CORAL MOUNTAIN RESORT

DRAFT EIR

SCH# 2021020310

TECHNICAL APPENDICES

Noise Study
Appendix K.1

June 2021

Coral Mountain Specific Plan

NOISE IMPACT ANALYSIS

CITY OF LA QUINTA

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Coral Mountain Specific Plan
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 Coral Mountain Specific Plan development ("Project"). The Project site is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta. The Project is proposed to consist a master planned themed resort comprised of a recreational pool (wave basin), a 150-key hotel, 104 attached dwelling units, 496 detached dwelling units, 60,000 square feet of retail. The wave basin is a private facility. This study has been prepared consistent with applicable City of La Quinta noise standards, and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 29 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Coral Mountain Specific Plan Traffic Impact Analysis*. (2) Based on the significance criteria in outlined in Section 4, the Project-related noise level increases are considered *potentially significant* under Existing with Project conditions at the following two roadway segments:

- Madison Street north of Avenue 58 (Segment 8)
- Avenue 60 west of Madison Street (Segment 27)

All other roadway segments are shown to experience *less than significant* noise level impacts under Existing plus Project conditions. However, this scenario is provided solely for analytical purposes and will not occur, since the Project will not be full developed (Phase 1, 2 & 3) and occupied under Existing 2019 conditions. Therefore, no mitigation measures are considered to reduce the Existing with Project condition traffic noise level increases, and impacts are considered *less than significant* since they will not actually occur. The analysis shows that the unmitigated Project-related traffic noise level increases under all traffic scenarios will be *less than significant*.

ON-SITE TRAFFIC NOISE ANALYSIS

An on-site exterior noise analysis has been completed to determine the traffic noise exposure and to identify potential necessary noise abatement measures for the proposed Coral Mountain Specific Plan Project. It is expected that the primary source of noise activity to the Project site will be traffic noise from Avenue 58 and Madison Street.

EXTERIOR NOISE

To satisfy the City of La Quinta 65 dBA CNEL exterior noise level standards for residential land use, the construction of 6-foot-high noise barriers is required for the low-density residential

development within Planning Area II. With the recommended noise barriers shown on Exhibit ES-A, the future exterior noise levels at the outdoor living areas (backyards) of single-family residential uses in Planning Areas II will be reduced to less than 65.0 dBA CNEL. This noise analysis shows that the recommended 6-foot-high noise barriers will satisfy the City of La Quinta 65 dBA CNEL exterior noise level standards for single-family residential use. Therefore, future on-site exterior traffic noise levels will be *less than significant*.

INTERIOR NOISE

The interior noise level analysis shows that the City of La Quinta 45 dBA CNEL residential interior noise standards can be satisfied using standard building construction, a windows-closed condition requiring a means of mechanical ventilation (e.g., air conditioning) and standard windows with STC ratings of 27 for all lots/units. Therefore, the future on-site interior traffic noise levels will be *less than significant*.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the expected noise sources from the Coral Mountain Specific Plan site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Coral Mountain Specific Plan are anticipated to include wave basin/wave machine activity, outdoor pool/spa activity, outdoor activity, and neighborhood commercial land use activity. The operational noise analysis shows that the Project-related stationary-source noise levels at the nearby sensitive receiver locations will satisfy the City of La Quinta daytime exterior noise level standards, with no planned nighttime activities. Therefore, the operational noise impacts are considered *less than significant* at all existing off-site receiver locations. Further, this analysis demonstrates that the Project will contribute a *less than significant* long-term unmitigated operational noise level increase to the existing daytime ambient noise environment at all existing off-site receiver locations.

CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of the Coral Mountain Specific Plan site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. Since the City of La Quinta General Plan and Municipal Codes do not identify specific construction noise level thresholds, a threshold is identified based on the National Institute for Occupational Safety and Health (NIOSH) limits for construction noise. The Project Phase 1 construction noise levels are expected to range from 58.0 to 76.5 dBA L_{eq} at the nearby receiver locations. The Project Phase 2 and Phase 3 construction noise levels are expected to range from 63.7 to 75.8 dBA. The construction noise analysis shows that the nearby receiver locations will satisfy the 85 dBA L_{eq} significance threshold during Project construction activities. Therefore, the

noise impacts due to Project construction noise is considered *less than significant* at all receiver locations.

Though construction noise and vibration are temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce noise and vibration levels produced by construction equipment to nearby noise-sensitive uses. Temporary construction-related noise and vibration impacts will be further reduced with the incorporation of the following measures:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of La Quinta Municipal Code requirements.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the center).
- The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. This analysis shows the highest construction vibration levels are expected to range from 0.000 to 0.009 in/sec RMS, which is below the vibration standard of 0.01 in/sec RMS at all receiver locations. Therefore, based on the results of this analysis, all nearby sensitive receiver locations will experience *less than significant* impacts due to Project construction noise levels.

