium Trucks: 43.386					
					Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.70	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3				
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	142	306	659				
CNEL:			69	149	321	691				

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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					
					Vehicle Type		Day	Evening	Night	Daily
					Autos: 74.0% 12.4% 13.6% 96.16%					
					Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
					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: 43.589					
					Medium Trucks: 43.386					
					Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos: 66.51 1.72 0.79 -1.20 -4.65 0.000 0.000										
Medium Trucks: 77.72 -14.85 0.82 -1.20 -4.87 0.000 0.000										
Heavy Trucks: 82.99 -15.76 0.82 -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: 67.8 66.5 64.8 60.4 68.3 68.8										
Medium Trucks: 62.5 61.6 52.6 55.6 63.3 63.4										
Heavy Trucks: 66.9 65.8 59.7 60.6 68.0 68.2										
Vehicle Noise: 71.0 69.9 66.2 64.2 71.8 72.1										
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	143	307	662				
CNEL:			69	149	322	694				

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,343 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,103 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: 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: 74.0% 12.4% 13.6% 96.17%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.11%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.71%				
					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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	663			
CNEL:			69	150	322	694			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,179 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,011 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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			
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1		65.6		
Medium Trucks:	59.3	58.5	49.5	52.5	60.1		60.2		
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8		65.0		
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7		69.0		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			41	88	189		407		
CNEL:			43	92	198		426		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,886 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,070 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: 74.0% 12.4% 13.6% 95.46%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.18%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 2.35%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.24	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.64	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.32	0.82	-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:	64.9	63.6	61.8	57.5	65.3		65.8		
Medium Trucks:	59.7	58.8	49.8	52.8	60.5		60.6		
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5		66.6		
Vehicle Noise:	68.7	67.5	63.6	61.9	69.5		69.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				46	100	216	465		
CNEL:				49	105	226	486		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,020 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2		65.7		
Medium Trucks:	59.4	58.5	49.5	52.5	60.1		60.2		
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9		65.1		
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7		69.0		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,991 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,078 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Autos:		74.0%	12.4%	13.6%	95.47%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.35%
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:		43.589			
Right View:		90.0 degrees		Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.20	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	64.9	63.6	61.9	57.5	65.4		65.9		
Medium Trucks:	59.7	58.9	49.9	52.9	60.5		60.6		
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5		66.7		
Vehicle Noise:	68.7	67.6	63.6	62.0	69.6		69.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				47	101	217	467		
CNEL:				49	105	227	488		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,719 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,218 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					
					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:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		43.589			
					Medium Trucks:		43.386			
Heavy Trucks:		43.405								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.51	0.82	-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:	68.1	66.8	65.0	60.7	68.5	69.0				
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6				
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4				
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			69	148	319	687				
CNEL:			72	155	334	720				

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,622 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,293 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: 74.0% 12.4% 13.6% 95.86%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.13%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 2.00%					
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					
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos: 43.589					
Left View:		-90.0 degrees		Medium Trucks: 43.386					
Right View:		90.0 degrees		Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.43	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.71	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.1	53.0	56.1	63.7	63.8			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.7	70.5	66.7	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA		65 dBA		60 dBA	55 dBA
Ldn:				73		158		341	734
CNEL:				77		166		357	768

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,941 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,236 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 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: 74.0% 12.4% 13.6% 96.16%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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)				
FHWA Noise Model Calculations					Autos: 43.589				
VehicleType					Medium Trucks: 43.386				
REMEL					Heavy Trucks: 43.405				
Traffic Flow					Fresnel				
Distance					Barrier Atten				
Finite Road					Berm Atten				
Autos: 66.51					Autos: 66.51				
Medium Trucks: 77.72					Medium Trucks: 77.72				
Heavy Trucks: 82.99					Heavy Trucks: 82.99				
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType		Leq Peak Hour		Leq Day		Leq Evening		Leq Night	
Autos:		68.1		66.8		65.1		60.7	
Medium Trucks:		62.8		61.9		52.9		55.9	
Heavy Trucks:		67.1		66.0		59.9		60.9	
Vehicle Noise:		71.3		70.2		66.4		64.5	
Centerline Distance to Noise Contour (in feet)									
				70 dBA		65 dBA		60 dBA	
				55 dBA					
Ldn:				69		149		321	
CNEL:				72		156		336	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. Warehouse Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		27,844 vehicles		Autos:		15	
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,311 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		50 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		74.0%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		12.4%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		13.6%	
Centerline Dist. to Observer:		50.0 feet				95.87%	
Barrier Distance to Observer:		0.0 feet				2.6%	
Observer Height (Above Pad):		5.0 feet				15.4%	
Pad Elevation:		0.0 feet				2.13%	
Road Elevation:		0.0 feet				2.00%	
Road Grade:		0.0%		Noise Source Elevations (in feet)			
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	
FHWA Noise Model Calculations				Lane Equivalent Distance (in feet)			
VehicleType		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten
Autos:		66.51	2.13	0.79	-1.20	-4.65	0.000
Medium Trucks:		77.72	-14.40	0.82	-1.20	-4.87	0.000
Heavy Trucks:		82.99	-14.68	0.82	-1.20	-5.43	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	66.9	65.2	60.8	68.7	69.2
Medium Trucks:		62.9	62.1	53.1	56.1	63.7	63.8
Heavy Trucks:		67.9	66.8	60.7	61.7	69.1	69.3
Vehicle Noise:		71.7	70.6	66.7	64.9	72.5	72.8
Centerline Distance to Noise Contour (in feet)							
				70 dBA	65 dBA	60 dBA	55 dBA
Ldn:				74	159	342	738
CNEL:				77	166	358	772

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Barrier Height:		0.0 feet		Medium Trucks:		2.297		Grade Adjustment: 0.0	
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		8.004			
Centerline Dist. to Barrier:		50.0 feet							
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			
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	2.38	0.79	-1.20	-4.65	0.000	0.000	
Medium Trucks:		77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000	
Heavy Trucks:		82.99	-15.10	0.82	-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	67.2	65.4	61.1	69.0	69.5		
Medium Trucks:		63.1	62.3	53.3	56.3	63.9	64.0		
Heavy Trucks:		67.5	66.4	60.3	61.3	68.7	68.8		
Vehicle Noise:		71.7	70.5	66.8	64.8	72.5	72.8		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				73	158	340	732		
CNEL:				77	165	356	767		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		30,313 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,516 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: 74.0% 12.4% 13.6% 95.90%				
Barrier Height:		0.0 feet			Medium Trucks:		82.0% 2.6% 15.4% 2.13%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4% 4.8% 17.8% 1.98%		
Centerline Dist. to Barrier:		50.0 feet							
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:		43.589		
Left View:		-90.0 degrees			Medium Trucks:		43.386		
Right View:		90.0 degrees			Heavy Trucks:		43.405		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:		66.51	2.50	0.79	-1.20	-4.65	0.000		0.000
Medium Trucks:		77.72	-14.04	0.82	-1.20	-4.87	0.000		0.000
Heavy Trucks:		82.99	-14.36	0.82	-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:		68.6	67.3	65.6	61.2	69.1			69.6
Medium Trucks:		63.3	62.5	53.4	56.5	64.1			64.2
Heavy Trucks:		68.3	67.2	61.1	62.0	69.4			69.6
Vehicle Noise:		72.1	70.9	67.1	65.3	72.9			73.2
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				78	168	361			778
CNEL:				81	175	378			814

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 29,612 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,458 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: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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: 43.589				
Road Grade: 0.0%					Medium Trucks: 43.386				
Left View: -90.0 degrees					Heavy Trucks: 43.405				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 2.41 0.79 -1.20 -4.65 0.000 0.000									
Medium Trucks: 77.72 -14.16 0.82 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 82.99 -15.07 0.82 -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 67.2 65.5 61.1 69.0 69.5									
Medium Trucks: 63.2 62.3 53.3 56.3 64.0 64.1									
Heavy Trucks: 67.5 66.5 60.4 61.3 68.7 68.9									
Vehicle Noise: 71.7 70.6 66.8 64.9 72.5 72.8									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		30,549 vehicles			Autos: 15					
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,536 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: 74.0% 12.4% 13.6% 95.90%					
Barrier Height:		0.0 feet			Medium Trucks: 82.0% 2.6% 15.4% 2.13%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 77.4% 4.8% 17.8% 1.97%					
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:		43.589			
Road Grade:		0.0%			Medium Trucks:		43.386			
Left View:		-90.0 degrees			Heavy Trucks:		43.405			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.53	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.00	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.33	0.82	-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:	68.6	67.3	65.6	61.2	69.1	69.6				
Medium Trucks:	63.3	62.5	53.5	56.5	64.1	64.2				
Heavy Trucks:	68.3	67.2	61.1	62.1	69.4	69.6				
Vehicle Noise:	72.1	70.9	67.1	65.3	72.9	73.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				78	168	363	781			
CNEL:				82	176	380	818			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,105 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,084 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet			Vehicle Type					
Site Data					Day	Evening	Night	Daily		
					Autos:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.78	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.88	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3				
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				66	142	306	659			
CNEL:				69	149	321	691			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. Warehouse Job Number: 14715							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		25,737 vehicles		Autos:		15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15					
Peak Hour Volume:		2,136 vehicles		Heavy Trucks (3+ Axles):		15					
Vehicle Speed:		40 mph		Vehicle Mix							
Near/Far Lane Distance:		50 feet									
Site Data				VehicleType	Day	Evening	Night	Daily			
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	95.96%		
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%		
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.91%		
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:		43.589					
				Medium Trucks:		43.386					
				Heavy Trucks:		43.405					
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.76	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.21	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9					
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5					
Heavy Trucks:	67.4	66.3	60.2	61.2	68.6	68.7					
Vehicle Noise:	71.3	70.1	66.3	64.5	72.1	72.4					
Centerline Distance to Noise Contour (in feet)											
				70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:				69		149		321		691	
CNEL:				72		156		336		723	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,306 vehicles					Autos: 15					
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,100 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height: 0.0 feet					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade: 0.0%					Medium Trucks:		43.386			
Left View: -90.0 degrees					Heavy Trucks:		43.405			
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos: 66.51 1.73 0.79 -1.20 -4.65 0.000 0.000										
Medium Trucks: 77.72 -14.85 0.82 -1.20 -4.87 0.000 0.000										
Heavy Trucks: 82.99 -15.75 0.82 -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: 67.8 66.5 64.8 60.4 68.3 68.8										
Medium Trucks: 62.5 61.6 52.6 55.6 63.3 63.4										
Heavy Trucks: 66.9 65.8 59.7 60.6 68.0 68.2										
Vehicle Noise: 71.0 69.9 66.2 64.2 71.8 72.1										
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	143	308	662				
CNEL:			69	150	322	694				

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,939 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,153 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Day	Evening	Night	Daily		
				Autos:		74.0%	12.4%	13.6%	95.96%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.91%
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: 50.0 feet				Medium Trucks: 2.297					
Centerline Dist. to Observer: 50.0 feet				Heavy Trucks: 8.004					
Barrier Distance to Observer: 0.0 feet				Grade Adjustment: 0.0					
Observer Height (Above Pad): 5.0 feet				Lane Equivalent Distance (in feet)					
Pad Elevation: 0.0 feet				Autos: 43.589					
Road Elevation: 0.0 feet				Medium Trucks: 43.386					
Road Grade: 0.0%				Heavy Trucks: 43.405					
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	1.83	0.79	-1.20	-4.65	0.000		0.000	
Medium Trucks:	77.72	-14.72	0.82	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	82.99	-15.18	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.4	66.3	60.2	61.2	68.6	68.8			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	150	322	694			
CNEL:			73	157	337	727			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,647 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,129 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,374 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,189 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:		74.0%	12.4%	13.6%	95.75%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.09%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.89	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.72	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.6	70.4	66.5	64.8	72.4	72.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				72	155	335	722		
CNEL:				76	163	350	755		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,852 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,146 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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: 43.589				
Road Grade: 0.0%					Medium Trucks: 43.386				
Left View: -90.0 degrees					Heavy Trucks: 43.405				
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	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	704			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		26,580 vehicles		Autos:		15	
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,206 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		50 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		74.0%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		12.4%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		2.6%	
Centerline Dist. to Observer:		50.0 feet				13.6%	
Barrier Distance to Observer:		0.0 feet				95.75%	
Observer Height (Above Pad):		5.0 feet		Noise Source Elevations (in 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	
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:	66.51	1.92	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-14.69	0.82	-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	66.7	65.0	60.6	68.5	69.0	
Medium Trucks:	62.8	62.0	52.9	55.9	63.6	63.7	
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2	
Vehicle Noise:	71.6	70.5	66.6	64.8	72.4	72.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			73	156	337	725	
CNEL:			76	163	352	759	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,659 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,130 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type					
Site Data				Day	Evening	Night	Daily		
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		50.0 feet		Heavy Trucks:		8.004			
Centerline Dist. to Observer:		50.0 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:		43.589			
Pad Elevation:		0.0 feet		Medium Trucks:		43.386			
Road Elevation:		0.0 feet		Heavy Trucks:		43.405			
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	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)								
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		26,204 vehicles		Autos:		15		
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,175 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: 74.0% 12.4% 13.6% 96.16%				
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.09%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 1.75%				
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				
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0				
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)				
Road Grade:		0.0%		Autos: 43.589				
Left View:		-90.0 degrees		Medium Trucks: 43.386				
Right View:		90.0 degrees		Heavy Trucks: 43.405				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	1.88	0.79	-1.20	-4.65	0.000	0.000	
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	82.99	-15.53	0.82	-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	66.7	65.0	60.6	68.5	69.0		
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5		
Heavy Trucks:	67.1	66.0	59.9	60.9	68.2	68.4		
Vehicle Noise:	71.2	70.1	66.3	64.4	72.0	72.3		
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				68	147	316	680	
CNEL:				71	154	331	713	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,865 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,147 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: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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: 43.589				
Road Grade: 0.0%					Medium Trucks: 43.386				
Left View: -90.0 degrees					Heavy Trucks: 43.405				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	705			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,409 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,192 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.09%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.75%
				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:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.91	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.72	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.50	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.2	70.1	66.4	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	317	684			
CNEL:			72	154	333	717			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. Warehouse Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		27,116 vehicles		Autos:		15	
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		2,251 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		50 feet		Vehicle Type			
Site Data				Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%
Centerline Dist. to Observer:		50.0 feet		Noise Source Elevations (in feet)		15.4%	2.12%
Barrier Distance to Observer:		0.0 feet		Autos:		0.000	17.8%
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297	1.72%
Pad Elevation:		0.0 feet		Heavy Trucks:		8.004	Grade Adjustment: 0.0
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)			
Road Grade:		0.0%		Autos:		43.589	
Left View:		-90.0 degrees		Medium Trucks:		43.386	
Right View:		90.0 degrees		Heavy Trucks:		43.405	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.03	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1	
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7	
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5	
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			69	149	322	694	
CNEL:			73	157	338	727	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. Warehouse Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 27,320 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,268 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
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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.73%			
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.06	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.40	0.82	-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	66.9	65.1	60.8	68.6	69.1	
Medium Trucks:	62.8	62.0	52.9	56.0	63.6	63.7	
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.5	
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			70	150	324	698	
CNEL:			73	158	339	731	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)								
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000	
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	82.99	-15.39	0.82	-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	66.9	65.2	60.8	68.7	69.2		
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7		
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6		
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			70	151	325	700		
CNEL:			73	158	341	734		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. Warehouse Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 27,687 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,298 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
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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.73%			
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.12	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-14.48	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.34	0.82	-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	66.9	65.2	60.8	68.7	69.2	
Medium Trucks:	62.9	62.0	53.0	56.0	63.6	63.7	
Heavy Trucks:	67.3	66.2	60.1	61.0	68.4	68.6	
Vehicle Noise:	71.4	70.3	66.6	64.6	72.2	72.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			70	152	327	704	
CNEL:			74	159	342	738	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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				
					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: 74.0% 12.4% 13.6% 96.16%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Medium Trucks: 2.297					Grade Adjustment: 0.0				
Heavy Trucks: 8.004									
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)				
					Autos: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				54	116	250	538		
CNEL:				56	122	262	564		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 18,593 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,543 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: 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:	74.0%	12.4%	13.6%	96.18%		
					Medium Trucks:	82.0%	2.6%	15.4%	2.11%		
					Heavy Trucks:	77.4%	4.8%	17.8%	1.71%		
					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:	43.589					
					Medium Trucks:	43.386					
					Heavy Trucks:	43.405					
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	0.39	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5					
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0					
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8					
Vehicle Noise:	69.7	68.5	64.8	62.9	70.5	70.8					
Centerline Distance to Noise Contour (in feet)											
				70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:				54		116		250		539	
CNEL:				56		122		262		565	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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: 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:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
VehicleType	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos: 66.51 0.44 0.79 -1.20 -4.65 0.000 0.000										
Medium Trucks: 77.72 -16.13 0.82 -1.20 -4.87 0.000 0.000										
Heavy Trucks: 82.99 -17.03 0.82 -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: 66.5 65.3 63.5 59.2 67.0 67.5										
Medium Trucks: 61.2 60.4 51.3 54.4 62.0 62.1										
Heavy Trucks: 65.6 64.5 58.4 59.4 66.7 66.9										
Vehicle Noise: 69.8 68.6 64.9 62.9 70.5 70.9										
Centerline Distance to Noise Contour (in feet)										
			70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:			54		117		253		544	
CNEL:			57		123		265		570	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)								
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,897 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,568 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: 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: 74.0% 12.4% 13.6% 96.18%				
				Medium Trucks: 82.0% 2.6% 15.4% 2.11%				
				Heavy Trucks: 77.4% 4.8% 17.8% 1.71%				
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos: 66.51 0.46 0.79 -1.20 -4.65 0.000 0.000								
Medium Trucks: 77.72 -16.13 0.82 -1.20 -4.87 0.000 0.000								
Heavy Trucks: 82.99 -17.03 0.82 -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: 66.6 65.3 63.5 59.2 67.0 67.5								
Medium Trucks: 61.2 60.4 51.3 54.4 62.0 62.1								
Heavy Trucks: 65.6 64.5 58.4 59.4 66.7 66.9								
Vehicle Noise: 69.8 68.6 64.9 62.9 70.6 70.9								
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			54	117	253	545		
CNEL:			57	123	265	571		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: elo Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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				
					Vehicle Type		Day	Evening	Night
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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	251	542			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,571 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,458 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: 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: 74.0% 12.4% 13.6% 96.19% Medium Trucks: 82.0% 2.6% 15.4% 2.10% Heavy Trucks: 77.4% 4.8% 17.8% 1.71%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.14	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	65.0	63.2	58.9	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.6	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				52	112	240	518		
CNEL:				54	117	252	543		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,736 vehicles			Autos: 15					
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,472 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height:		0.0 feet			Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade:		0.0%			Medium Trucks: 43.386					
Left View:		-90.0 degrees			Heavy Trucks: 43.405					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000		0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000		0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3				
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8				
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6				
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			52	113	243	523				
CNEL:			55	118	254	548				