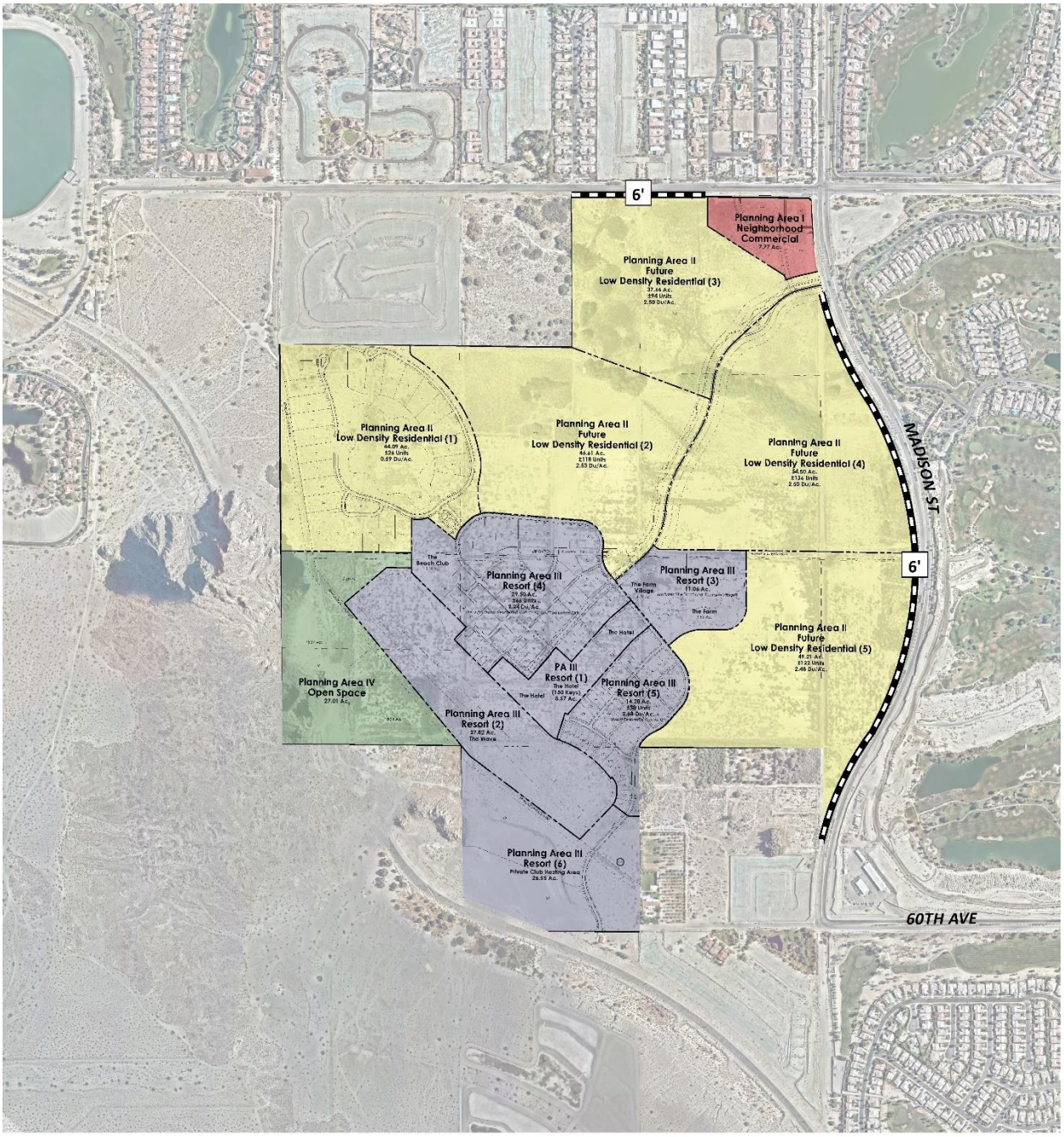
SUMMARY OF CEQA SIGNIFICANCE FINDINGS

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
On-Site Traffic Noise	8	*Less Than Significant*	-
Operational Noise	10	*Less Than Significant*	-
Construction Noise	11	*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-

EXHIBIT ES-A: SUMMARY OF ON-SITE RECOMMENDATIONS



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LEGEND:

6' Recommended Noise Barrier Height (in feet)

Recommended Noise Barrier

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Coral Mountain Specific Plan ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for transportation noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

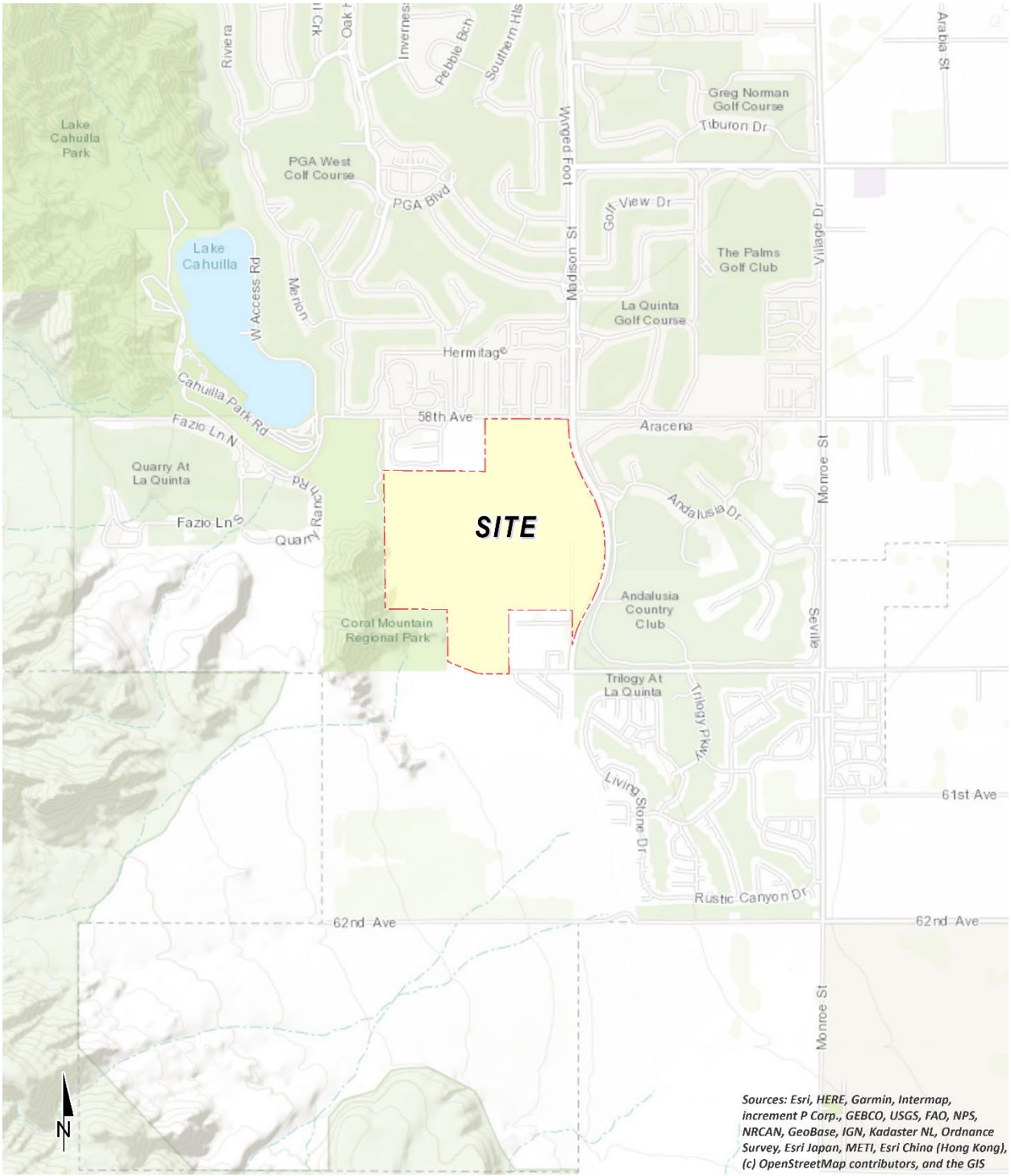
The Project site is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project consists of a master planned themed resort comprised of a recreational pool (wave basin), a 150-key hotel, 104 attached dwelling units, 496 detached dwelling units, and 60,000 square feet of retail use. The wave basin is a private facility. The preliminary Project land use plan is presented on Exhibit 1-B.

The Project is anticipated to be constructed in phases, with Phase 1 (2021) including resort (wave basin and hotel uses), 104 attached dwelling units, 26 detached dwelling units, and 10,000 square feet of retail use. Project Phase 2 (2023) adds 25,000 square feet of retail. Project Phase 3 (2026) adds 470 detached dwelling units and 25,000 square feet of retail use.