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.					Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,867 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,483 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: 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: 74.0% 12.4% 13.6% 96.19% Medium Trucks: 82.0% 2.6% 15.4% 2.10% Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.22	0.79	-1.20	-4.65	0.000	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3				
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8				
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6				
Vehicle Noise:	69.5	68.4	64.6	62.7	70.3	70.6				
Centerline Distance to Noise Contour (in feet)										
			70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:			52		113		243		524	
CNEL:			55		118		255		549	

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Curry St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		6,144 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		510 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph		Vehicle Mix					
Near/Far Lane Distance:		12 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
Centerline Dist. to Barrier:		28.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		28.0 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:		27.803			
Left View:		-90.0 degrees		Medium Trucks:		27.483			
Right View:		90.0 degrees		Heavy Trucks:		27.514			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-2.38	3.72	-1.20	-4.46	0.000	0.000		
Medium Trucks:	70.80	-18.95	3.80	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	77.97	-19.86	3.79	-1.20	-5.83	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:	58.9	57.6	55.8	51.5	59.4		59.8		
Medium Trucks:	54.4	53.6	44.6	47.6	55.2		55.3		
Heavy Trucks:	60.7	59.6	53.5	54.5	61.9		62.0		
Vehicle Noise:	63.5	62.3	58.0	56.8	64.4		64.6		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			12	25	55		118		
CNEL:			12	26	57		123		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Curry St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 6,209 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 515 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 25 mph				Vehicle Mix					
Near/Far Lane Distance: 12 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.20%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.09%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.70%					
Centerline Dist. to Barrier: 28.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 28.0 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: 27.803					
Road Grade: 0.0%				Medium Trucks: 27.483					
Left View: -90.0 degrees				Heavy Trucks: 27.514					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-2.33	3.72	-1.20	-4.46	0.000	0.000		
Medium Trucks:	70.80	-18.95	3.80	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	77.97	-19.86	3.79	-1.20	-5.83	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	58.9	57.6	55.9	51.5	59.4	59.9			
Medium Trucks:	54.4	53.6	44.6	47.6	55.2	55.3			
Heavy Trucks:	60.7	59.6	53.5	54.5	61.9	62.0			
Vehicle Noise:	63.5	62.4	58.1	56.8	64.4	64.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				12	25	55	118		
CNEL:				12	27	57	123		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Curry St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. Warehouse Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		6,201 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		515 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph		Vehicle Mix					
Near/Far Lane Distance:		12 feet		VehicleType		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
Centerline Dist. to Barrier:		28.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		28.0 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:		27.803			
Road Grade:		0.0%		Medium Trucks:		27.483			
Left View:		-90.0 degrees		Heavy Trucks:		27.514			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-2.34	3.72	-1.20	-4.46	0.000	0.000		
Medium Trucks:	70.80	-18.91	3.80	-1.20	-4.86	0.000	0.000		
Heavy Trucks:	77.97	-19.82	3.79	-1.20	-5.83	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	58.9	57.6	55.9	51.5	59.4		59.9		
Medium Trucks:	54.5	53.6	44.6	47.6	55.3		55.4		
Heavy Trucks:	60.7	59.7	53.6	54.5	61.9		62.1		
Vehicle Noise:	63.5	62.4	58.1	56.8	64.4		64.7		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			12	26	55		119		
CNEL:			12	27	57		124		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Curry St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. Warehouse Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt):		6,266 vehicles		Autos: 15						
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15						
Peak Hour Volume:		520 vehicles		Heavy Trucks (3+ Axles): 15						
Vehicle Speed:		25 mph		Vehicle Mix						
Near/Far Lane Distance:		12 feet		VehicleType		Day	Evening	Night	Daily	
Site Data				Autos: 74.0% 12.4% 13.6% 96.20%						
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.09%						
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 1.70%						
Centerline Dist. to Barrier:		28.0 feet		Noise Source Elevations (in feet)						
Centerline Dist. to Observer:		28.0 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: 27.803						
Road Grade:		0.0%		Medium Trucks: 27.483						
Left View:		-90.0 degrees		Heavy Trucks: 27.514						
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-2.29	3.72	-1.20	-4.46	0.000	0.000			
Medium Trucks:	70.80	-18.91	3.80	-1.20	-4.86	0.000	0.000			
Heavy Trucks:	77.97	-19.82	3.79	-1.20	-5.83	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:	59.0	57.7	55.9	51.6	59.4		59.9			
Medium Trucks:	54.5	53.6	44.6	47.6	55.3		55.4			
Heavy Trucks:	60.7	59.7	53.6	54.5	61.9		62.1			
Vehicle Noise:	63.5	62.4	58.1	56.9	64.4		64.7			
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				12		26		55		119
CNEL:				12		27		57		124

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,616 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 50 feet									
Site Data				Vehicle Mix					
				Vehicle Type	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Centerline Dist. to Barrier: 50.0 feet				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,537 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,622 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 50 feet									
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
				Autos: 74.0% 12.4% 13.6% 96.18%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.11%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
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: 50.0 feet				Medium Trucks: 2.297					
Centerline Dist. to Observer: 50.0 feet				Heavy Trucks: 8.004 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:	66.51	0.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				56	120	258	557		
CNEL:				58	126	271	584		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,656 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 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									
Centerline Dist. to Barrier: 50.0 feet						Autos: 74.0%	12.4%	13.6%	96.16%
Centerline Dist. to Observer: 50.0 feet						Medium Trucks: 82.0%	2.6%	15.4%	2.12%
Barrier Distance to Observer: 0.0 feet						Heavy Trucks: 77.4%	4.8%	17.8%	1.72%
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:	66.51	0.70	0.79	-1.20	-4.65	0.000		0.000	
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3			67.8	
Medium Trucks:	61.5	60.6	51.6	54.6	62.2			62.3	
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0			67.2	
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8			71.1	
Centerline Distance to Noise Contour (in feet)									
		70 dBA	65 dBA	60 dBA	55 dBA				
	Ldn:	57	122	262	566				
	CNEL:	59	128	275	593				

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: e/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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			
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1		68.6		
Medium Trucks:	62.3	61.4	52.4	55.4	63.1		63.2		
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8		68.0		
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6		71.9		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			64	138	297		641		
CNEL:			67	145	312		672		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: e/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,279 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,015 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:		74.0%	12.4%	13.6%	96.14%
				Medium Trucks:		82.0%	2.6%	15.4%	2.11%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.75%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.55	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.04	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.85	0.82	-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:	67.6	66.4	64.6	60.3	68.1		68.6		
Medium Trucks:	62.3	61.5	52.4	55.4	63.1		63.2		
Heavy Trucks:	66.8	65.7	59.6	60.5	67.9		68.1		
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7		72.0		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				65	139	300	647		
CNEL:				68	146	315	678		

Wednesday, September 6, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC				Project Name: Cherry Av. Warehouse					
Road Name: South St.				Job Number: 14715					
Road Segment: e/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,486 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,032 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:	74.0%	12.4%	13.6%	96.16%	
Barrier Height: 0.0 feet				Medium Trucks:	82.0%	2.6%	15.4%	2.12%	
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:	77.4%	4.8%	17.8%	1.72%	
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:	43.589				
Road Grade: 0.0%				Medium Trucks:	43.386				
Left View: -90.0 degrees				Heavy Trucks:	43.405				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.58	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.89	0.82	-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:	67.7	66.4	64.7	60.3	68.2		68.7		
Medium Trucks:	62.3	61.5	52.5	55.5	63.1		63.2		
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9		68.1		
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7		72.0		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

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APPENDIX 7.2:

TENANT USE OPTION OFF-SITE TRAFFIC NOISE CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt1 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 25,069 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,081 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos: 74.0% 12.4% 13.6% 96.16%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%									
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000						
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8							
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3							
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2							
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			66	142	306	658							
CNEL:			69	149	320	690							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,134 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,086 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	321	691			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	149	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,343 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,103 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.17%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.11%		
		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%		
		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:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	663			
CNEL:			69	150	322	694			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,179 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,011 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					
				Vehicle Type		Day	Evening	Night	Daily
						Autos: 74.0%	12.4%	13.6%	96.16%
						Medium Trucks: 82.0%	2.6%	15.4%	2.12%
						Heavy Trucks: 77.4%	4.8%	17.8%	1.72%
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6			
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0			
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	189	407			
CNEL:			43	92	198	426			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,885 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,069 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	95.46%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.18%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	2.35%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.24	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.64	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.32	0.82	-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:	64.9	63.6	61.8	57.5	65.3	65.8			
Medium Trucks:	59.7	58.8	49.8	52.8	60.5	60.6			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	68.7	67.5	63.6	61.9	69.5	69.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			46	100	216	465			
CNEL:			49	105	226	486			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,990 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,078 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:		74.0%	12.4%	13.6%	95.47%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.35%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.20	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	64.9	63.6	61.9	57.5	65.4	65.9			
Medium Trucks:	59.7	58.9	49.9	52.9	60.5	60.6			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.7			
Vehicle Noise:	68.7	67.6	63.6	62.0	69.6	69.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			47	101	217	467			
CNEL:			49	105	227	488			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,719 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,218 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.51	0.82	-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	66.8	65.0	60.7	68.5	69.0			
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	148	319	687			
CNEL:			72	155	334	720			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos:		74.0%	12.4%	13.6%	96.16%				
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%				
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%				
				Noise Source Elevations (in feet)									
				Autos:		0.000		Grade Adjustment: 0.0					
				Medium Trucks:		2.297							
				Heavy Trucks:		8.004							
								Lane Equivalent Distance (in feet)					
Autos:		43.589											
Medium Trucks:		43.386											
				Heavy Trucks:		43.405							
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 2.00 0.79 -1.20 -4.65 0.000 0.000													
Medium Trucks: 77.72 -14.57 0.82 -1.20 -4.87 0.000 0.000													
Heavy Trucks: 82.99 -15.48 0.82 -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: 68.1 66.8 65.1 60.7 68.6 69.1													
Medium Trucks: 62.8 61.9 52.9 55.9 63.6 63.7													
Heavy Trucks: 67.1 66.0 59.9 60.9 68.3 68.5													
Vehicle Noise: 71.3 70.2 66.4 64.5 72.1 72.4													
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				69	149	321	691						
CNEL:				72	156	336	724						

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,621 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,293 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:		74.0%	12.4%	13.6%	95.86%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.00%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.43	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.71	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.1	53.0	56.1	63.7	63.8			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.7	70.5	66.7	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	341	734			
CNEL:			77	166	357	768			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt1 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 27,843 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,311 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: 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: 74.0% 12.4% 13.6% 95.87% Medium Trucks: 82.0% 2.6% 15.4% 2.13% Heavy Trucks: 77.4% 4.8% 17.8% 2.00%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.13	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.40	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.68	0.82	-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	66.9	65.2	60.8	68.7	69.2				
Medium Trucks:	62.9	62.1	53.1	56.1	63.7	63.8				
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.3				
Vehicle Noise:	71.7	70.6	66.7	64.9	72.5	72.8				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				74		159		342		738
CNEL:				77		166		358		772

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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							
Right View:		90.0 degrees		Lane Equivalent Distance (in feet)					
				Autos:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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:	68.5	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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: 74.0% 12.4% 13.6% 96.16%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		30,312 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,516 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	95.90%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.98%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.50	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.04	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.36	0.82	-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:	68.6	67.3	65.6	61.2	69.1	69.6			
Medium Trucks:	63.3	62.5	53.4	56.5	64.1	64.2			
Heavy Trucks:	68.3	67.2	61.1	62.0	69.4	69.6			
Vehicle Noise:	72.1	70.9	67.1	65.3	72.9	73.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			78	168	361	778			
CNEL:			81	175	378	814			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		30,547 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,535 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:		74.0%	12.4%	13.6%	95.90%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.97%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.53	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.00	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.33	0.82	-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:	68.6	67.3	65.6	61.2	69.1	69.6			
Medium Trucks:	63.3	62.5	53.5	56.5	64.1	64.2			
Heavy Trucks:	68.3	67.2	61.1	62.1	69.4	69.6			
Vehicle Noise:	72.1	70.9	67.1	65.3	72.9	73.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			78	168	363	781			
CNEL:			82	176	380	818			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,105 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,084 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 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					
					Vehicle Type		Day	Evening	Night	Daily
					Autos:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3				
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	142	306	659				
CNEL:			69	149	321	691				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		25,736 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,136 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: 74.0% 12.4% 13.6% 95.96%				
Barrier Height:		0.0 feet			Medium Trucks:		82.0% 2.6% 15.4% 2.12%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4% 4.8% 17.8% 1.91%		
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:		43.589		
Road Grade:		0.0%			Medium Trucks:		43.386		
Left View:		-90.0 degrees			Heavy Trucks:		43.405		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.76	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.21	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.4	66.3	60.2	61.2	68.6	68.7			
Vehicle Noise:	71.3	70.1	66.3	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	321	691			
CNEL:			72	156	336	723			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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				
					Vehicle Type		Day	Evening	Night
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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	662			
CNEL:			69	150	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		25,938 vehicles			Autos: 15				
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		2,153 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 feet			VehicleType				
Site Data					Day	Evening	Night	Daily	
					Autos: 74.0% 12.4% 13.6% 95.96%				
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					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.91%				
Noise Source Elevations (in feet)					Autos: 0.000				
					Medium Trucks: 2.297				
Lane Equivalent Distance (in feet)					Heavy Trucks: 8.004 Grade Adjustment: 0.0				
					Autos: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.83	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.72	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.18	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.4	66.3	60.2	61.2	68.6	68.8			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	150	322	694			
CNEL:			73	157	337	727			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,647 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,129 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,373 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,189 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	95.75%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.16%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	2.09%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.89	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.72	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.6	70.4	66.5	64.8	72.4	72.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			72	155	335	722			
CNEL:			76	163	350	755			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos: 74.0% 12.4% 13.6% 96.16%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%									
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000						
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9							
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5							
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3							
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			67	145	312	672							
CNEL:			70	152	327	704							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,579 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,206 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	95.75%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.16%		
		Heavy Trucks:		77.4%	4.8%	17.8%	2.09%		
		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:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.92	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.69	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.8	62.0	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.6	70.5	66.6	64.8	72.4	72.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	156	337	725			
CNEL:			76	163	352	759			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,659 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,130 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axes): 15 Heavy Trucks (3+ Axes): 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		26,203 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,175 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: 74.0% 12.4% 13.6% 96.16%				
Barrier Height:		0.0 feet			Medium Trucks:		82.0% 2.6% 15.4% 2.09%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4% 4.8% 17.8% 1.75%		
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:		43.589		
Road Grade:		0.0%			Medium Trucks:		43.386		
Left View:		-90.0 degrees			Heavy Trucks:		43.405		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.88	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.53	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.2	68.4			
Vehicle Noise:	71.2	70.1	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	316	680			
CNEL:			71	154	331	713			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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					
					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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9				
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5				
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3				
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			67	145	312	672				
CNEL:			70	152	327	705				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,408 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,192 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.09% Heavy Trucks: 77.4% 4.8% 17.8% 1.75%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.91	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.72	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.50	0.82	-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	66.7	65.0	60.6	68.5	69.0			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.2	70.1	66.4	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	317	684			
CNEL:			72	154	333	717			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		27,116 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,251 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 feet			Vehicle Type		Day	Evening	Night
Site Data					Autos:		74.0%	12.4%	13.6%
					Medium Trucks:		82.0%	2.6%	15.4%
					Heavy Trucks:		77.4%	4.8%	17.8%
					Grade Adjustment:		0.0		
					Noise Source Elevations (in feet)				
					Autos:		0.000		
					Medium Trucks:		2.297		
					Heavy Trucks:		8.004		
					Lane Equivalent Distance (in feet)				
					Autos:		43.589		
					Medium Trucks:		43.386		
					Heavy Trucks:		43.405		
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				69	149	322	694		
CNEL:				73	157	338	727		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		27,320 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,268 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: 74.0% 12.4% 13.6% 96.17%				
Barrier Height:		0.0 feet			Medium Trucks:		82.0% 2.6% 15.4% 2.11%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4% 4.8% 17.8% 1.73%		
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:		43.589		
Road Grade:		0.0%			Medium Trucks:		43.386		
Left View:		-90.0 degrees			Heavy Trucks:		43.405		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.06	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.40	0.82	-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	66.9	65.1	60.8	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.5			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	324	698			
CNEL:			73	158	339	731			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt1 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		27,687 vehicles			Autos: 15				
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		2,298 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 feet			VehicleType				
Site Data					Day	Evening	Night	Daily	
					Autos: 74.0% 12.4% 13.6% 96.17%				
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					Medium Trucks: 82.0% 2.6% 15.4% 2.11%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.73%				
					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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.12	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.48	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.34	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.3	66.2	60.1	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.3	66.6	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				70	152	327	704		
CNEL:				74	159	342	738		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,593 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,543 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.39	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.9	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	539			
CNEL:			56	122	262	565			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,897 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,568 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: 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: 74.0% 12.4% 13.6% 96.18%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.11%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.46	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.6	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.6	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	545			
CNEL:			57	123	265	571			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos: 74.0% 12.4% 13.6% 96.16%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%									
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000						
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2							
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8							
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6							
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			52	111	240	517							
CNEL:			54	117	251	542							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,571 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,458 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.19%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.10%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.14	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	65.0	63.2	58.9	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.6	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	112	240	518			
CNEL:			54	117	252	543			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8			67.3	
Medium Trucks:	60.9	60.1	51.1	54.1	61.7			61.8	
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5			66.6	
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3			70.6	
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,867 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,483 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:		74.0%	12.4%	13.6%	96.19%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.10%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.22	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.4	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	524			
CNEL:			55	118	255	549			