EXHIBIT 1-A: LOCATION MAP



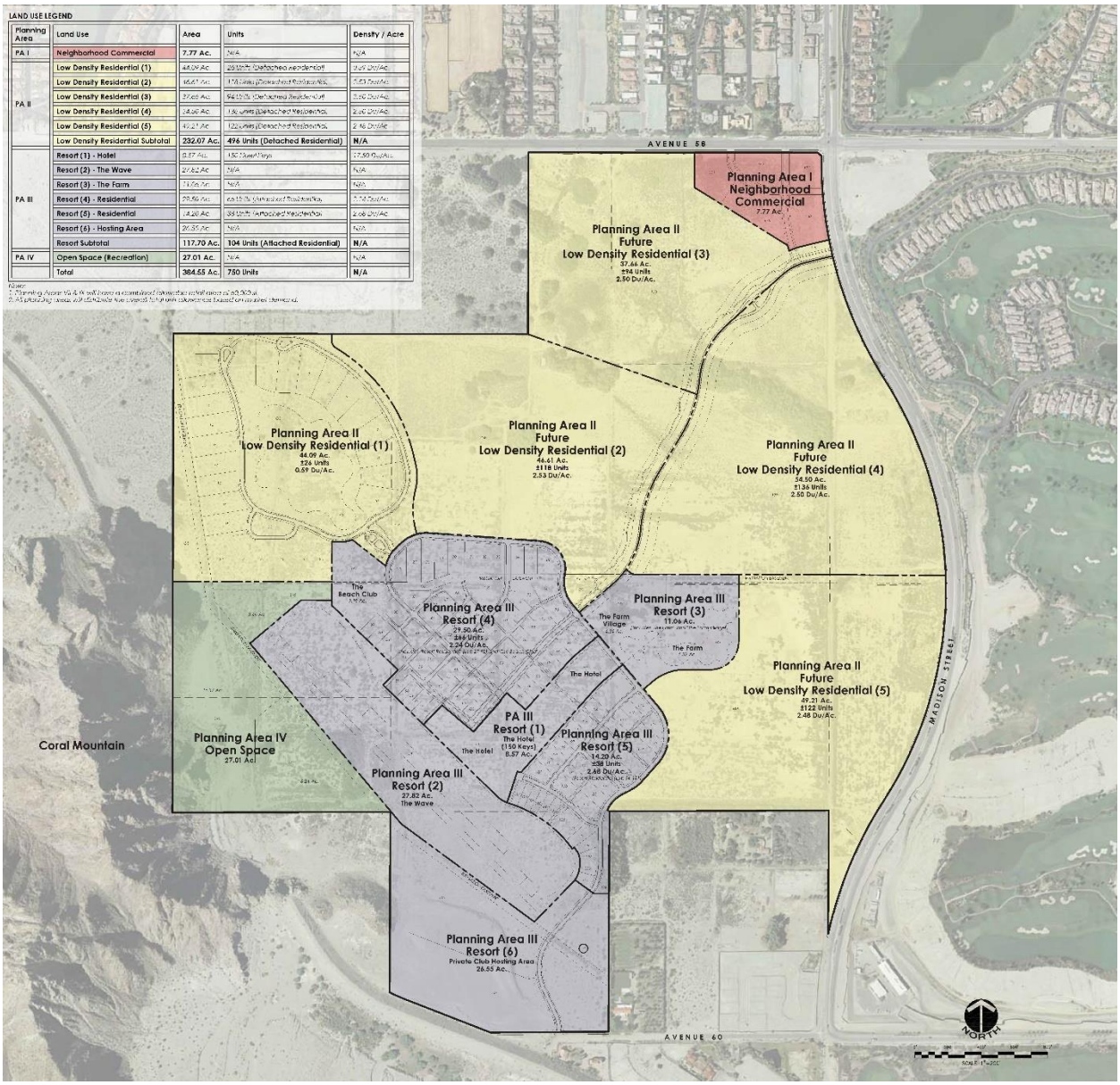
LEGEND:

EXHIBIT 1-B: PRELIMINARY LAND USE PLAN

LAND USE LEGEND

Planning Area	Land Use	Area	Units	Density / Acre
PA I	Neighborhood Commercial	7.77 Ac.	N/A	N/A
PA II	Low Density Residential (1)	44.09 Ac.	99 Units (Detached Residential)	0.69 Du/Ac.
	Low Density Residential (2)	46.61 Ac.	117 Units (Detached Residential)	2.53 Du/Ac.
	Low Density Residential (3)	37.66 Ac.	94 Units (Detached Residential)	2.50 Du/Ac.
	Low Density Residential (4)	54.50 Ac.	136 Units (Detached Residential)	2.50 Du/Ac.
	Low Density Residential (5)	49.21 Ac.	122 Units (Detached Residential)	2.48 Du/Ac.
	Low Density Residential Subtotal	232.07 Ac.	496 Units (Detached Residential)	N/A
PA III	Resort (1) - Hotel	8.57 Ac.	150 Hotel Keys	17.50 Ou/Ac.
	Resort (2) - The Wave	27.83 Ac.	N/A	N/A
	Resort (3) - The Farm	11.04 Ac.	N/A	N/A
	Resort (4) - Residential	29.50 Ac.	66 Units (Attached Residential)	2.24 Du/Ac.
	Resort (5) - Residential	14.20 Ac.	38 Units (Attached Residential)	2.68 Du/Ac.
	Resort (6) - Hosting Area	26.55 Ac.	N/A	N/A
	Resort Subtotal	117.70 Ac.	104 Units (Attached Residential)	N/A
PA IV	Open Space (Recreation)	27.01 Ac.	N/A	N/A
	Total	384.55 Ac.	750 Units	N/A

Notes:
1. Planning Areas III & IV will have a combined total of no more than 750 DU.
2. All planning areas will maximize the number of units allowed on the lots.



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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		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (4) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. (5) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those

sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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

2.5 NOISE BARRIER ATTENUATION

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

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic

health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (7)

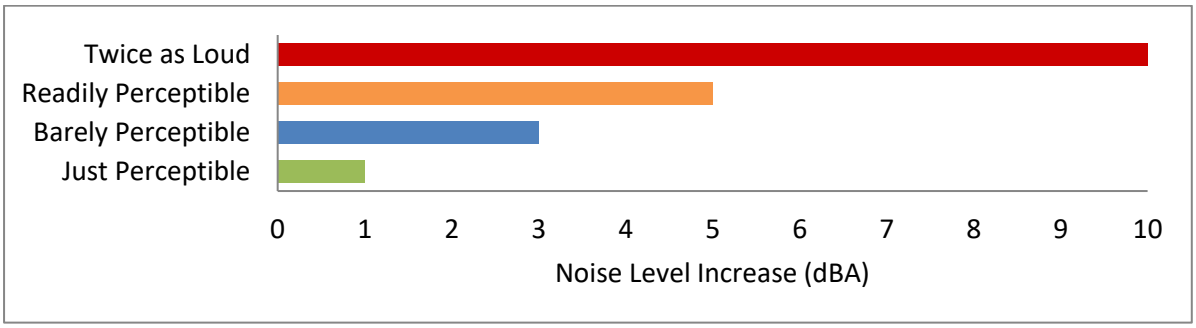
2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments (9), a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (10)

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

2.9 VIBRATION

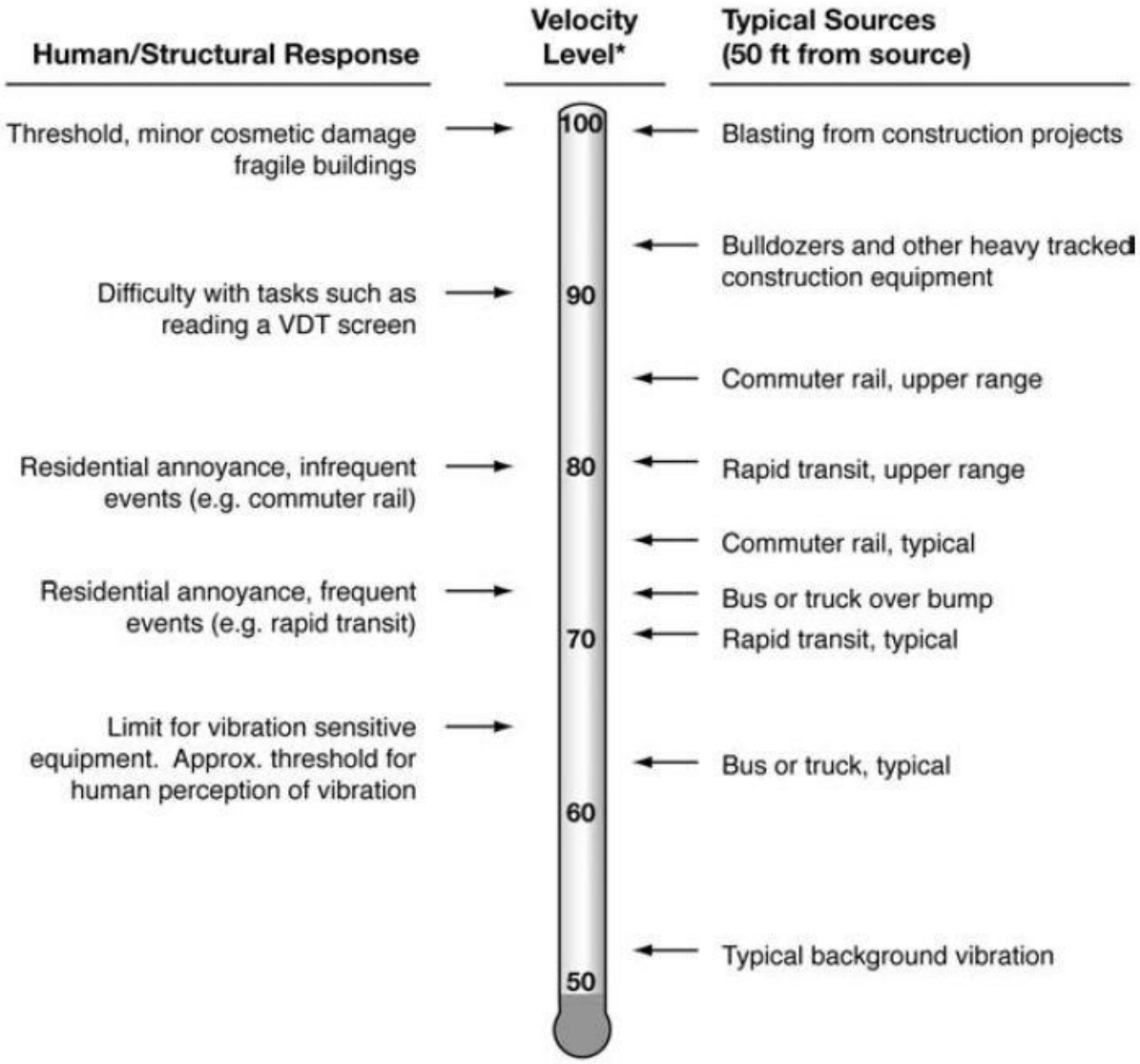
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (11), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), vibration-sensitive equipment and/or activities.