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,616 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,656 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
				FHWA Noise Model Calculations					
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	262	566			
CNEL:			59	128	275	593			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,536 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,622 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:		74.0%	12.4%	13.6%	96.18%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	557			
CNEL:			58	126	271	584			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 20,022 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,662 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: 74.0% 12.4% 13.6% 96.18% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.71	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				57	122	263	566		
CNEL:				59	128	275	599		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0			
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			67	145	312	672			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,486 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,032 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 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
Medium Trucks:		2.297							
Heavy Trucks:		8.004							
Lane Equivalent Distance (in feet)									
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.58	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.89	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.3	61.5	52.5	55.5	63.1	63.2			
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,279 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,015 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:		74.0%	12.4%	13.6%	96.14%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.75%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.55	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.04	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.85	0.82	-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:	67.6	66.4	64.6	60.3	68.1	68.6			
Medium Trucks:	62.3	61.5	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.8	65.7	59.6	60.5	67.9	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	139	300	647			
CNEL:			68	146	315	678			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt1 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,696 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,050 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: 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: 74.0% 12.4% 13.6% 96.14% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.75%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.62	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.97	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.4	61.5	52.5	55.5	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.1	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	141	304	655			
CNEL:			69	148	319	686			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,069 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,081 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	658			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
				FHWA Noise Model Calculations					
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	149	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,085 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,082 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: 74.0% 12.4% 13.6% 96.17%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				66	142	306	658		
CNEL:				69	149	320	690		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,294 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,099 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				66	143	307	662		
CNEL:				69	150	322	694		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,179 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,011 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6			
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0			
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	189	407			
CNEL:			43	92	198	426			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,486 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,036 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	95.02%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.31%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	2.67%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.39	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.53	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.91	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.8	59.0	49.9	53.0	60.6	60.7			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.0			
Vehicle Noise:	68.8	67.7	63.6	62.1	69.7	70.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			48	103	221	477			
CNEL:			50	107	231	498			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,591 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,045 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:		74.0%	12.4%	13.6%	95.03%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.31%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.66%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.36	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.50	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	64.7	63.5	61.7	57.4	65.2	65.7			
Medium Trucks:	59.8	59.0	50.0	53.0	60.6	60.7			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	68.9	67.7	63.6	62.1	69.7	70.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			48	103	222	479			
CNEL:			50	108	232	500			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 26,719 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,218 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						
				Vehicle Type		Day	Evening	Night	Daily	
				Autos:		74.0%	12.4%	13.6%	96.16%	
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%	
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%	
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.51	0.82	-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:	68.1	66.8	65.0	60.7	68.5	69.0				
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6				
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4				
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:			69		148		319		687	
CNEL:			72		155		334		720	

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,076 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,247 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: 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: 74.0% 12.4% 13.6% 95.64% Medium Trucks: 82.0% 2.6% 15.4% 2.20% Heavy Trucks: 77.4% 4.8% 17.8% 2.15%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.00	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.38	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.48	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	63.0	62.1	53.1	56.1	63.7	63.8			
Heavy Trucks:	68.1	67.0	60.9	61.9	69.3	69.5			
Vehicle Noise:	71.7	70.6	66.7	65.0	72.6	72.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	160	345	742			
CNEL:			78	167	360	776			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.00	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.48	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	321	691			
CNEL:			72	156	336	724			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,299 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,266 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: 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: 74.0% 12.4% 13.6% 95.65% Medium Trucks: 82.0% 2.6% 15.4% 2.20% Heavy Trucks: 77.4% 4.8% 17.8% 2.15%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.34	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.45	0.82	-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	66.8	65.1	60.7	68.6		69.1		
Medium Trucks:	63.0	62.1	53.1	56.1	63.8		63.9		
Heavy Trucks:	68.2	67.1	61.0	61.9	69.3		69.5		
Vehicle Noise:	71.8	70.6	66.7	65.0	72.6		72.9		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			75	161	346	746			
CNEL:			78	168	362	748			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Day		Evening		Night	
Barrier Height:		0.0 feet		Autos:		74.0%		12.4%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%		2.6%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%		4.8%	
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:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
				FHWA Noise Model Calculations					
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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:	68.5	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,743 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,469 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:		74.0%	12.4%	13.6%	95.69%
				Medium Trucks:		82.0%	2.6%	15.4%	2.19%
				Heavy Trucks:		77.4%	4.8%	17.8%	2.11%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-13.99	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.15	0.82	-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	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.3	62.5	53.5	56.5	64.1	64.2			
Heavy Trucks:	68.5	67.4	61.3	62.2	69.6	69.8			
Vehicle Noise:	72.1	71.0	67.1	65.3	72.9	73.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			79	169	365	786			
CNEL:			82	177	381	822			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,978 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,488 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: 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: 74.0% 12.4% 13.6% 95.69% Medium Trucks: 82.0% 2.6% 15.4% 2.19% Heavy Trucks: 77.4% 4.8% 17.8% 2.11%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-13.95	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.12	0.82	-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	67.3	65.5	61.2	69.0	69.5			
Medium Trucks:	63.4	62.5	53.5	56.5	64.2	64.3			
Heavy Trucks:	68.5	67.4	61.3	62.3	69.7	69.8			
Vehicle Noise:	72.1	71.0	67.1	65.4	73.0	73.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			79	170	366	789			
CNEL:			83	178	383	826			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,105 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,084 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	321	691			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	662			
CNEL:			69	150	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,348 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,104 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 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:		74.0%	12.4%	13.6%	95.81%
				Medium Trucks:		82.0%	2.6%	15.4%	2.18%
				Heavy Trucks:		77.4%	4.8%	17.8%	2.02%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.72	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.05	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.6	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.3	70.2	66.3	64.5	72.2	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	323	696			
CNEL:			73	157	338	728			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,550 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,121 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: 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: 74.0% 12.4% 13.6% 95.81% Medium Trucks: 82.0% 2.6% 15.4% 2.18% Heavy Trucks: 77.4% 4.8% 17.8% 2.02%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.75	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.69	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.02	0.82	-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:	67.9	66.6	64.8	60.5	68.3	68.8			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.6	66.5	60.4	61.4	68.8	68.9			
Vehicle Noise:	71.4	70.2	66.4	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	699			
CNEL:			73	158	340	732			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,647 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,129 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 43.589				
Left View: -90.0 degrees					Medium Trucks: 43.386				
Right View: 90.0 degrees					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt2 Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%						
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9					
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5					
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3					
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			67	145	312	672					
CNEL:			70	152	327	704					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,981 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,156 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: 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: 74.0% 12.4% 13.6% 95.51% Medium Trucks: 82.0% 2.6% 15.4% 2.23% Heavy Trucks: 77.4% 4.8% 17.8% 2.26%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.81	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.51	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.45	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	68.2	67.1	61.0	61.9	69.3	69.5			
Vehicle Noise:	71.7	70.5	66.6	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				73	158	340	734		
CNEL:				77	165	356	767		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,186 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,173 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: 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: 74.0% 12.4% 13.6% 95.52% Medium Trucks: 82.0% 2.6% 15.4% 2.23% Heavy Trucks: 77.4% 4.8% 17.8% 2.25%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.85	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.47	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.43	0.82	-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:	67.9	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.9	62.0	53.0	56.0	63.7	63.8			
Heavy Trucks:	68.2	67.1	61.0	62.0	69.3	69.5			
Vehicle Noise:	71.7	70.5	66.6	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				74	159	342	737		
CNEL:				77	166	358	770		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,659 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,130 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,821 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,143 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.08%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.79%					
Centerline Dist. to Barrier: 50.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 50.0 feet				Autos: 0.000					
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004					
Pad Elevation: 0.0 feet				Grade Adjustment: 0.0					
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)					
Road Grade: 0.0%				Autos: 43.589					
Left View: -90.0 degrees				Medium Trucks: 43.386					
Right View: 90.0 degrees				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.81	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.74	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.48	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.2	70.0	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	146	315	679			
CNEL:			71	153	330	712			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	705			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,027 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,160 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.08%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.79%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.85	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.71	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	67.9	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.2	70.1	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	317	683			
CNEL:			72	154	332	716			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,116 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,251 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet			Vehicle Type					
Site Data					Day	Evening	Night	Daily		
					Autos:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.03	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1				
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7				
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5				
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				69	149	322	694			
CNEL:				73	157	338	727			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		27,176 vehicles			Autos:		15		
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		2,256 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: 74.0% 12.4% 13.6% 96.14%				
Barrier Height:		0.0 feet			Medium Trucks:		82.0% 2.6% 15.4% 2.12%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4% 4.8% 17.8% 1.74%		
Centerline Dist. to Barrier:		50.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		50.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.004		Grade Adjustment: 0.0
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos:		43.589		
Road Grade:		0.0%			Medium Trucks:		43.386		
Left View:		-90.0 degrees			Heavy Trucks:		43.405		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.53	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.38	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				70	150	324	697		
CNEL:				73	157	339	731		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street					Project Name: Cherry Av. - Alt2 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		27,544 vehicles			Autos: 15				
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		2,286 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 feet			VehicleType				
Site Data					Day	Evening	Night	Daily	
					Autos: 74.0% 12.4% 13.6% 96.14%				
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					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.74%				
					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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.47	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.33	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.0	53.0	56.0	63.7	63.8			
Heavy Trucks:	67.3	66.2	60.1	61.1	68.5	68.6			
Vehicle Noise:	71.4	70.3	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				70	152	327	704		
CNEL:				74	159	342	737		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E				Project Name: Cherry Av. - Alt2					
Road Name: Artesia Blvd.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,527 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,538 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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			
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0		67.5		
Medium Trucks:	61.1	60.3	51.3	54.3	61.9		62.0		
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7		66.8		
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5		70.8		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			54	116	250		538		
CNEL:			56	122	262		564		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P				Project Name: Cherry Av. - Alt2						
Road Name: Artesia Blvd.				Job Number: 14715						
Road Segment: w/o Cherry Av.										
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 18,544 vehicles				Autos: 15						
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15						
Peak Hour Volume: 1,539 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:		74.0%	12.4%	13.6%	96.17%	
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%	
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%	
				Noise Source Elevations (in feet)						
				Autos:		0.000				
Barrier Height: 0.0 feet				Medium Trucks:		2.297		Grade Adjustment: 0.0		
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:		8.004				
Centerline Dist. to Barrier: 50.0 feet				Lane Equivalent Distance (in feet)						
Centerline Dist. to Observer: 50.0 feet				Autos:		43.589				
Barrier Distance to Observer: 0.0 feet				Medium Trucks:		43.386				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks:		43.405				
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	0.38	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0		67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9		62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7		66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5		70.8			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			54	116	250	538				
CNEL:			56	122	262	564				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC				Project Name: Cherry Av. - Alt2					
Road Name: Artesia Blvd.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,563 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:	74.0%	12.4%	13.6%	96.16%	
Barrier Height: 0.0 feet				Medium Trucks:	82.0%	2.6%	15.4%	2.12%	
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:	77.4%	4.8%	17.8%	1.72%	
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:	43.589				
Road Grade: 0.0%				Medium Trucks:	43.386				
Left View: -90.0 degrees				Heavy Trucks:	43.405				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0		67.5		
Medium Trucks:	61.2	60.4	51.3	54.4	62.0		62.1		
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7		66.9		
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5		70.9		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA		55 dBA		
Ldn:			54	117	253		544		
CNEL:			57	123	265		570		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:	43.589			
						Medium Trucks:	43.386			
		Heavy Trucks:	43.405							
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2				
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8				
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6				
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			52	111	240	517				
CNEL:			54	117	251	542				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,474 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,450 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.12	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	252	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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: 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: 74.0% 12.4% 13.6% 96.16%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,770 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,475 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.19	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,616 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,488 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,617 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,656 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	262	566			
CNEL:			59	128	275	593			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,974 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,658 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589					
				Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	263	566			
CNEL:			59	128	275	593			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0			
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			67	145	312	672			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,138 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,003 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.10%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.77%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.52	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.03	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.82	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.5	52.4	55.5	63.1	63.2			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 24,486 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,032 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						
				Vehicle Type		Day	Evening	Night	Daily	
				Autos:		74.0%	12.4%	13.6%	96.16%	
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%	
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%	
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
				FHWA Noise Model Calculations						
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten
Autos:				66.51	1.58	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:				77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:				82.99	-15.89	0.82	-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:				67.7	66.4	64.7	60.3	68.2	68.7	
Medium Trucks:				62.3	61.5	52.5	55.5	63.1	63.2	
Heavy Trucks:				66.7	65.6	59.5	60.5	67.9	68.1	
Vehicle Noise:				70.9	69.7	66.0	64.1	71.7	72.0	
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				65	140	301	648			
CNEL:				68	146	315	679			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt2 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,555 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,038 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:		74.0%	12.4%	13.6%	96.10%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.77%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.96	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.4	61.5	52.5	55.5	63.2	63.3			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.1	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	141	304	655			
CNEL:			69	148	319	687			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt3 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 25,069 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,081 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos: 74.0% 12.4% 13.6% 96.16%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%									
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000						
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8							
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3							
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2							
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			66	142	306	658							
CNEL:			69	149	320	690							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,093 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,083 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	149	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,301 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,100 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.17%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.11%		
		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%		
		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:		43.589					
		Medium Trucks:		43.386					
		Heavy Trucks:		43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	150	322	694			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,179 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,011 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6			
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0			
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	189	407			
CNEL:			43	92	198	426			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,454 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,034 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:		74.0%	12.4%	13.6%	95.77%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.06%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.83	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.04	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.5	58.7	49.7	52.7	60.3	60.4			
Heavy Trucks:	64.6	63.5	57.4	58.4	65.7	65.9			
Vehicle Noise:	68.3	67.1	63.3	61.5	69.1	69.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			44	94	202	436			
CNEL:			46	98	212	456			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,560 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,042 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: 74.0% 12.4% 13.6% 95.77% Medium Trucks: 82.0% 2.6% 15.4% 2.17% Heavy Trucks: 77.4% 4.8% 17.8% 2.06%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.33	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.01	0.82	-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:	64.8	63.5	61.7	57.4	65.3	65.7			
Medium Trucks:	59.5	58.7	49.7	52.7	60.3	60.4			
Heavy Trucks:	64.6	63.5	57.4	58.4	65.8	65.9			
Vehicle Noise:	68.3	67.2	63.3	61.5	69.1	69.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				44	94	203	438		
CNEL:				46	99	213	459		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,719 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,218 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.96	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.51	0.82	-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:	68.1	66.8	65.0	60.7	68.5	69.0			
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	148	319	687			
CNEL:			72	155	334	720			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,066 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,247 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:		74.0%	12.4%	13.6%	95.99%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.87%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.01	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.52	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.09	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.9			
Vehicle Noise:	71.5	70.3	66.5	64.7	72.3	72.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			71	153	330	710			
CNEL:			74	160	345	744			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.00	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.48	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	321	691			
CNEL:			72	156	336	724			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,289 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,265 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:		74.0%	12.4%	13.6%	95.99%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.87%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.05	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.48	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.05	0.82	-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	66.9	65.1	60.8	68.6	69.1			
Medium Trucks:	62.9	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.6	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.5	70.4	66.6	64.7	72.3	72.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			71	154	331	714			
CNEL:			75	161	347	748			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,377 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,438 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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:	68.5	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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:	68.5	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,737 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,468 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.01%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.86%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.42	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.12	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.71	0.82	-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	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.4	53.4	56.4	64.0	64.1			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.2			
Vehicle Noise:	71.9	70.7	66.9	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				75	163	350	754		
CNEL:				79	170	367	790		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,972 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,488 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:		74.0%	12.4%	13.6%	96.01%
				Medium Trucks:		82.0%	2.6%	15.4%	2.13%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.86%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.46	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.08	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.68	0.82	-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:	68.6	67.3	65.5	61.2	69.0	69.5			
Medium Trucks:	63.3	62.4	53.4	56.4	64.0	64.1			
Heavy Trucks:	67.9	66.8	60.7	61.7	69.1	69.3			
Vehicle Noise:	71.9	70.8	67.0	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			76	163	352	758			
CNEL:			79	171	369	794			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,105 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,084 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	321	691			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,347 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,104 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: 74.0% 12.4% 13.6% 96.05%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.13%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.82%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.82	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.49	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.1	70.0	66.2	64.3	71.9	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	313	674			
CNEL:			71	152	328	707			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4				
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	143	308	662				
CNEL:			69	150	322	694				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,548 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,121 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: 74.0% 12.4% 13.6% 96.05%					
Barrier Height:		0.0 feet		Medium Trucks:		82.0%		2.6% 15.4% 2.13%	
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%		4.8% 17.8% 1.82%	
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.76	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.78	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	67.9	66.6	64.8	60.5	68.3	68.8			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.2	70.0	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	146	315	678			
CNEL:			71	153	330	710			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,647 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,129 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	704			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,933 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,152 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:		74.0%	12.4%	13.6%	95.94%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.15%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.92%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.68	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.17	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.7	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.4	66.3	60.2	61.2	68.6	68.8			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	323	695			
CNEL:			73	157	338	728			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,138 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,169 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:		74.0%	12.4%	13.6%	95.94%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.15%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.91%
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			
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.86	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.64	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.14	0.82	-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	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.7	61.8	52.8	55.8	63.5	63.6			
Heavy Trucks:	67.5	66.4	60.3	61.2	68.6	68.8			
Vehicle Noise:	71.4	70.2	66.4	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	324	699			
CNEL:			73	158	340	731			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt3 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,659 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,130 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 43.589				
Left View: -90.0 degrees					Medium Trucks: 43.386				
Right View: 90.0 degrees					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt3 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	705			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt3 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,861 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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: 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: 74.0% 12.4% 13.6% 96.15% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.74%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.77	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.61	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.8	68.2	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				67	145	313	674		
CNEL:				71	152	328	706		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt3 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,067 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,164 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: 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: 74.0% 12.4% 13.6% 96.15% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.74%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.86	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.73	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.57	0.82	-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	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.6	61.8	52.7	55.8	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.8	68.2	68.4			
Vehicle Noise:	71.2	70.0	66.3	64.3	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	146	314	677			
CNEL:			71	153	330	710			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,116 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,251 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	322	694			
CNEL:			73	157	338	727			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,192 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,257 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.42	0.82	-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	66.9	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.5			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	323	696			
CNEL:			73	157	338	729			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
				FHWA Noise Model Calculations					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,559 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,287 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.10	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.48	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.37	0.82	-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	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.2	60.1	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.3	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	326	702			
CNEL:			74	158	341	736			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,551 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,540 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,856 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,565 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.6	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.6	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			54		117		253		544
CNEL:			57		123		265		571