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

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



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

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

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3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING CODE

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

3.3 CITY OF LA QUINTA GENERAL PLAN ENVIRONMENTAL HAZARDS ELEMENT

The City of La Quinta has adopted an Environmental Hazards Element (Chapter 4), Noise section, of the General Plan which *identifies areas where noise levels are expected to reach unacceptable levels, and provides policies and programs which will assure that noise levels do not negatively impact the community.* (13) The Noise Element specifies the maximum exterior and interior noise levels for new developments impacted by transportation noise sources such as arterial roads,

freeways, airports and railroads. To protect City residents from excessive noise, the Environmental Hazards Element contains the following goal related to the Project:

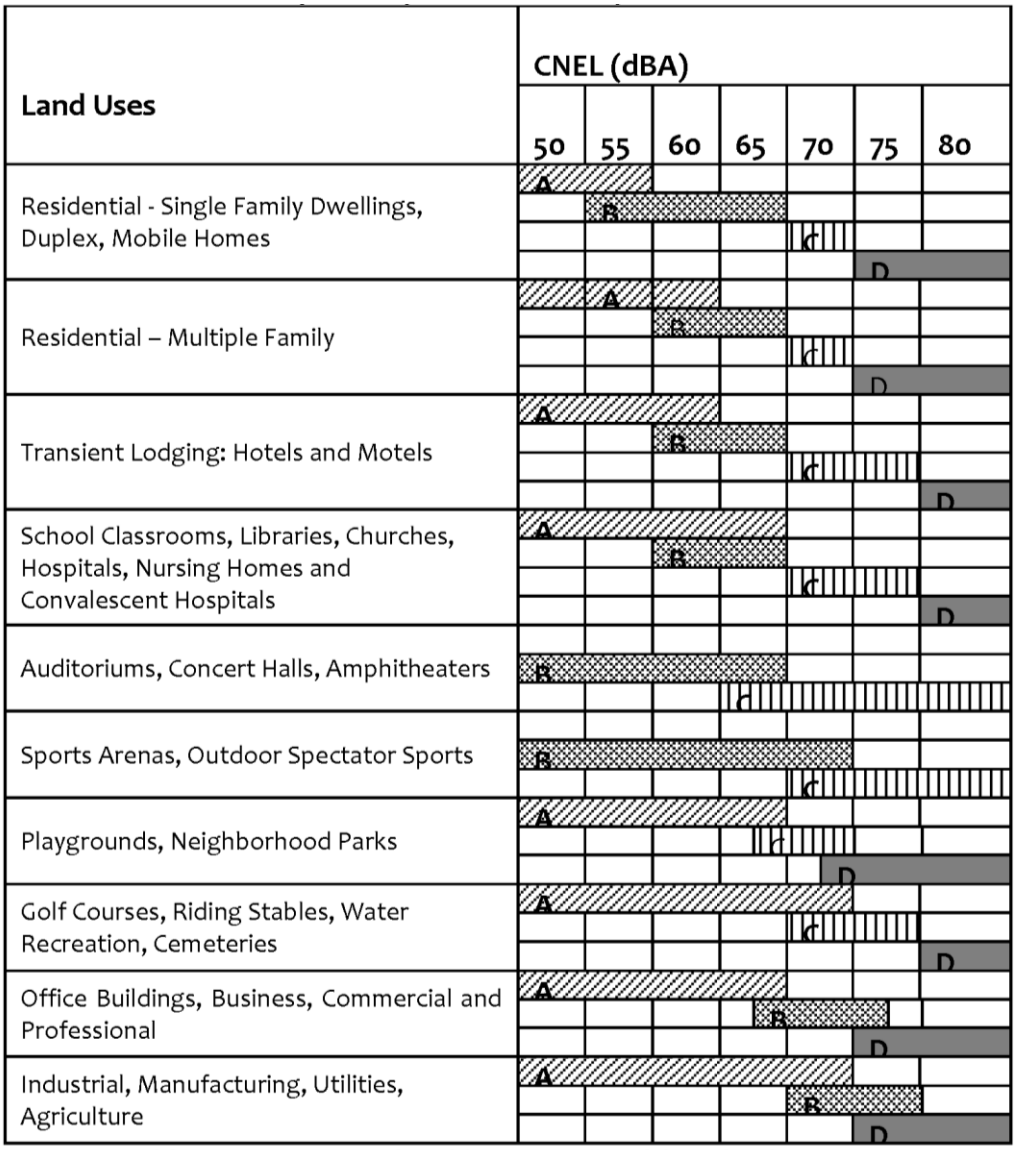
> *N-1* *A healthful noise environment which complements the City's residential and resort character.*