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:	43.589							
		Medium Trucks:	43.386							
		Heavy Trucks:	43.405							
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2				
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8				
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6				
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			52	111	240	517				
CNEL:			54	117	251	542				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,488 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,452 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.12	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.6	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	252	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
				FHWA Noise Model Calculations					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,784 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,476 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.20	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			52		113		243		523
CNEL:			55		118		255		548

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,616 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,495 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,618 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,656 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	262	566			
CNEL:			59	128	275	593			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,981 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,658 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589					
				Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	263	566			
CNEL:			59	128	275	593			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: South St. Road Segment: e/o Cherry Av.					Project Name: Cherry Av. - Alt3 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet			VehicleType					
Site Data					Day	Evening	Night	Daily		
					Autos:		74.0%	12.4%	13.6%	96.16%
					Medium Trucks:		82.0%	2.6%	15.4%	2.12%
					Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
					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:		50.0 feet			Heavy Trucks:		8.004			
Centerline Dist. to Observer:		50.0 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:		43.589			
Pad Elevation:		0.0 feet			Medium Trucks:		43.386			
Road Elevation:		0.0 feet			Heavy Trucks:		43.405			
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	1.51	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6				
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2				
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0				
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			64	138	297	641				
CNEL:			67	145	312	672				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: e/o Cherry Av.					Project Name: Cherry Av. - Alt3 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,486 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,032 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				
					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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.58	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.89	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.3	61.5	52.5	55.5	63.1	63.2			
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		24,148 vehicles		Autos: 15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15			
Peak Hour Volume:		2,004 vehicles		Heavy Trucks (3+ Axles): 15			
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		50 feet		VehicleType			
Site Data				Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.15%			
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.12%			
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 1.74%			
Centerline Dist. to Barrier:		50.0 feet		Noise Source Elevations (in feet)			
Centerline Dist. to Observer:		50.0 feet		Autos: 0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks: 2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)			
Road Elevation:		0.0 feet		Autos: 43.589			
Road Grade:		0.0%		Medium Trucks: 43.386			
Left View:		-90.0 degrees		Heavy Trucks: 43.405			
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	1.52	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-15.05	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.91	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6	
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2	
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.0	
Vehicle Noise:	70.8	69.7	66.0	64.0	71.6	72.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			64	139	299	644	
CNEL:			67	145	313	675	

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYC+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt3 Job Number: 14715			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 24,565 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,039 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
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: 74.0% 12.4% 13.6% 96.15% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.74%			
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.60	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-14.98	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.84	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7	
Medium Trucks:	62.4	61.5	52.5	55.5	63.1	63.2	
Heavy Trucks:	66.8	65.7	59.6	60.6	67.9	68.1	
Vehicle Noise:	70.9	69.8	66.0	64.1	71.7	72.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			65	140	302	651	
CNEL:			68	147	317	683	

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,069 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,081 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3				
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	142	306	658				
CNEL:			69	149	320	690				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,089 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,082 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	149	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,298 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,100 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.17%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.12%		
		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%		
		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:		43.589					
		Medium Trucks:		43.386					
		Heavy Trucks:		43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	150	322	694			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 12,179 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,011 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:	43.589			
						Medium Trucks:	43.386			
						Heavy Trucks:	43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6				
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2				
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0				
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			41	88	189	407				
CNEL:			43	92	198	426				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,560 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,042 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	94.74%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.36%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	2.90%
Centerline Distance 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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.41	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.52	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.9	59.1	50.1	53.1	60.7	60.8			
Heavy Trucks:	66.1	65.0	58.9	59.9	67.3	67.4			
Vehicle Noise:	69.0	67.9	63.7	62.3	69.9	70.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			49	106	229	494			
CNEL:			51	111	239	515			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			41		88		190		409
CNEL:			43		92		199		429

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,666 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,051 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:		74.0%	12.4%	13.6%	94.75%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.36%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.89%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.38	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.50	0.82	-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:	64.8	63.5	61.7	57.4	65.2	65.7			
Medium Trucks:	60.0	59.1	50.1	53.1	60.7	60.8			
Heavy Trucks:	66.1	65.0	58.9	59.9	67.3	67.4			
Vehicle Noise:	69.1	67.9	63.7	62.4	69.9	70.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			50	107	230	496			
CNEL:			52	111	240	517			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 26,719 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,218 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.51	0.82	-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:	68.1	66.8	65.0	60.7	68.5	69.0				
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6				
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4				
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			69	148	319	687				
CNEL:			72	155	334	720				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,162 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,254 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:		74.0%	12.4%	13.6%	95.51%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.23%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.26%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.01	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.32	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.25	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	63.0	62.2	53.2	56.2	63.8	63.9			
Heavy Trucks:	68.4	67.3	61.2	62.1	69.5	69.7			
Vehicle Noise:	71.9	70.7	66.8	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			76	163	351	756			
CNEL:			79	170	367	790			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.00	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.48	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	321	691			
CNEL:			72	156	336	724			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,384 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,273 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	95.52%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.22%		
		Heavy Trucks:		77.4%	4.8%	17.8%	2.26%		
		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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.29	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.22	0.82	-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	66.9	65.1	60.7	68.6	69.1			
Medium Trucks:	63.0	62.2	53.2	56.2	63.8	63.9			
Heavy Trucks:	68.4	67.3	61.2	62.2	69.6	69.7			
Vehicle Noise:	71.9	70.7	66.8	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			76	164	353	760			
CNEL:			79	171	369	794			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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							
Right View:		90.0 degrees		Lane Equivalent Distance (in feet)					
				Autos:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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:	68.5	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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:	68.5	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,831 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,476 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: 74.0% 12.4% 13.6% 95.57%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.21%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 2.21%					
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: 43.589					
Road Grade:		0.0%		Medium Trucks: 43.386					
Left View:		-90.0 degrees		Heavy Trucks: 43.405					
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-13.94	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-13.94	0.82	-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	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.4	62.6	53.5	56.6	64.2	64.3			
Heavy Trucks:	68.7	67.6	61.5	62.4	69.8	70.0			
Vehicle Noise:	72.2	71.1	67.1	65.4	73.1	73.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			80	172	371	799			
CNEL:			84	180	388	835			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 30,066 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,496 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: 74.0% 12.4% 13.6% 95.58% Medium Trucks: 82.0% 2.6% 15.4% 2.21% Heavy Trucks: 77.4% 4.8% 17.8% 2.21%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-13.90	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-13.91	0.82	-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:	68.6	67.3	65.5	61.2	69.0	69.5			
Medium Trucks:	63.4	62.6	53.6	56.6	64.2	64.3			
Heavy Trucks:	68.7	67.6	61.5	62.5	69.9	70.0			
Vehicle Noise:	72.2	71.1	67.2	65.5	73.1	73.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				80	173	373	803		
CNEL:				84	181	390	839		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,105 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,084 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	321	691			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	662			
CNEL:			69	150	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,407 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,109 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: 74.0% 12.4% 13.6% 95.72%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.19%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 2.09%					
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: 43.589					
Road Grade:		0.0%		Medium Trucks: 43.386					
Left View:		-90.0 degrees		Heavy Trucks: 43.405					
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.68	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.88	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.7	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.7	66.6	60.5	61.5	68.9	69.1			
Vehicle Noise:	71.4	70.3	66.4	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			71	152	327	705			
CNEL:			74	159	342	738			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,608 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,125 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: 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: 74.0% 12.4% 13.6% 95.72% Medium Trucks: 82.0% 2.6% 15.4% 2.19% Heavy Trucks: 77.4% 4.8% 17.8% 2.09%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.76	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.65	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.85	0.82	-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:	67.9	66.6	64.8	60.5	68.3	68.8				
Medium Trucks:	62.7	61.8	52.8	55.8	63.5	63.6				
Heavy Trucks:	67.8	66.7	60.6	61.5	68.9	69.1				
Vehicle Noise:	71.4	70.3	66.4	64.7	72.3	72.6				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				71		153		329		708
CNEL:				74		160		344		741

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,647 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,129 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Day		Evening		Night	
Barrier Height:		0.0 feet		Autos:		74.0%		12.4%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%		2.6%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%		4.8%	
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:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	704			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,062 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,163 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: 74.0% 12.4% 13.6% 95.35%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.26%					
				Heavy Trucks: 77.4% 4.8% 17.8% 2.39%					
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: 43.589									
Medium Trucks: 43.386									
Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.44	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.19	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.9	62.1	53.0	56.1	63.7	63.8			
Heavy Trucks:	68.4	67.3	61.2	62.2	69.6	69.8			
Vehicle Noise:	71.8	70.7	66.6	65.0	72.6	72.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			75	161	348	749			
CNEL:			78	169	363	783			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 26,268 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,180 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: 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: 74.0% 12.4% 13.6% 95.36% Medium Trucks: 82.0% 2.6% 15.4% 2.26% Heavy Trucks: 77.4% 4.8% 17.8% 2.39%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.85	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.41	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.16	0.82	-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	66.7	64.9	60.6	68.4	68.9				
Medium Trucks:	62.9	62.1	53.1	56.1	63.7	63.8				
Heavy Trucks:	68.4	67.4	61.3	62.2	69.6	69.8				
Vehicle Noise:	71.8	70.7	66.7	65.1	72.7	73.0				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				75		162		349		753
CNEL:				79		169		365		787

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt4 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,659 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,130 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%						
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9					
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5					
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3					
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			67	145	312	672					
CNEL:			70	152	327	705					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt4 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,859 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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: 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: 74.0% 12.4% 13.6% 96.06%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.13%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.81%				
					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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.73	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.43	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.8	52.7	55.8	63.4	63.5			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.3	68.5			
Vehicle Noise:	71.2	70.1	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	317	682			
CNEL:			71	154	332	715			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,065 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,163 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: 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: 74.0% 12.4% 13.6% 96.06%					
					Medium Trucks: 82.0% 2.6% 15.4% 2.13%					
					Heavy Trucks: 77.4% 4.8% 17.8% 1.81%					
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.85	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.70	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.40	0.82	-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	66.7	64.9	60.6	68.4	68.9				
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5				
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.5				
Vehicle Noise:	71.3	70.1	66.3	64.4	72.1	72.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA		65 dBA		60 dBA		55 dBA	
Ldn:			69		148		318		686	
CNEL:			72		155		333		718	

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,116 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,251 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	322	694			
CNEL:			73	157	338	727			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,190 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,257 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:		74.0%	12.4%	13.6%	96.13%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.75%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.53	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.37	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.2	60.1	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	324	698			
CNEL:			73	158	340	732			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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:	68.2	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt4 Job Number: 14715							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		27,558 vehicles		Autos:		15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15					
Peak Hour Volume:		2,287 vehicles		Heavy Trucks (3+ Axles):		15					
Vehicle Speed:		40 mph		Vehicle Mix							
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.13%				
		Medium Trucks:		82.0%	2.6%	15.4%	2.12%				
		Heavy Trucks:		77.4%	4.8%	17.8%	1.75%				
		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:		43.589									
Medium Trucks:		43.386									
Heavy Trucks:		43.405									
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	2.10	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.47	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.31	0.82	-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	66.9	65.2	60.8	68.7	69.2					
Medium Trucks:	62.9	62.0	53.0	56.0	63.7	63.8					
Heavy Trucks:	67.3	66.2	60.1	61.1	68.5	68.6					
Vehicle Noise:	71.4	70.3	66.5	64.6	72.2	72.5					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			70	152	327	704					
CNEL:			74	159	343	738					

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,548 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,539 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
Centerline Distance 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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,853 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,565 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.6	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.6	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:		43.589		
						Medium Trucks:		43.386		
						Heavy Trucks:		43.405		
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2				
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8				
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6				
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			52	111	240	517				
CNEL:			54	117	251	542				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos:		74.0%	12.4%	13.6%	96.16%				
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%				
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%				
				Noise Source Elevations (in feet)									
				Autos:		0.000		Grade Adjustment: 0.0					
				Medium Trucks:		2.297							
				Heavy Trucks:		8.004							
								Lane Equivalent Distance (in feet)					
Autos:		43.589											
Medium Trucks:		43.386											
				Heavy Trucks:		43.405							
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 0.18 0.79 -1.20 -4.65 0.000 0.000													
Medium Trucks: 77.72 -16.39 0.82 -1.20 -4.87 0.000 0.000													
Heavy Trucks: 82.99 -17.29 0.82 -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: 66.3 65.0 63.3 58.9 66.8 67.3													
Medium Trucks: 60.9 60.1 51.1 54.1 61.7 61.8													
Heavy Trucks: 65.3 64.2 58.1 59.1 66.5 66.6													
Vehicle Noise: 69.5 68.3 64.6 62.7 70.3 70.6													
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			52	113	243	523							
CNEL:			55	118	254	548							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 17,482 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,451 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:	74.0%	12.4%	13.6%	96.17%
						Medium Trucks:	82.0%	2.6%	15.4%	2.11%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.71%
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.12	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2				
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8				
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6				
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			52	111	240	517				
CNEL:			54	117	252	542				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,777 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,476 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.19	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	255	548			

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E				Project Name: Cherry Av. - Alt4					
Road Name: South St.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,616 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type	Day	Evening	Night	Daily	
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000			
Barrier Height: 0.0 feet				Medium Trucks:		2.297		Grade Adjustment: 0.0	
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:		8.004			
Centerline Dist. to Barrier: 50.0 feet				Lane Equivalent Distance (in feet)					
Centerline Dist. to Observer: 50.0 feet				Autos:		43.589			
Barrier Distance to Observer: 0.0 feet				Medium Trucks:		43.386			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks:		43.405			
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	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2		67.7		
Medium Trucks:	61.4	60.5	51.5	54.5	62.1		62.2		
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9		67.1		
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7		71.0		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				56	120	258	556		
CNEL:				58	126	271	583		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,492 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,618 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:		74.0%	12.4%	13.6%	96.17%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2		67.7		
Medium Trucks:	61.4	60.5	51.5	54.5	62.1		62.2		
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9		67.1		
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7		71.0		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				56	120	258	556		
CNEL:				58	126	271	583		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC				Project Name: Cherry Av. - Alt4					
Road Name: South St.				Job Number: 14715					
Road Segment: w/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,656 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:	74.0%	12.4%	13.6%	96.16%	
Barrier Height: 0.0 feet				Medium Trucks:	82.0%	2.6%	15.4%	2.12%	
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:	77.4%	4.8%	17.8%	1.72%	
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:	43.589				
Road Grade: 0.0%				Medium Trucks:	43.386				
Left View: -90.0 degrees				Heavy Trucks:	43.405				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3		67.8		
Medium Trucks:	61.5	60.6	51.6	54.6	62.2		62.3		
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0		67.2		
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8		71.1		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				57	122	262	566		
CNEL:				59	128	275	593		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,069 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,998 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph				Vehicle Mix					
Near/Far Lane Distance: 50 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
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	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0			
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			67	145	312	672			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,486 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,032 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
				FHWA Noise Model Calculations					
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.58	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.89	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.3	61.5	52.5	55.5	63.1	63.2			
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,154 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,005 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: 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: 74.0% 12.4% 13.6% 96.08% Medium Trucks: 82.0% 2.6% 15.4% 2.13% Heavy Trucks: 77.4% 4.8% 17.8% 1.79%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.52	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.5	52.5	55.5	63.1	63.2			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	70.9	69.8	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	302	650			
CNEL:			68	147	316	681			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt4 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,571 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,039 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: 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: 74.0% 12.4% 13.6% 96.08% Medium Trucks: 82.0% 2.6% 15.4% 2.13% Heavy Trucks: 77.4% 4.8% 17.8% 1.79%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.95	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.71	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.4	61.5	52.5	55.5	63.2	63.3			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.1	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				66	142	305	657		
CNEL:				69	148	319	688		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,069 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,081 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					
				Vehicle Type		Day	Evening	Night	Daily
						Autos: 74.0%	12.4%	13.6%	96.16%
						Medium Trucks: 82.0%	2.6%	15.4%	2.12%
						Heavy Trucks: 77.4%	4.8%	17.8%	1.72%
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	658			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	149	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,098 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,083 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,306 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,100 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:		74.0%	12.4%	13.6%	96.17%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	150	322	694			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,179 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,011 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6			
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0			
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	189	407			
CNEL:			43	92	198	426			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,585 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,045 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:		74.0%	12.4%	13.6%	95.13%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.28%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.59%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.35	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.56	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.01	0.82	-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:	64.7	63.5	61.7	57.4	65.2	65.7			
Medium Trucks:	59.8	58.9	49.9	52.9	60.6	60.7			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.8	66.9			
Vehicle Noise:	68.8	67.7	63.6	62.1	69.6	69.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			47	102	220	474			
CNEL:			49	107	230	495			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,691 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,053 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: 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: 74.0% 12.4% 13.6% 95.14% Medium Trucks: 82.0% 2.6% 15.4% 2.28% Heavy Trucks: 77.4% 4.8% 17.8% 2.58%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.32	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.52	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.98	0.82	-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:	64.8	63.5	61.8	57.4	65.3	65.8			
Medium Trucks:	59.8	59.0	50.0	53.0	60.6	60.7			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.8	67.0			
Vehicle Noise:	68.8	67.7	63.6	62.1	69.7	70.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			48		103		221		476
CNEL:			50		107		231		497

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,719 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,218 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.51	0.82	-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:	68.1	66.8	65.0	60.7	68.5	69.0			
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	148	319	687			
CNEL:			72	155	334	720			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,212 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,259 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:		74.0%	12.4%	13.6%	95.70%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.19%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.12%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.02	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.53	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.9	62.1	53.1	56.1	63.7	63.8			
Heavy Trucks:	68.1	67.0	60.9	61.9	69.2	69.4			
Vehicle Noise:	71.7	70.6	66.7	64.9	72.6	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	159	344	740			
CNEL:			77	167	359	774			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.00	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.57	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.48	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.4	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	321	691			
CNEL:			72	156	336	724			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,434 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,277 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:		74.0%	12.4%	13.6%	95.70%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	2.11%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.06	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.36	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.51	0.82	-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	66.9	65.1	60.8	68.6	69.1			
Medium Trucks:	63.0	62.1	53.1	56.1	63.8	63.9			
Heavy Trucks:	68.1	67.0	60.9	61.9	69.3	69.4			
Vehicle Noise:	71.8	70.6	66.7	65.0	72.6	72.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	160	345	744			
CNEL:			78	168	361	778			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Day		Evening		Night	
Barrier Height:		0.0 feet		Autos:		74.0%		12.4%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%		2.6%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%		4.8%	
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:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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:	68.5	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt5 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 29,885 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,480 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: 74.0% 12.4% 13.6% 95.74%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.18%									
				Heavy Trucks: 77.4% 4.8% 17.8% 2.08%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 2.43 0.79 -1.20 -4.65 0.000 0.000													
Medium Trucks: 77.72 -14.00 0.82 -1.20 -4.87 0.000 0.000													
Heavy Trucks: 82.99 -14.20 0.82 -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 67.2 65.5 61.1 69.0 69.5													
Medium Trucks: 63.3 62.5 53.5 56.5 64.1 64.2													
Heavy Trucks: 68.4 67.3 61.2 62.2 69.6 69.7													
Vehicle Noise: 72.1 71.0 67.1 65.3 72.9 73.2													
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				78	169	364	784						
CNEL:				82	177	381	820						

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt5 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 30,120 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,500 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: 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: 74.0% 12.4% 13.6% 95.75% Medium Trucks: 82.0% 2.6% 15.4% 2.18% Heavy Trucks: 77.4% 4.8% 17.8% 2.08%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.46	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-13.97	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.17	0.82	-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:	68.6	67.3	65.5	61.2	69.0	69.5				
Medium Trucks:	63.4	62.5	53.5	56.5	64.2	64.3				
Heavy Trucks:	68.4	67.3	61.2	62.2	69.6	69.8				
Vehicle Noise:	72.1	71.0	67.1	65.3	73.0	73.3				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				79		170		365		787
CNEL:				82		177		382		824

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,105 vehicles					Autos: 15					
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,084 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph					Vehicle Mix					
Near/Far Lane Distance: 50 feet					VehicleType					
Site Data					Day		Evening		Night	
					Autos: 74.0%		12.4%		13.6%	
					Medium Trucks: 82.0%		2.6%		15.4%	
					Heavy Trucks: 77.4%		4.8%		17.8%	
					Grade Adjustment: 0.0					
					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.004					
					Lane Equivalent Distance (in feet)					
					Autos: 43.589					
					Medium Trucks: 43.386					
					Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8				
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3				
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2				
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			66	142	306	659				
CNEL:			69	149	321	691				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%						
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8					
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4					
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2					
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			66	143	308	662					
CNEL:			69	150	322	694					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,445 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,112 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: 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: 74.0% 12.4% 13.6% 95.85% Medium Trucks: 82.0% 2.6% 15.4% 2.16% Heavy Trucks: 77.4% 4.8% 17.8% 1.99%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.74	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.73	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.09	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.6	61.8	52.7	55.8	63.4	63.5			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.9			
Vehicle Noise:	71.3	70.2	66.3	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				69	150	322	695		
CNEL:				73	157	337	727		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,646 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,129 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: 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: 74.0% 12.4% 13.6% 95.85%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.16%				
					Heavy Trucks: 77.4% 4.8% 17.8% 1.99%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.77	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.70	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.06	0.82	-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:	67.9	66.6	64.8	60.5	68.4	68.8			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.6	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.4	70.2	66.4	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA		65 dBA		60 dBA	
				55 dBA					
Ldn:				70		150		324	
CNEL:				73		157		339	
								698	
								731	

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,647 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,129 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	704			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,079 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,165 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 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:		74.0%	12.4%	13.6%	95.57%
					Medium Trucks:		82.0%	2.6%	15.4%	2.21%
					Heavy Trucks:		77.4%	4.8%	17.8%	2.22%
					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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.83	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.52	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.52	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9				
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7				
Heavy Trucks:	68.1	67.0	60.9	61.9	69.3	69.4				
Vehicle Noise:	71.6	70.5	66.6	64.9	72.5	72.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			73	157	339	731				
CNEL:			76	165	355	764				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,284 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,182 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: 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: 74.0% 12.4% 13.6% 95.58%				
					Medium Trucks: 82.0% 2.6% 15.4% 2.21%				
					Heavy Trucks: 77.4% 4.8% 17.8% 2.21%				
					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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.87	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.49	0.82	-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	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	68.1	67.0	60.9	61.9	69.3	69.5			
Vehicle Noise:	71.7	70.5	66.6	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				73	158	341	734		
CNEL:				77	165	356	767		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,659 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,130 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%						
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9					
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5					
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3					
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			67	145	312	672					
CNEL:			70	152	327	705					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		25,916 vehicles			Autos: 15				
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		2,151 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 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: 74.0% 12.4% 13.6% 96.10%				
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 77.4% 4.8% 17.8% 1.78%				
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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.83	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.74	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.49	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.5			
Vehicle Noise:	71.2	70.0	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	146	315	680			
CNEL:			71	153	331	712			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,122 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,168 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: 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: 74.0% 12.4% 13.6% 96.10% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.78%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.86	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.71	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.46	0.82	-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	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.6	61.8	52.8	55.8	63.4	63.5			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.2	70.1	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	147	317	683			
CNEL:			72	154	332	716			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,116 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,251 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	322	694			
CNEL:			73	157	338	727			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,212 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,259 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:		74.0%	12.4%	13.6%	96.15%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.74%
Centerline Dist. to Barrier:		50.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		50.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.004	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.53	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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	66.9	65.1	60.8	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	324	697			
CNEL:			73	157	339	731			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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:	68.2	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,579 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,289 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					
				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:		74.0%	12.4%	13.6%	96.15%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.74%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.10	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.47	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.33	0.82	-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:	68.2	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.9	62.0	53.0	56.0	63.7	63.8			
Heavy Trucks:	67.3	66.2	60.1	61.1	68.4	68.6			
Vehicle Noise:	71.4	70.3	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA		65 dBA		60 dBA	
				55 dBA					
Ldn:				70		152		327	
CNEL:				74		159		342	

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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					
					Vehicle Type		Day	Evening	Night	Daily
					Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5				
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0				
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8				
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			54	116	250	538				
CNEL:			56	122	262	564				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,556 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,540 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet			Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
Centerline Distance 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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.38	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5				
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0				
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8				
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				54	116	250	538			
CNEL:				56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.					Project Name: Cherry Av. - Alt5 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,861 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,565 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.6	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.6	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	571			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,440 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,448 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	0.11	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	251	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,498 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,452 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
Centerline Distance 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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.13	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.6	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	252	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
				FHWA Noise Model Calculations					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,794 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,477 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.20	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			52		113		243		523
CNEL:			55		118		255		548

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,616 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,656 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:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
				FHWA Noise Model Calculations					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	262	566			
CNEL:			59	128	275	593			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,500 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,618 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:		74.0%	12.4%	13.6%	96.17%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	557			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt5 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,986 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,659 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: 74.0% 12.4% 13.6% 96.17%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.11%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	263	566			
CNEL:			59	128	275	593			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E				Project Name: Cherry Av. - Alt5					
Road Name: South St.				Job Number: 14715					
Road Segment: e/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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			
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0					
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0			
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			67	145	312	672			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC				Project Name: Cherry Av. - Alt5							
Road Name: South St.				Job Number: 14715							
Road Segment: e/o Cherry Av.											
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt): 24,486 vehicles				Autos: 15							
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15							
Peak Hour Volume: 2,032 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:		74.0%	12.4%	13.6%	96.16%		
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%		
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%		
				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:		43.589					
				Medium Trucks:		43.386					
				Heavy Trucks:		43.405					
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.58	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.99	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.89	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7					
Medium Trucks:	62.3	61.5	52.5	55.5	63.1	63.2					
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.1					
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			65	140	301	648					
CNEL:			68	146	315	679					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P				Project Name: Cherry Av. - Alt5					
Road Name: South St.				Job Number: 14715					
Road Segment: e/o Cherry Av.									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,173 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,006 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:		74.0%	12.4%	13.6%	96.11%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.77%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.53	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.03	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.83	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.5	52.4	55.5	63.1	63.2			
Heavy Trucks:	66.8	65.7	59.6	60.6	67.9	68.1			
Vehicle Noise:	70.9	69.7	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	301	648			
CNEL:			68	146	315	679			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: E Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt6 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 25,069 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,081 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos: 74.0% 12.4% 13.6% 96.16%									
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%									
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%									
				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: 43.589									
				Medium Trucks: 43.386									
				Heavy Trucks: 43.405									
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000						
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8							
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3							
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2							
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1							
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			66	142	306	658							
CNEL:			69	149	320	690							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,098 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,083 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.89	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.79	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.4	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.8	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	320	690			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,277 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,098 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.72	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				66	143	307	662		
CNEL:				69	149	322	694		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: w/o SR-91 WB Ramps				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,307 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,101 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 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:		74.0%	12.4%	13.6%	96.17%		
		Medium Trucks:		82.0%	2.6%	15.4%	2.11%		
		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%		
		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:		43.589					
		Medium Trucks:		43.386					
		Heavy Trucks:		43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.76	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	307	662			
CNEL:			69	150	322	694			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,179 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,011 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:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-18.02	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.93	0.82	-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:	64.7	63.4	61.6	57.3	65.1	65.6			
Medium Trucks:	59.3	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.8	65.0			
Vehicle Noise:	67.9	66.7	63.0	61.0	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	189	407			
CNEL:			43	92	198	426			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,285 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,020 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-18.89	0.82	-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:	64.7	63.4	61.7	57.3	65.2	65.7			
Medium Trucks:	59.4	58.5	49.5	52.5	60.1	60.2			
Heavy Trucks:	63.7	62.6	56.5	57.5	64.9	65.1			
Vehicle Noise:	67.9	66.7	63.0	61.1	68.7	69.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			43	92	199	429			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		12,518 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		1,039 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: 74.0% 12.4% 13.6% 95.70%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.17%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 2.12%					
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: 43.589					
Road Grade:		0.0%		Medium Trucks: 43.386					
Left View:		-90.0 degrees		Heavy Trucks: 43.405					
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.35	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-17.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.89	0.82	-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:	64.8	63.5	61.7	57.4	65.2	65.7			
Medium Trucks:	59.5	58.7	49.7	52.7	60.3	60.4			
Heavy Trucks:	64.7	63.6	57.5	58.5	65.9	66.1			
Vehicle Noise:	68.4	67.2	63.3	61.6	69.2	69.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			44	95	205	441			
CNEL:			46	99	214	462			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 12,623 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,048 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: 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: 74.0% 12.4% 13.6% 95.71% Medium Trucks: 82.0% 2.6% 15.4% 2.17% Heavy Trucks: 77.4% 4.8% 17.8% 2.12%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-1.31	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-17.75	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.86	0.82	-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:	64.8	63.5	61.8	57.4	65.3	65.8				
Medium Trucks:	59.6	58.7	49.7	52.7	60.4	60.5				
Heavy Trucks:	64.8	63.7	57.6	58.5	65.9	66.1				
Vehicle Noise:	68.4	67.2	63.4	61.6	69.2	69.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				44		96		206		444
CNEL:				46		100		215		464

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 26,719 vehicles				Autos: 15					
Peak Hour Percentage: 8.30%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,218 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height: 0.0 feet				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
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: 43.589					
Road Grade: 0.0%				Medium Trucks: 43.386					
Left View: -90.0 degrees				Heavy Trucks: 43.405					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.96	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.61	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.51	0.82	-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	66.8	65.0	60.7	68.5	69.0			
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6			
Heavy Trucks:	67.1	66.0	59.9	60.9	68.3	68.4			
Vehicle Noise:	71.3	70.1	66.4	64.4	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	148	319	687			
CNEL:			72	155	334	720			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 26,941 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,236 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos:		74.0%	12.4%	13.6%	96.16%				
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%				
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%				
				Noise Source Elevations (in feet)									
				Autos:		0.000		Grade Adjustment: 0.0					
				Medium Trucks:		2.297							
				Heavy Trucks:		8.004							
								Lane Equivalent Distance (in feet)					
Autos:		43.589											
Medium Trucks:		43.386											
				Heavy Trucks:		43.405							
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 2.00 0.79 -1.20 -4.65 0.000 0.000													
Medium Trucks: 77.72 -14.57 0.82 -1.20 -4.87 0.000 0.000													
Heavy Trucks: 82.99 -15.48 0.82 -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: 68.1 66.8 65.1 60.7 68.6 69.1													
Medium Trucks: 62.8 61.9 52.9 55.9 63.6 63.7													
Heavy Trucks: 67.1 66.0 59.9 60.9 68.3 68.5													
Vehicle Noise: 71.3 70.2 66.4 64.5 72.1 72.4													
Centerline Distance to Noise Contour (in feet)													
			70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:			69	149	321	691							
CNEL:			72	156	336	724							

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,147 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,253 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: 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: 74.0% 12.4% 13.6% 95.96% Medium Trucks: 82.0% 2.6% 15.4% 2.14% Heavy Trucks: 77.4% 4.8% 17.8% 1.90%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.02	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.50	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.01	0.82	-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	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.6	66.5	60.4	61.4	68.8	68.9			
Vehicle Noise:	71.5	70.4	66.6	64.7	72.3	72.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			71	154	332	715			
CNEL:			75	161	347	748			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o Artesia Blvd.				Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 27,369 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,272 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: 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:		74.0%	12.4%	13.6%	95.97%	
				Medium Trucks:		82.0%	2.6%	15.4%	2.14%	
				Heavy Trucks:		77.4%	4.8%	17.8%	1.90%	
				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:		43.589				
				Medium Trucks:		43.386				
				Heavy Trucks:		43.405				
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.06	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.47	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-14.98	0.82	-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	66.9	65.1	60.8	68.6	69.1				
Medium Trucks:	62.9	62.0	53.0	56.0	63.7	63.8				
Heavy Trucks:	67.6	66.5	60.4	61.4	68.8	69.0				
Vehicle Noise:	71.5	70.4	66.6	64.7	72.4	72.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				72		155		333		718
CNEL:				75		162		349		752

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		29,377 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,438 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		VehicleType					
Site Data				Day		Evening		Night	
Barrier Height:		0.0 feet		Autos:		74.0%		12.4%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%		2.6%	
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%		4.8%	
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:		43.589			
Left View:		-90.0 degrees		Medium Trucks:		43.386			
Right View:		90.0 degrees		Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.10	0.82	-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	67.2	65.4	61.1	69.0	69.5			
Medium Trucks:	63.1	62.3	53.3	56.3	63.9	64.0			
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.8			
Vehicle Noise:	71.7	70.5	66.8	64.8	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			73	158	340	732			
CNEL:			77	165	356	767			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,612 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,458 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				Noise Source Elevations (in feet)					
				Autos:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.004			
								Lane Equivalent Distance (in feet)	
Autos:		43.589							
Medium Trucks:		43.386							
Heavy Trucks:		43.405							
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.41	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.16	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.07	0.82	-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:	68.5	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.3	53.3	56.3	64.0	64.1			
Heavy Trucks:	67.5	66.5	60.4	61.3	68.7	68.9			
Vehicle Noise:	71.7	70.6	66.8	64.9	72.5	72.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			74	158	341	736			
CNEL:			77	166	358	771			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 29,820 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,475 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:		74.0%	12.4%	13.6%	95.98%
				Medium Trucks:		82.0%	2.6%	15.4%	2.13%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.88%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.43	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.10	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.64	0.82	-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	67.2	65.5	61.1	69.0	69.5			
Medium Trucks:	63.2	62.4	53.4	56.4	64.0	64.1			
Heavy Trucks:	68.0	66.9	60.8	61.7	69.1	69.3			
Vehicle Noise:	71.9	70.8	67.0	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			76	163	352	759			
CNEL:			79	171	369	795			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		30,056 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,495 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:		74.0%	12.4%	13.6%	95.99%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.88%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.47	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.07	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-14.61	0.82	-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:	68.6	67.3	65.5	61.2	69.0	69.5			
Medium Trucks:	63.3	62.4	53.4	56.4	64.1	64.2			
Heavy Trucks:	68.0	66.9	60.8	61.8	69.2	69.3			
Vehicle Noise:	71.9	70.8	67.0	65.1	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA		65 dBA		60 dBA		55 dBA
Ldn:			76		164		354		762
CNEL:			80		172		371		799