The noise policies specified in the City of La Quinta Environmental Hazards Element provide the guidelines necessary to satisfy this goal. To minimize noise impacts to noise-sensitive land uses, the City has established Policy N-1.1 to identify noise standards consistent with the *Land Use Compatibility for Community Noise Environments*, Table IV-3, for various land uses. The Noise Element also provides several policies to minimize noise impacts from transportation, such as Policy N-1.2, which requires a noise study and any necessary mitigation measures for new developments along roadways where the noise levels are in excess of 65 dBA CNEL.

The noise criteria identified in the City of La Quinta Environmental Hazards Element, Noise section, are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Land Use Compatibility for Community Noise Environments* (Table IV-3) matrix in the City of La Quinta General Plan provides guidelines to evaluate the acceptability of transportation-related noise level impacts. The Project residential and hotel uses, are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL and *conditionally acceptable* with exterior noise levels of up to 70 dBA CNEL. For *conditionally acceptable* land use, the General Plan indicates *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.* (13)

Based on the City of La Quinta land use compatibility guidelines for the Project land uses, this noise study has been prepared to satisfy the 65 dBA CNEL exterior noise level criteria in outdoor living areas, and an interior noise standard of 45 dBA CNEL consistent with the State of California Building Code.

EXHIBIT 3-A: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS



Source: *California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990*

A **Normally Acceptable:** With no special noise reduction requirements assuming standard construction.

B **Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design

C **Normally Unacceptable:** New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D **Clearly Unacceptable:** New construction or development should generally not be undertaken.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Project, stationary-source (operational) noise such as the expected wave basin/wave machine activity, outdoor pool/spa activity, outdoor activity, and neighborhood commercial land use activity are typically evaluated against standards established under a jurisdiction's Municipal Code.

The City of La Quinta Municipal Code, Ordinance 550, Sections 9.100.210 (B) and (C) establish the noise level standards for stationary noise sources. For residential properties, the exterior noise level shall not exceed 65 dBA L_{50} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 50 dBA L_{50} during the nighttime hours. (14) The exterior noise level standards shall apply for a cumulative period of 30 minutes in any hour, as well as 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. The City of La Quinta operational noise level standards are shown on Table 3-1 and included in Appendix 3.1.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

City	Land Use	Time Period	Exterior Noise Level Standards[1]				
			L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (<1 min)
La Quinta[2]	Residential, Schools, Hospitals & Churches	7:00 a.m. to 10:00 p.m.	65	70	75	80	85
		10:00 p.m. to 7:00 a.m.	50	55	60	65	70

[1] The noise level exceeded "n" percent of the time during the measurement period. L_{25} is the noise level exceeded 25% of the time.
[2] Source: City of La Quinta Municipal Code, Ordinance 550, Section 9.100.210 (B) & (C) (Appendix 3.1).

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of Coral Mountain Specific Plan, noise from construction activities is typically evaluated against standards established under a City's Municipal Code. The Municipal Code noise standards for construction are described below for the City of La Quinta to determine the potential noise impacts at nearby receiver locations.