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,105 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,084 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet		Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
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	1.69	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.78	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.1	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	142	306	659			
CNEL:			69	149	321	691			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,404 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,109 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.03%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.13%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.84%
Centerline Distance 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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.74	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.81	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.43	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.3	68.5			
Vehicle Noise:	71.2	70.0	66.2	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			68	146	314	677			
CNEL:			71	153	329	710			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 25,306 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,100 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.73	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.85	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.75	0.82	-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:	67.8	66.5	64.8	60.4	68.3	68.8			
Medium Trucks:	62.5	61.6	52.6	55.6	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.6	68.0	68.2			
Vehicle Noise:	71.0	69.9	66.2	64.2	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			66	143	308	662			
CNEL:			69	150	322	694			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 60th St.				Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,605 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,125 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: 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: 74.0% 12.4% 13.6% 96.03% Medium Trucks: 82.0% 2.6% 15.4% 2.13% Heavy Trucks: 77.4% 4.8% 17.8% 1.84%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
				FHWA Noise Model Calculations						
				VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten
Autos:				66.51	1.77	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:				77.72	-14.77	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:				82.99	-15.40	0.82	-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:				67.9	66.6	64.8	60.5	68.4	68.8	
Medium Trucks:				62.6	61.7	52.7	55.7	63.4	63.5	
Heavy Trucks:				67.2	66.1	60.0	61.0	68.4	68.5	
Vehicle Noise:				71.2	70.1	66.3	64.4	72.0	72.3	
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				68	147	316	681			
CNEL:				71	154	331	713			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,647 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,129 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				
					Vehicle Type		Day	Evening	Night
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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.5	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	668			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		25,998 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,158 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		74.0%	12.4%	13.6%	95.90%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		82.0%	2.6%	15.4%	2.15%
Centerline Dist. to Barrier:		50.0 feet			Heavy Trucks:		77.4%	4.8%	17.8%	1.95%
Centerline Distance 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:		43.589			
					Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.83	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.66	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.08	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9				
Medium Trucks:	62.7	61.8	52.8	55.8	63.5	63.6				
Heavy Trucks:	67.5	66.4	60.3	61.3	68.7	68.9				
Vehicle Noise:	71.4	70.2	66.4	64.6	72.2	72.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				70	151	325	700			
CNEL:				73	158	340	733			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)											
Scenario: OYC Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 25,852 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,146 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%						
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000				
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000				
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9					
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5					
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3					
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			67	145	312	672					
CNEL:			70	152	327	704					

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: n/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		26,204 vehicles			Autos:		15			
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		2,175 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		50 feet								
Site Data					Autos:		74.0%	12.4%	13.6%	95.90%
Barrier Height:		0.0 feet			Medium Trucks:		82.0%	2.6%	15.4%	2.15%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		77.4%	4.8%	17.8%	1.95%
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			
Road Elevation:		0.0 feet			Grade Adjustment: 0.0					
Road Grade:		0.0%								
Left View:		-90.0 degrees			Autos:		43.589			
Right View:		90.0 degrees			Medium Trucks:		43.386			
					Heavy Trucks:		43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.87	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.62	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.05	0.82	-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	66.7	64.9	60.6	68.4	68.9				
Medium Trucks:	62.7	61.9	52.9	55.9	63.5	63.6				
Heavy Trucks:	67.6	66.5	60.4	61.3	68.7	68.9				
Vehicle Noise:	71.4	70.3	66.4	64.6	72.2	72.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				70	152	327	704			
CNEL:				74	159	342	737			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,659 vehicles					Autos: 15				
Peak Hour Percentage: 8.30%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,130 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType				
Site Data					Day				
					Evening				
					Night				
					Daily				
					Autos: 74.0% 12.4% 13.6% 96.16%				
Barrier Height: 0.0 feet					Medium Trucks: 82.0% 2.6% 15.4% 2.12%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
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				
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Grade: 0.0%					Autos: 43.589				
Left View: -90.0 degrees					Medium Trucks: 43.386				
Right View: 90.0 degrees					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.79	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.79	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.69	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.3	63.4			
Heavy Trucks:	66.9	65.8	59.7	60.7	68.1	68.3			
Vehicle Noise:	71.1	69.9	66.2	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	669			
CNEL:			70	151	325	701			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,865 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,147 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.82	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.75	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.66	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.7	68.1	68.3			
Vehicle Noise:	71.1	70.0	66.3	64.3	71.9	72.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	145	312	672			
CNEL:			70	152	327	705			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		25,910 vehicles			Autos: 15				
Peak Hour Percentage:		8.30%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		2,151 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		50 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: 74.0% 12.4% 13.6% 96.15%				
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 82.0% 2.6% 15.4% 2.11%				
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 77.4% 4.8% 17.8% 1.74%				
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: 43.589				
					Medium Trucks: 43.386				
					Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.83	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.77	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.59	0.82	-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:	67.9	66.6	64.9	60.5	68.4	68.9			
Medium Trucks:	62.6	61.7	52.7	55.7	63.4	63.5			
Heavy Trucks:	67.0	65.9	59.8	60.8	68.2	68.4			
Vehicle Noise:	71.2	70.0	66.3	64.3	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				68	145	313	675		
CNEL:				71	152	328	707		

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o 59th St.					Project Name: Cherry Av. - Alt6 Job Number: 14715				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,115 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,168 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: 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: 74.0% 12.4% 13.6% 96.15% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.74%				
					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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.86	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.73	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.56	0.82	-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	66.7	64.9	60.6	68.4	68.9			
Medium Trucks:	62.6	61.8	52.7	55.8	63.4	63.5			
Heavy Trucks:	67.1	66.0	59.9	60.8	68.2	68.4			
Vehicle Noise:	71.2	70.0	66.3	64.4	72.0	72.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				68	146	315	679		
CNEL:				71	153	330	711		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,116 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,251 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					
				Vehicle Type		Day	Evening	Night	Daily
						Autos: 74.0%	12.4%	13.6%	96.16%
						Medium Trucks: 82.0%	2.6%	15.4%	2.12%
						Heavy Trucks: 77.4%	4.8%	17.8%	1.72%
				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: 43.589					
				Medium Trucks: 43.386					
				Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.03	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.55	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.45	0.82	-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:	68.1	66.8	65.1	60.7	68.6	69.1			
Medium Trucks:	62.8	61.9	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	60.9	68.3	68.5			
Vehicle Noise:	71.3	70.2	66.5	64.5	72.1	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	322	694			
CNEL:			73	157	338	727			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,484 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,281 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.09	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.49	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.39	0.82	-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:	68.2	66.9	65.2	60.8	68.7	69.2			
Medium Trucks:	62.8	62.0	53.0	56.0	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.6			
Vehicle Noise:	71.4	70.2	66.5	64.6	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	151	325	700			
CNEL:			73	158	341	734			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		27,210 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,258 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: 74.0% 12.4% 13.6% 96.16%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.11%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 1.73%					
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: 43.589					
Road Grade:		0.0%		Medium Trucks: 43.386					
Left View:		-90.0 degrees		Heavy Trucks: 43.405					
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.04	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.54	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.42	0.82	-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	66.9	65.1	60.8	68.6	69.1			
Medium Trucks:	62.8	62.0	52.9	55.9	63.6	63.7			
Heavy Trucks:	67.2	66.1	60.0	61.0	68.4	68.5			
Vehicle Noise:	71.4	70.2	66.5	64.5	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			70	150	323	696			
CNEL:			73	157	339	729			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: OYC+P Road Name: Cherry Av. Road Segment: s/o South Street				Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 27,577 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,289 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.73%						
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405						
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	2.10	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-14.48	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-15.36	0.82	-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	66.9	65.2	60.8	68.7	69.2				
Medium Trucks:	62.9	62.0	53.0	56.0	63.6	63.7				
Heavy Trucks:	67.3	66.2	60.1	61.0	68.4	68.6				
Vehicle Noise:	71.4	70.3	66.5	64.6	72.2	72.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA		65 dBA		60 dBA		55 dBA
Ldn:				70		151		326		702
CNEL:				74		159		342		736

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)										
Scenario: E Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 18,527 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,538 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						
				Vehicle Type		Day	Evening	Night	Daily	
						Autos:	74.0%	12.4%	13.6%	96.16%
						Medium Trucks:	82.0%	2.6%	15.4%	2.12%
						Heavy Trucks:	77.4%	4.8%	17.8%	1.72%
				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:	43.589			
						Medium Trucks:	43.386			
						Heavy Trucks:	43.405			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.37	0.79	-1.20	-4.65	0.000	0.000			
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.4	59.1	67.0	67.5				
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0				
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8				
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			54	116	250	538				
CNEL:			56	122	262	564				

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		18,557 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,540 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.17%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.38	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.10	0.82	-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:	66.5	65.2	63.5	59.1	67.0	67.5			
Medium Trucks:	61.1	60.3	51.3	54.3	61.9	62.0			
Heavy Trucks:	65.5	64.4	58.3	59.3	66.7	66.8			
Vehicle Noise:	69.7	68.5	64.8	62.8	70.5	70.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	116	250	538			
CNEL:			56	122	262	564			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,832 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,563 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.44	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.5	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	570			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,862 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,566 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.45	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.13	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.03	0.82	-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:	66.6	65.3	63.5	59.2	67.0	67.5			
Medium Trucks:	61.2	60.4	51.3	54.4	62.0	62.1			
Heavy Trucks:	65.6	64.5	58.4	59.4	66.7	66.9			
Vehicle Noise:	69.8	68.6	64.9	62.9	70.6	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			54	117	253	544			
CNEL:			57	123	265	571			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,440 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,448 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.11	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.5	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	251	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		17,500 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,452 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.18%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.71%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.13	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.46	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.37	0.82	-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:	66.2	64.9	63.2	58.8	66.7	67.2			
Medium Trucks:	60.9	60.0	51.0	54.0	61.7	61.8			
Heavy Trucks:	65.2	64.2	58.1	59.0	66.4	66.6			
Vehicle Noise:	69.4	68.3	64.6	62.6	70.2	70.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	240	517			
CNEL:			54	117	252	542			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,736 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,472 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: 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: 74.0% 12.4% 13.6% 96.16%					
				Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
				Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.18	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	254	548			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: Artesia Blvd. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,795 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,477 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: 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: 74.0% 12.4% 13.6% 96.18% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.71%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.20	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-16.39	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-17.29	0.82	-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:	66.3	65.0	63.3	58.9	66.8	67.3			
Medium Trucks:	60.9	60.1	51.1	54.1	61.7	61.8			
Heavy Trucks:	65.3	64.2	58.1	59.1	66.5	66.6			
Vehicle Noise:	69.5	68.3	64.6	62.7	70.3	70.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	113	243	523			
CNEL:			55	118	255	549			

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,471 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,616 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.16%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
				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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.59	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.7	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	556			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		19,501 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,619 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:		74.0%	12.4%	13.6%	96.17%
Barrier Height:		0.0 feet		Medium Trucks:		82.0%	2.6%	15.4%	2.11%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
Road Grade:		0.0%		Medium Trucks:		43.386			
Left View:		-90.0 degrees		Heavy Trucks:		43.405			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.98	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.89	0.82	-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:	66.7	65.4	63.7	59.3	67.2	67.7			
Medium Trucks:	61.4	60.5	51.5	54.5	62.1	62.2			
Heavy Trucks:	65.7	64.6	58.5	59.5	66.9	67.1			
Vehicle Noise:	69.9	68.8	65.0	63.1	70.7	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			56	120	258	557			
CNEL:			58	126	271	583			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,957 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,656 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: 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: 74.0% 12.4% 13.6% 96.16% Medium Trucks: 82.0% 2.6% 15.4% 2.12% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	262	566			
CNEL:			59	128	275	593			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: w/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 19,987 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 1,659 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: 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: 74.0% 12.4% 13.6% 96.17% Medium Trucks: 82.0% 2.6% 15.4% 2.11% Heavy Trucks: 77.4% 4.8% 17.8% 1.72%					
				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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.70	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.88	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-16.78	0.82	-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:	66.8	65.5	63.8	59.4	67.3	67.8			
Medium Trucks:	61.5	60.6	51.6	54.6	62.2	62.3			
Heavy Trucks:	65.8	64.7	58.6	59.6	67.0	67.2			
Vehicle Noise:	70.0	68.9	65.1	63.2	70.8	71.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	122	263	566			
CNEL:			59	128	275	593			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,069 vehicles		Autos:		15			
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		1,998 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		50 feet							
Site Data				Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		74.0%	12.4%	13.6%	96.16%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		82.0%	2.6%	15.4%	2.12%
Centerline Dist. to Barrier:		50.0 feet		Heavy Trucks:		77.4%	4.8%	17.8%	1.72%
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:		43.589			
				Medium Trucks:		43.386			
				Heavy Trucks:		43.405			
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.51	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.06	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.97	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.6	65.6	59.5	60.4	67.8	68.0			
Vehicle Noise:	70.8	69.7	65.9	64.0	71.6	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			67	145	312	672			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)													
Scenario: OYC Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715									
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt): 24,486 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,032 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									
				Vehicle Type		Day	Evening	Night	Daily				
				Autos:		74.0%	12.4%	13.6%	96.16%				
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%				
				Heavy Trucks:		77.4%	4.8%	17.8%	1.72%				
				Noise Source Elevations (in feet)									
				Autos:		0.000		Grade Adjustment: 0.0					
				Medium Trucks:		2.297							
				Heavy Trucks:		8.004							
								Lane Equivalent Distance (in feet)					
Autos:		43.589											
Medium Trucks:		43.386											
				Heavy Trucks:		43.405							
				FHWA Noise Model Calculations									
				Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 66.51 1.58 0.79 -1.20 -4.65 0.000 0.000													
Medium Trucks: 77.72 -14.99 0.82 -1.20 -4.87 0.000 0.000													
Heavy Trucks: 82.99 -15.89 0.82 -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: 67.7 66.4 64.7 60.3 68.2 68.7													
Medium Trucks: 62.3 61.5 52.5 55.5 63.1 63.2													
Heavy Trucks: 66.7 65.6 59.5 60.5 67.9 68.1													
Vehicle Noise: 70.9 69.7 66.0 64.1 71.7 72.0													
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				65	140	301	648						
CNEL:				68	146	315	679						

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		24,166 vehicles		Autos: 15					
Peak Hour Percentage:		8.30%		Medium Trucks (2 Axles): 15					
Peak Hour Volume:		2,006 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: 74.0% 12.4% 13.6% 96.15%					
Barrier Height:		0.0 feet		Medium Trucks: 82.0% 2.6% 15.4% 2.12%					
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 77.4% 4.8% 17.8% 1.74%					
Centerline Dist. to Barrier:		50.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		50.0 feet		Autos: 0.000					
Barrier Distance to Observer:		0.0 feet		Medium Trucks: 2.297					
Observer Height (Above Pad):		5.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0					
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos: 43.589					
Road Grade:		0.0%		Medium Trucks: 43.386					
Left View:		-90.0 degrees		Heavy Trucks: 43.405					
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.53	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-15.05	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.90	0.82	-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:	67.6	66.3	64.6	60.2	68.1	68.6			
Medium Trucks:	62.3	61.4	52.4	55.4	63.1	63.2			
Heavy Trucks:	66.7	65.6	59.5	60.5	67.9	68.0			
Vehicle Noise:	70.9	69.7	66.0	64.0	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	139	299	644			
CNEL:			68	146	314	675			

Tuesday, December 12, 2023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYC+P Road Name: South St. Road Segment: e/o Cherry Av.				Project Name: Cherry Av. - Alt6 Job Number: 14715					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,583 vehicles Peak Hour Percentage: 8.30% Peak Hour Volume: 2,040 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 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					
				Vehicle Type		Day	Evening	Night	Daily
				Autos:		74.0%	12.4%	13.6%	96.15%
				Medium Trucks:		82.0%	2.6%	15.4%	2.12%
				Heavy Trucks:		77.4%	4.8%	17.8%	1.74%
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: 43.589 Medium Trucks: 43.386 Heavy Trucks: 43.405									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.60	0.79	-1.20	-4.65	0.000	0.000		
Medium Trucks:	77.72	-14.97	0.82	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-15.83	0.82	-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:	67.7	66.4	64.7	60.3	68.2	68.7			
Medium Trucks:	62.4	61.5	52.5	55.5	63.2	63.3			
Heavy Trucks:	66.8	65.7	59.6	60.6	68.0	68.1			
Vehicle Noise:	70.9	69.8	66.0	64.1	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			65	140	303	652			
CNEL:			68	147	317	683			

APPENDIX 7.3:

CADNAA TRAFFIC NOISE REFLECTION CALCULATIONS

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14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05_WithoutBuildingReflectionLine.cna

Date: 11.09.23

Analyst: S. Shami

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	3
Search Radius Src	152.40
Search Radius Rcvr	15.24
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type	(m)		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)						(m)	(m)	(m)
RECEIVERS		R1	62.1	56.0	64.7	78.1	73.7	0.0				1.52	a	1822528.31	690166.28	1.52
RECEIVERS		R2	51.5	45.5	54.1	70.4	66.1	0.0				1.52	a	1822989.21	689421.02	1.52
RECEIVERS		R3	66.0	59.9	68.6	72.3	69.6	0.0				1.52	a	1822430.00	689434.93	1.52
RECEIVERS		R4	68.5	62.4	71.1	67.9	64.9	0.0				1.52	a	1822461.57	689642.97	1.52
RECEIVERS		R5	68.3	62.2	70.9	67.8	65.3	0.0				1.52	a	1822463.37	689844.25	1.52
RECEIVERS		R6	65.0	59.0	67.6	67.8	65.3	0.0				1.52	a	1822511.18	689641.41	1.52
RECEIVERS		R7	68.5	62.4	71.1	67.8	65.3	0.0				1.52	a	1822462.73	689743.96	1.52

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	Day	Evening	Night	(km/h)	
Cherry Avenue		road_00000	102.2	102.2	96.1	86.2	86.2	80.1	Lw	102.2								6	a
Cherry Avenue		road_00012	115.1	115.1	109.0	86.2	86.2	80.1	Lw	115.1								6	a
Cherry Avenue		road_00014	103.5	103.5	97.4	86.3	86.3	80.2	Lw	103.5								6	a
Cherry Avenue		road_00015	104.8	104.8	98.7	86.2	86.2	80.2	Lw	104.8								6	a
Cherry Avenue		road_00016	104.7	104.7	98.6	86.2	86.2	80.1	Lw	104.7								6	a
Cherry Avenue		road_00017	103.5	103.5	97.4	86.3	86.3	80.2	Lw	103.5								6	a
Cherry Avenue		road_00018	100.7	100.7	94.6	86.2	86.2	80.1	Lw	100.7								6	a
Cherry Avenue		road_00019	106.2	106.2	100.1	86.3	86.3	80.2	Lw	106.2								6	a
Cherry Avenue		road_00020	104.9	104.9	98.8	86.2	86.2	80.1	Lw	104.9								6	a
Cherry Avenue		road_00021	100.9	100.9	94.8	86.3	86.3	80.2	Lw	100.9								6	a
Cherry Avenue		road_00022	104.0	104.0	97.9	86.2	86.2	80.1	Lw	104.0								6	a
Cherry Avenue		road_00023	107.5	107.5	101.4	86.2	86.2	80.1	Lw	107.5								6	a

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(km/h)	(ft)
Cherry Avenue		road_00024	110.2	110.2	104.1	86.2	86.2	80.1	Lw	110.2								6	a
Cherry Avenue		road_00025	111.3	111.3	105.2	86.2	86.2	80.1	Lw	111.3								6	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(m)	(m)	(m)	(m)	(m)	(m)
Cherry Avenue	road_00000	6.00	a	1822477.44	689610.78	6.00	0.00
				1822477.41	689645.55	6.00	0.00
				1822477.51	689650.46	6.00	0.00
Cherry Avenue	road_00012	6.00	a	1822551.38	688616.67	6.00	0.00
				1822552.83	688709.60	6.00	0.00
				1822552.79	688735.27	6.00	0.00
				1822552.77	688746.92	6.00	0.00
				1822550.76	688765.10	6.00	0.00
				1822549.15	688779.60	6.00	0.00
				1822544.33	688811.54	6.00	0.00
				1822530.93	688850.71	6.00	0.00
				1822522.68	688874.90	6.00	0.00
				1822512.24	688905.57	6.00	0.00
				1822498.70	688943.54	6.00	0.00
				1822488.40	688972.48	6.00	0.00
				1822483.90	688996.35	6.00	0.00
				1822479.16	689023.55	6.00	0.00
				1822477.61	689043.92	6.00	0.00
				1822477.46	689048.21	6.00	0.00
				1822476.35	689090.98	6.00	0.00
				1822476.54	689104.00	6.00	0.00
				1822477.44	689172.88	6.00	0.00
				1822478.57	689253.82	6.00	0.00
				1822478.76	689279.03	6.00	0.00
				1822479.87	689377.81	6.00	0.00
Cherry Avenue	road_00014	6.00	a	1822479.31	689848.58	6.00	0.00
				1822480.12	689901.37	6.00	0.00
Cherry Avenue	road_00015	6.00	a	1822477.51	689650.46	6.00	0.00
				1822477.76	689679.13	6.00	0.00
				1822478.14	689719.16	6.00	0.00
				1822478.13	689722.19	6.00	0.00
Cherry Avenue	road_00016	6.00	a	1822479.87	689377.81	6.00	0.00
				1822480.21	689397.87	6.00	0.00
				1822480.74	689431.44	6.00	0.00
				1822481.09	689448.65	6.00	0.00
Cherry Avenue	road_00017	6.00	a	1822484.40	690153.40	6.00	0.00
				1822485.61	690206.32	6.00	0.00
Cherry Avenue	road_00018	6.00	a	1822478.13	689722.19	6.00	0.00
				1822478.15	689729.14	6.00	0.00
				1822478.20	689750.16	6.00	0.00
Cherry Avenue	road_00019	6.00	a	1822478.20	689750.16	6.00	0.00
				1822478.90	689814.31	6.00	0.00
				1822479.31	689848.58	6.00	0.00
Cherry Avenue	road_00020	6.00	a	1822470.03	689522.98	6.00	0.00
				1822469.51	689497.87	6.00	0.00
				1822468.78	689467.11	6.00	0.00
				1822468.41	689449.00	6.00	0.00
Cherry Avenue	road_00021	6.00	a	1822476.92	689581.65	6.00	0.00
				1822477.05	689588.59	6.00	0.00
				1822477.44	689610.78	6.00	0.00
Cherry Avenue	road_00022	6.00	a	1822476.92	689581.65	6.00	0.00
				1822470.84	689568.23	6.00	0.00
				1822470.14	689527.82	6.00	0.00
				1822470.03	689522.98	6.00	0.00
Cherry Avenue	road_00023	6.00	a	1822481.09	689448.65	6.00	0.00
				1822481.29	689467.13	6.00	0.00
				1822481.74	689498.64	6.00	0.00
				1822482.03	689519.70	6.00	0.00
				1822482.25	689534.37	6.00	0.00
				1822482.72	689567.34	6.00	0.00
				1822476.92	689581.65	6.00	0.00
Cherry Avenue	road_00024	6.00	a	1822480.12	689901.37	6.00	0.00
				1822482.68	690052.12	6.00	0.00
				1822482.78	690058.25	6.00	0.00
				1822483.52	690097.14	6.00	0.00
				1822483.68	690110.95	6.00	0.00
				1822484.40	690153.40	6.00	0.00
Cherry Avenue	road_00025	6.00	a	1822468.41	689449.00	6.00	0.00
				1822468.13	689431.79	6.00	0.00
				1822467.65	689397.99	6.00	0.00
				1822467.48	689385.80	6.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(m)	(m)	(m)	(m)	(m)	(m)
				1822466.04	689281.76	6.00	0.00
				1822465.54	689249.78	6.00	0.00
				1822464.74	689197.29	6.00	0.00
				1822464.79	689173.56	6.00	0.00
				1822463.85	689126.47	6.00	0.00

14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05_WithBuildingReflectionLine.cna

Date: 12.09.23

Analyst: S. Shami

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	1
Search Radius Src	152.40
Search Radius Rcvr	15.24
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type	(ft)		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)						(ft)	(ft)	(ft)
RECEIVERS		R1	62.1	56.0	64.7	78.1	73.7	0.0				5.00	a	5979423.58	2264325.07	5.00
RECEIVERS		R2	51.3	45.2	53.9	70.4	66.1	0.0				5.00	a	5980935.71	2261880.00	5.00
RECEIVERS		R3	66.0	59.9	68.6	72.3	69.6	0.0				5.00	a	5979101.06	2261925.62	5.00
RECEIVERS		R4	68.6	62.5	71.2	67.9	64.9	0.0				5.00	a	5979204.62	2262608.17	5.00
RECEIVERS		R5	68.4	62.4	71.0	67.8	65.3	0.0				5.00	a	5979210.53	2263268.54	5.00
RECEIVERS		R6	65.0	59.0	67.6	67.8	65.3	0.0				5.00	a	5979367.38	2262603.04	5.00
RECEIVERS		R7	68.8	62.7	71.4	67.8	65.3	0.0				5.00	a	5979208.43	2262939.49	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Operating Time			Moving Pt. Src			Height			
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed	(ft)		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	Day	Evening	Night	(mph)		
Cherry Avenue		road_00000	102.2	102.2	96.1	86.2	86.2	80.1	Lw	102.2									20	a
Cherry Avenue		road_00012	115.1	115.1	109.0	86.2	86.2	80.1	Lw	115.1									20	a
Cherry Avenue		road_00014	103.5	103.5	97.4	86.3	86.3	80.2	Lw	103.5									20	a
Cherry Avenue		road_00015	104.8	104.8	98.7	86.2	86.2	80.2	Lw	104.8									20	a
Cherry Avenue		road_00016	104.7	104.7	98.6	86.2	86.2	80.1	Lw	104.7									20	a
Cherry Avenue		road_00017	103.5	103.5	97.4	86.3	86.3	80.2	Lw	103.5									20	a
Cherry Avenue		road_00018	100.7	100.7	94.6	86.2	86.2	80.1	Lw	100.7									20	a
Cherry Avenue		road_00019	106.2	106.2	100.1	86.3	86.3	80.2	Lw	106.2									20	a
Cherry Avenue		road_00020	104.9	104.9	98.8	86.2	86.2	80.1	Lw	104.9									20	a
Cherry Avenue		road_00021	100.9	100.9	94.8	86.3	86.3	80.2	Lw	100.9									20	a
Cherry Avenue		road_00022	104.0	104.0	97.9	86.2	86.2	80.1	Lw	104.0									20	a
Cherry Avenue		road_00023	107.5	107.5	101.4	86.2	86.2	80.1	Lw	107.5									20	a

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	
Cherry Avenue		road_00024	110.2	110.2	104.1	86.2	86.2	80.1	Lw	110.2								20	a
Cherry Avenue		road_00025	111.3	111.3	105.2	86.2	86.2	80.1	Lw	111.3								20	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
Cherry Avenue	road_00000	19.69	a	5979256.71	2262502.57	19.69	0.00
				5979256.59	2262616.65	19.69	0.00
				5979256.92	2262632.73	19.69	0.00
Cherry Avenue	road_00012	19.69	a	5979499.26	2259241.05	19.69	0.00
				5979504.02	2259545.94	19.69	0.00
				5979503.90	2259630.16	19.69	0.00
				5979503.85	2259668.38	19.69	0.00
				5979497.23	2259728.01	19.69	0.00
				5979491.97	2259775.60	19.69	0.00
				5979476.16	2259880.39	19.69	0.00
				5979432.19	2260008.88	19.69	0.00
				5979405.13	2260088.25	19.69	0.00
				5979370.88	2260188.86	19.69	0.00
				5979326.44	2260313.47	19.69	0.00
				5979292.66	2260408.39	19.69	0.00
				5979277.88	2260486.70	19.69	0.00
				5979262.34	2260575.94	19.69	0.00
				5979257.25	2260642.79	19.69	0.00
				5979256.75	2260656.84	19.69	0.00
				5979253.11	2260797.18	19.69	0.00
				5979253.74	2260839.90	19.69	0.00
				5979256.69	2261065.87	19.69	0.00
				5979260.39	2261331.43	19.69	0.00
				5979261.03	2261414.15	19.69	0.00
				5979264.66	2261738.24	19.69	0.00
Cherry Avenue	road_00014	19.69	a	5979262.84	2263282.74	19.69	0.00
				5979265.48	2263455.94	19.69	0.00
Cherry Avenue	road_00015	19.69	a	5979256.92	2262632.73	19.69	0.00
				5979257.74	2262726.80	19.69	0.00
				5979259.00	2262858.13	19.69	0.00
				5979258.97	2262868.07	19.69	0.00
Cherry Avenue	road_00016	19.69	a	5979264.66	2261738.24	19.69	0.00
				5979265.78	2261804.02	19.69	0.00
				5979267.53	2261914.16	19.69	0.00
				5979268.66	2261970.63	19.69	0.00
Cherry Avenue	road_00017	19.69	a	5979279.54	2264282.81	19.69	0.00
				5979283.49	2264456.42	19.69	0.00
Cherry Avenue	road_00018	19.69	a	5979258.97	2262868.07	19.69	0.00
				5979259.03	2262890.89	19.69	0.00
				5979259.20	2262959.86	19.69	0.00
Cherry Avenue	road_00019	19.69	a	5979259.20	2262959.86	19.69	0.00
				5979261.50	2263170.30	19.69	0.00
				5979262.84	2263282.74	19.69	0.00
Cherry Avenue	road_00020	19.69	a	5979232.40	2262214.50	19.69	0.00
				5979230.67	2262132.13	19.69	0.00
				5979228.27	2262031.21	19.69	0.00
				5979227.08	2261971.80	19.69	0.00
Cherry Avenue	road_00021	19.69	a	5979254.98	2262406.99	19.69	0.00
				5979255.40	2262429.77	19.69	0.00
				5979256.71	2262502.57	19.69	0.00
Cherry Avenue	road_00022	19.69	a	5979254.98	2262406.99	19.69	0.00
				5979235.04	2262362.95	19.69	0.00
				5979232.75	2262230.37	19.69	0.00
				5979232.40	2262214.50	19.69	0.00
Cherry Avenue	road_00023	19.69	a	5979268.66	2261970.63	19.69	0.00
				5979269.32	2262031.26	19.69	0.00
				5979270.80	2262134.63	19.69	0.00
				5979271.76	2262203.73	19.69	0.00
				5979272.47	2262251.87	19.69	0.00
				5979274.00	2262360.05	19.69	0.00
				5979254.98	2262406.99	19.69	0.00
Cherry Avenue	road_00024	19.69	a	5979265.48	2263455.94	19.69	0.00
				5979273.88	2263950.54	19.69	0.00
				5979274.22	2263970.62	19.69	0.00
				5979276.63	2264098.22	19.69	0.00
				5979277.16	2264143.53	19.69	0.00
				5979279.54	2264282.81	19.69	0.00
Cherry Avenue	road_00025	19.69	a	5979227.08	2261971.80	19.69	0.00
				5979226.13	2261915.32	19.69	0.00
				5979224.58	2261804.42	19.69	0.00
				5979224.02	2261764.43	19.69	0.00

Name	ID	Height			Coordinates			
		Begin	End		x	y	z	Ground
		(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
					5979219.29	2261423.11	19.69	0.00
					5979217.66	2261318.17	19.69	0.00
					5979215.01	2261145.95	19.69	0.00
					5979215.19	2261068.09	19.69	0.00
					5979212.10	2260913.61	19.69	0.00

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001		0	0.00	51.00 a	5979385.32	2263145.80	51.00	0.00
								5980172.01	2263135.13	51.00	0.00
								5980167.41	2262761.26	51.00	0.00
								5979493.47	2262770.87	51.00	0.00
								5979493.29	2262710.35	51.00	0.00
								5979388.13	2262718.74	51.00	0.00
								5979385.70	2262771.85	51.00	0.00
								5979383.21	2262771.89	51.00	0.00
								5979384.62	2262806.69	51.00	0.00
								5979380.45	2262805.10	51.00	0.00

APPENDIX 9.1:

CADNAA TYPICAL OPERATIONAL NOISE CALCULATIONS

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14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05c_Typical.cna

Date: 12.09.23

Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	36.3	36.2	42.9	50.0	45.0	0.0				5.00	a 5979423.58	2264325.07	5.00
R2		R2	46.8	46.8	53.4	50.0	45.0	0.0				5.00	a 5980935.71	2261880.00	5.00
R3		R3	49.4	49.3	56.0	50.0	45.0	0.0				5.00	a 5979082.04	2261907.48	5.00
R4		R4	58.7	58.7	65.4	50.0	45.0	0.0				5.00	a 5979198.12	2262592.66	5.00
R5		R5	40.8	40.1	46.8	50.0	45.0	0.0				5.00	a 5979081.54	2262832.18	5.00
R6		R6	43.9	43.8	50.4	50.0	45.0	0.0				5.00	a 5979204.88	2263271.20	5.00
R7		R7	63.5	63.5	70.2	50.0	45.0	0.0				5.00	a 5979431.26	2262573.38	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height	Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.8	88.8	88.8	Lw	88.8		585.00	0.00	252.00	5.00	g 5979416.78	2262746.45	56.00
POINTSOURCE		AC02	88.8	88.8	88.8	Lw	88.8		585.00	0.00	252.00	5.00	g 5979467.14	2262744.95	56.00
POINTSOURCE		TRASH01	88.4	88.4	88.4	Lw	88.4		450.00	0.00	135.00	5.00	a 5980186.73	2262775.86	5.00
POINTSOURCE		TRASH02	88.4	88.4	88.4	Lw	88.4		450.00	0.00	135.00	5.00	a 5980186.90	2262785.33	5.00
POINTSOURCE		TRASH03	88.4	88.4	88.4	Lw	88.4		450.00	0.00	135.00	5.00	a 5980186.54	2262764.05	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height		
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed			
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	91.4	91.4	91.4	66.2	66.2	66.2	Lw	91.4									8	a
LINESOURCE		TRUCK02	91.4	91.4	91.4	67.0	67.0	67.0	Lw	91.4									8	a

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number	Speed			
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		TRUCK03	91.4	91.4	91.4	66.6	66.6	66.6	Lw	91.4								8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	a	5980192.95	2262955.15	8.00	0.00
				5980193.83	2263150.52	8.00	0.00
				5979304.58	2263170.35	8.00	0.00
LINESOURCE	TRUCK02	8.00	a	5980211.81	2262665.62	8.00	0.00
				5979298.02	2262678.77	8.00	0.00
LINESOURCE	TRUCK03	8.00	a	5980192.95	2262955.15	8.00	0.00
				5980392.72	2262951.02	8.00	0.00
				5980385.20	2262633.79	8.00	0.00
				5980230.16	2262637.04	8.00	0.00
				5980215.82	2262665.15	8.00	0.00
				5980221.84	2262953.46	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		CAR01	84.3	84.3	84.3	51.0	51.0	51.0	Lw	84.3					6	a
AREASOURCE		CAR02	84.3	84.3	84.3	60.3	60.3	60.3	Lw	84.3					6	a
AREASOURCE		CAR03	84.3	84.3	84.3	53.1	53.1	53.1	Lw	84.3					6	a
AREASOURCE		CAR04	84.3	84.3	84.3	61.3	61.3	61.3	Lw	84.3					6	a
AREASOURCE		CAR05	84.3	84.3	84.3	59.5	59.5	59.5	Lw	84.3					6	a
AREASOURCE		COLD01	111.5	111.5	111.5	75.2	75.2	75.2	Lw	111.5					8	a
AREASOURCE		DRY01	103.4	103.4	103.4	68.9	68.9	68.9	Lw	103.4					8	a
AREASOURCE		DRY02	103.4	103.4	103.4	71.7	71.7	71.7	Lw	103.4					8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	CAR01	6.00	a	5979314.04	2263133.98	6.00	0.00
				5979375.04	2263132.01	6.00	0.00
				5979375.01	2263073.36	6.00	0.00
				5979357.36	2263073.18	6.00	0.00
				5979358.17	2263064.11	6.00	0.00
				5979374.83	2263062.87	6.00	0.00
				5979374.67	2262996.12	6.00	0.00
				5979356.56	2262996.43	6.00	0.00
				5979356.76	2262951.60	6.00	0.00
				5979372.97	2262951.33	6.00	0.00
				5979373.09	2262901.74	6.00	0.00
				5979355.94	2262902.50	6.00	0.00
				5979355.29	2262892.02	6.00	0.00
				5979371.49	2262891.75	6.00	0.00
				5979372.57	2262842.15	6.00	0.00
				5979354.44	2262841.50	6.00	0.00
				5979355.26	2262833.38	6.00	0.00
				5979370.98	2262832.64	6.00	0.00
				5979370.09	2262722.03	6.00	0.00
				5979309.05	2262721.62	6.00	0.00
				5979308.89	2262740.70	6.00	0.00
				5979327.92	2262738.47	6.00	0.00
				5979327.62	2262748.49	6.00	0.00
				5979308.56	2262749.76	6.00	0.00
				5979309.42	2262801.24	6.00	0.00
				5979327.51	2262799.51	6.00	0.00
				5979327.67	2262808.57	6.00	0.00
				5979310.03	2262808.86	6.00	0.00
				5979310.41	2262860.35	6.00	0.00
				5979328.51	2262859.10	6.00	0.00
				5979328.67	2262868.63	6.00	0.00
				5979310.07	2262868.46	6.00	0.00
				5979311.42	2262920.41	6.00	0.00
				5979330.46	2262918.66	6.00	0.00
				5979330.14	2262928.21	6.00	0.00
				5979311.08	2262928.53	6.00	0.00
				5979312.88	2262979.04	6.00	0.00
				5979328.61	2262979.25	6.00	0.00
				5979329.23	2262987.82	6.00	0.00
				5979312.55	2262988.10	6.00	0.00
				5979312.92	2263038.64	6.00	0.00
				5979330.57	2263039.30	6.00	0.00
				5979330.70	2263046.92	6.00	0.00

Name	ID	Height			Coordinates			
		Begin	End		x	y	z	Ground
		(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
					5979313.55	2263047.69	6.00	0.00
					5979313.45	2263099.18	6.00	0.00
					5979331.09	2263098.89	6.00	0.00
					5979332.17	2263106.50	6.00	0.00
					5979313.60	2263107.77	6.00	0.00
AREASOURCE	CAR02	6.00	a		5979322.13	2262656.96	6.00	0.00
					5979467.74	2262654.38	6.00	0.00
					5979466.87	2262635.78	6.00	0.00
					5979322.65	2262638.19	6.00	0.00
AREASOURCE	CAR03	6.00	a		5979493.75	2262646.53	6.00	0.00
					5980193.04	2262634.84	6.00	0.00
					5980192.24	2262615.78	6.00	0.00
					5979492.44	2262625.10	6.00	0.00
AREASOURCE	CAR04	6.00	a		5980176.01	2262927.89	6.00	0.00
					5980192.67	2262926.18	6.00	0.00
					5980191.02	2262798.90	6.00	0.00
					5980173.86	2262799.66	6.00	0.00
AREASOURCE	CAR05	6.00	a		5980221.37	2262995.58	6.00	0.00
					5980306.24	2262994.16	6.00	0.00
					5980306.05	2262975.60	6.00	0.00
					5980314.46	2262975.34	6.00	0.00
					5980314.89	2262994.25	6.00	0.00
					5980399.77	2262992.72	6.00	0.00
					5980399.45	2262973.80	6.00	0.00
					5980221.16	2262976.32	6.00	0.00
AREASOURCE	COLD01	8.00	a		5979493.47	2262770.87	8.00	0.00
					5980167.41	2262761.26	8.00	0.00
					5980166.44	2262692.89	8.00	0.00
					5979493.11	2262703.67	8.00	0.00
AREASOURCE	DRY01	8.00	a		5980247.24	2262941.47	8.00	0.00
					5980353.47	2262940.22	8.00	0.00
					5980348.68	2262653.29	8.00	0.00
					5980242.43	2262654.03	8.00	0.00
AREASOURCE	DRY02	8.00	a		5980479.48	2262937.59	8.00	0.00
					5980476.06	2262639.70	8.00	0.00
					5980422.42	2262640.08	8.00	0.00
					5980426.38	2262939.00	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever			Height		Coordinates			
				left	right		horz.	vert.		Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED			0							10.00	a	5979493.29	2262710.35	10.00	0.00
												5979492.85	2262693.78	10.00	0.00

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APPENDIX 9.2:

CADNAA PEAK OPERATIONAL NOISE CALCULATIONS

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14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05c_Peak.cna

Date: 12.09.23

Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	54.4	54.4	61.0	50.0	45.0	0.0				5.00 a	5979423.58	2264325.07	5.00
R2		R2	60.0	60.0	66.6	50.0	45.0	0.0				5.00 a	5980935.71	2261880.00	5.00
R3		R3	60.3	60.3	67.0	50.0	45.0	0.0				5.00 a	5979082.04	2261907.48	5.00
R4		R4	72.9	72.9	79.5	50.0	45.0	0.0				5.00 a	5979198.12	2262592.66	5.00
R5		R5	62.7	62.7	69.4	50.0	45.0	0.0				5.00 a	5979081.54	2262832.18	5.00
R6		R6	65.7	65.7	72.3	50.0	45.0	0.0				5.00 a	5979204.88	2263271.20	5.00
R7		R7	78.5	78.5	85.1	50.0	45.0	0.0				5.00 a	5979431.26	2262573.38	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
POINTSOURCE		AC01	89.3	89.3	89.3	Lw	89.3					5.00 g	5979416.78	2262746.45	56.00
POINTSOURCE		AC02	89.3	89.3	89.3	Lw	89.3					5.00 g	5979467.14	2262744.95	56.00
POINTSOURCE		TRASH01	102.7	102.7	102.7	Lw	102.7					5.00 a	5980186.73	2262775.86	5.00
POINTSOURCE		TRASH02	102.7	102.7	102.7	Lw	102.7					5.00 a	5980186.90	2262785.33	5.00
POINTSOURCE		TRASH03	102.7	102.7	102.7	Lw	102.7					5.00 a	5980186.54	2262764.05	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		TRUCK01	99.6	99.6	99.6	74.4	74.4	74.4	Lw	99.6								8	a
LINESOURCE		TRUCK02	99.6	99.6	99.6	75.2	75.2	75.2	Lw	99.6								8	a

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number	Speed			
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
LINESOURCE		TRUCK03	99.6	99.6	99.6	74.8	74.8	74.8	Lw	99.6								8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	a	5980192.95	2262955.15	8.00	0.00
				5980193.83	2263150.52	8.00	0.00
				5979304.58	2263170.35	8.00	0.00
LINESOURCE	TRUCK02	8.00	a	5980211.81	2262665.62	8.00	0.00
				5979298.02	2262678.77	8.00	0.00
LINESOURCE	TRUCK03	8.00	a	5980192.95	2262955.15	8.00	0.00
				5980392.72	2262951.02	8.00	0.00
				5980385.20	2262633.79	8.00	0.00
				5980230.16	2262637.04	8.00	0.00
				5980215.82	2262665.15	8.00	0.00
				5980221.84	2262953.46	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		CAR01	112.6	112.6	112.6	79.3	79.3	79.3	Lw	112.6					6	a
AREASOURCE		CAR02	112.6	112.6	112.6	88.6	88.6	88.6	Lw	112.6					6	a
AREASOURCE		CAR03	112.6	112.6	112.6	81.4	81.4	81.4	Lw	112.6					6	a
AREASOURCE		CAR04	112.6	112.6	112.6	89.6	89.6	89.6	Lw	112.6					6	a
AREASOURCE		CAR05	112.6	112.6	112.6	87.8	87.8	87.8	Lw	112.6					6	a
AREASOURCE		COLD01	120.6	120.6	120.6	84.3	84.3	84.3	Lw	120.6					8	a
AREASOURCE		DRY01	120.6	120.6	120.6	86.1	86.1	86.1	Lw	120.6					8	a
AREASOURCE		DRY02	120.6	120.6	120.6	88.9	88.9	88.9	Lw	120.6					8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	CAR01	6.00	a	5979314.04	2263133.98	6.00	0.00
				5979375.04	2263132.01	6.00	0.00
				5979375.01	2263073.36	6.00	0.00
				5979357.36	2263073.18	6.00	0.00
				5979358.17	2263064.11	6.00	0.00
				5979374.83	2263062.87	6.00	0.00
				5979374.67	2262996.12	6.00	0.00
				5979356.56	2262996.43	6.00	0.00
				5979356.76	2262951.60	6.00	0.00
				5979372.97	2262951.33	6.00	0.00
				5979373.09	2262901.74	6.00	0.00
				5979355.94	2262902.50	6.00	0.00
				5979355.29	2262892.02	6.00	0.00
				5979371.49	2262891.75	6.00	0.00
				5979372.57	2262842.15	6.00	0.00
				5979354.44	2262841.50	6.00	0.00
				5979355.26	2262833.38	6.00	0.00
				5979370.98	2262832.64	6.00	0.00
				5979370.09	2262722.03	6.00	0.00
				5979309.05	2262721.62	6.00	0.00
				5979308.89	2262740.70	6.00	0.00
				5979327.92	2262738.47	6.00	0.00
				5979327.62	2262748.49	6.00	0.00
				5979308.56	2262749.76	6.00	0.00
				5979309.42	2262801.24	6.00	0.00
				5979327.51	2262799.51	6.00	0.00
				5979327.67	2262808.57	6.00	0.00
				5979310.03	2262808.86	6.00	0.00
				5979310.41	2262860.35	6.00	0.00
				5979328.51	2262859.10	6.00	0.00
				5979328.67	2262868.63	6.00	0.00
				5979310.07	2262868.46	6.00	0.00
				5979311.42	2262920.41	6.00	0.00
				5979330.46	2262918.66	6.00	0.00
				5979330.14	2262928.21	6.00	0.00
				5979311.08	2262928.53	6.00	0.00
				5979312.88	2262979.04	6.00	0.00
				5979328.61	2262979.25	6.00	0.00
				5979329.23	2262987.82	6.00	0.00
				5979312.55	2262988.10	6.00	0.00
				5979312.92	2263038.64	6.00	0.00
				5979330.57	2263039.30	6.00	0.00
				5979330.70	2263046.92	6.00	0.00

Name	ID	Height			Coordinates			
		Begin	End		x	y	z	Ground
		(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
					5979313.55	2263047.69	6.00	0.00
					5979313.45	2263099.18	6.00	0.00
					5979331.09	2263098.89	6.00	0.00
					5979332.17	2263106.50	6.00	0.00
					5979313.60	2263107.77	6.00	0.00
AREASOURCE	CAR02	6.00	a		5979322.13	2262656.96	6.00	0.00
					5979467.74	2262654.38	6.00	0.00
					5979466.87	2262635.78	6.00	0.00
					5979322.65	2262638.19	6.00	0.00
AREASOURCE	CAR03	6.00	a		5979493.75	2262646.53	6.00	0.00
					5980193.04	2262634.84	6.00	0.00
					5980192.24	2262615.78	6.00	0.00
					5979492.44	2262625.10	6.00	0.00
AREASOURCE	CAR04	6.00	a		5980176.01	2262927.89	6.00	0.00
					5980192.67	2262926.18	6.00	0.00
					5980191.02	2262798.90	6.00	0.00
					5980173.86	2262799.66	6.00	0.00
AREASOURCE	CAR05	6.00	a		5980221.37	2262995.58	6.00	0.00
					5980306.24	2262994.16	6.00	0.00
					5980306.05	2262975.60	6.00	0.00
					5980314.46	2262975.34	6.00	0.00
					5980314.89	2262994.25	6.00	0.00
					5980399.77	2262992.72	6.00	0.00
					5980399.45	2262973.80	6.00	0.00
					5980221.16	2262976.32	6.00	0.00
AREASOURCE	COLD01	8.00	a		5979493.47	2262770.87	8.00	0.00
					5980167.41	2262761.26	8.00	0.00
					5980166.44	2262692.89	8.00	0.00
					5979493.11	2262703.67	8.00	0.00
AREASOURCE	DRY01	8.00	a		5980247.24	2262941.47	8.00	0.00
					5980353.47	2262940.22	8.00	0.00
					5980348.68	2262653.29	8.00	0.00
					5980242.43	2262654.03	8.00	0.00
AREASOURCE	DRY02	8.00	a		5980479.48	2262937.59	8.00	0.00
					5980476.06	2262639.70	8.00	0.00
					5980422.42	2262640.08	8.00	0.00
					5980426.38	2262939.00	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever			Height		Coordinates			
				left	right		horz.	vert.		Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED			0							10.00	a	5979493.29	2262710.35	10.00	0.00
												5979492.85	2262693.78	10.00	0.00

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APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE CALCULATIONS

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14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05c_ConstructionPoint.cna

Date: 21.12.23

Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	59.9	59.9	66.6	70.0	0.0	0.0				5.00 a	5979423.58	2264325.07	5.00
R2		R2	55.7	55.7	62.4	70.0	0.0	0.0				5.00 a	5980935.71	2261880.00	5.00
R3		R3	61.8	61.8	68.5	70.0	0.0	0.0				5.00 a	5979082.04	2261907.48	5.00
R4		R4	80.7	80.7	87.3	70.0	0.0	0.0				5.00 a	5979198.12	2262592.66	5.00
R5		R5	73.9	73.9	80.6	70.0	0.0	0.0				5.00 a	5979081.54	2262832.18	5.00
R6		R6	80.5	80.5	87.1	70.0	0.0	0.0				5.00 a	5979204.88	2263271.20	5.00
R7		R7	75.5	75.5	82.1	70.0	0.0	0.0				5.00 a	5979431.26	2262573.38	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
CONS_		C1	118.4	118.4	118.4	Lw	118.4					8.00 a		5979310.90	2263269.08	8.00
CONS_		C2	118.4	118.4	118.4	Lw	118.4					8.00 a		5979304.97	2262824.93	8.00
CONS_		C3	118.4	118.4	118.4	Lw	118.4					8.00 a		5979302.35	2262627.87	8.00
CONS_		C4	118.4	118.4	118.4	Lw	118.4					8.00 a		5980521.49	2262609.41	8.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERTEMP			0						0.00	a	5979406.16	2263284.28	0.00	0.00
											5979306.11	2263285.14	0.00	0.00
											5979299.96	2262965.94	0.00	0.00

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
											5979299.44	2262938.88	0.00	0.00
											5979297.27	2262622.91	0.00	0.00
											5979396.23	2262620.93	0.00	0.00

APPENDIX 10.2:

MITIGATED CADNAA CONSTRUCTION NOISE CALCULATIONS

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14715 - Cherry Avenue Warehouse

CadnaA Noise Prediction Model: 14715_05c_ConstructionMitigated.cna

Date: 21.12.23

Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	56.2	56.2	62.8	70.0	0.0	0.0				5.00 a	5979423.58	2264325.07	5.00
R2		R2	55.7	55.7	62.3	70.0	0.0	0.0				5.00 a	5980935.71	2261880.00	5.00
R3		R3	54.7	54.7	61.4	70.0	0.0	0.0				5.00 a	5979082.04	2261907.48	5.00
R4		R4	69.6	69.6	76.3	70.0	0.0	0.0				5.00 a	5979198.12	2262592.66	5.00
R5		R5	63.6	63.6	70.2	70.0	0.0	0.0				5.00 a	5979081.54	2262832.18	5.00
R6		R6	68.9	68.9	75.6	70.0	0.0	0.0				5.00 a	5979204.88	2263271.20	5.00
R7		R7	72.7	72.7	79.4	70.0	0.0	0.0				5.00 a	5979431.26	2262573.38	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
CONS_		C1	118.4	118.4	118.4	Lw	118.4					8.00	a	5979310.90	2263269.08	8.00
CONS_		C2	118.4	118.4	118.4	Lw	118.4					8.00	a	5979304.97	2262824.93	8.00
CONS_		C3	118.4	118.4	118.4	Lw	118.4					8.00	a	5979302.35	2262627.87	8.00
CONS_		C4	118.4	118.4	118.4	Lw	118.4					8.00	a	5980521.49	2262609.41	8.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			Coordinates			
				left	right		horz.	vert.	Begin		End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERTEMP			0						12.00	a		5979406.16	2263284.28	12.00	0.00
												5979306.11	2263285.14	12.00	0.00
												5979299.96	2262965.94	12.00	0.00

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
											5979299.44	2262938.88	12.00	0.00
											5979297.27	2262622.91	12.00	0.00
											5979396.23	2262620.93	12.00	0.00