To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation. The City of La Quinta Municipal Code, Section 6.08.050 indicates that construction, shall be limited to the hours of 7:00 a.m. to 5:30 p.m. Mondays to Fridays during the months of October to April, and to the hours of 6:00 a.m. to 7:00 p.m. Mondays to Fridays during the months of May to September. All year, construction activities are limited to 8:00 a.m. to 5:00 p.m. on Saturdays, with no activity allowed on Sundays. (14) However, the City's General Plan and Municipal Code do not establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes as the *generation of noise levels in*

excess of standards or as a *substantial temporary or periodic noise increase*, the following construction noise level thresholds are used in this noise study.

To evaluate whether the Project will generate potentially significant temporary construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). (15) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (15) For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as L_{eq} noise levels. Therefore, the noise level threshold of 85 dBA L_{eq} over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby sensitive receiver locations.

3.6 CONSTRUCTION VIBRATION STANDARDS

Since the City of La Quinta does not identify specific construction vibration level standards, the County of Riverside General Plan Noise Element Policy N 16.3 vibration standards are used in this noise study. Policy N 16.3 identifies a motion velocity perception threshold for vibration due to passing trains of 0.01 inches per second (in/sec) over the range of one to 100 Hz. (16) For the purposes of this analysis, the perception threshold of 0.01 in/sec shall be used to assess the potential impacts due to Project construction at nearby sensitive receiver locations.

Typically, the human response at the perception threshold for vibration includes annoyance in residential areas as previously shown on Exhibit 2-C, when vibration levels expressed in vibration decibels (VdB) approach 75 VdB. The County of Riverside, however, identifies a vibration perception threshold of 0.01 in/sec. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS). The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a one-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to reduce the range of numbers used to describe human response to vibration. Therefore, the County of Riverside vibration standard of 0.01 in/sec in RMS velocity levels is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities.

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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?

While the City of La Quinta General Plan provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Significance Criteria A. CEQA Appendix G Significance Criteria C applies to nearby public and private airports, if any, and the Project's land use compatibility.

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

The Project site is located roughly 19 miles southeast of Palm Springs International Airport, and five miles west of the Jacqueline Cochran Regional Airport. Therefore, the Project site is not located within two miles of a public airport or the vicinity of a private airstrip, and as such, no impact related to the exposure of people residing or working in the Project area to excessive airport related noise levels is anticipated.

4.2 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (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}).

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

4.3 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. The significance criteria is shown on Table 4-2.

OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
    - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase: or
    - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase: or
    - already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON, 1992).

ON-SITE TRAFFIC NOISE

- If the on-site exterior noise levels exceed 65 dBA CNEL at the private outdoor living areas of residential homes, or common outdoor areas at hotel uses. Interior noise levels shall not exceed 45 dBA CNEL for residential homes and the hotel building (City of La Quinta Municipal Code, Ordinance 550, Section 9.100.210 (B) & General Plan Noise Element Policy N-1.2).

OPERATIONAL NOISE

- If Project-related operational (stationary-source) noise levels:
  - exceed the exterior 65 dBA L_{eq} daytime or 50 dBA L_{eq} nighttime noise level standards for residential and hotel land uses. (City of La Quinta Municipal Code, Ordinance 550, Section 9.100.210 (B) & (C)).
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
  - are less than 60 dBA L_{eq} and the Project creates a readily perceptible 5 dBA L_{eq} or greater Project-related noise level increase: or
  - range from 60 to 65 dBA L_{eq} and the Project creates a barely perceptible 3 dBA L_{eq} or greater Project-related noise level increase: or
  - already exceed 65 dBA L_{eq}, and the Project creates a community noise level increase of greater than 1.5 dBA L_{eq} (FICON, 1992).

CONSTRUCTION NOISE & VIBRATION

- If Project-related construction activities create noise levels which exceed the 85 dBA L_{eq} acceptable noise level threshold at the nearby sensitive receiver locations (NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure).
- If short-term Project generated construction vibration levels exceed the County of Riverside vibration standard of 0.01 in/sec RMS at sensitive receiver locations (County of Riverside General Plan Noise Element, Policy N 16.3).

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic Noise[1]	Noise-Sensitive	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	
On-Site Traffic Noise		Exterior Noise Level Criteria	65 dBA CNEL	
		Interior Noise Level Standard	45 dBA CNEL	
Operational Noise[3]		Exterior Noise Level Standards	See Table 3-1.	
		if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction[4]		Noise Level Threshold	85 dBA L_{eq}	n/a
		Vibration Level Threshold	0.01 in/sec RMS	n/a

[1] Source: FICON, 1992.
[2] Sources: City of La Quinta General Plan Noise Element & California Building Code.
[3] Sources: City of La Quinta Municipal Code, Section 6.08.050 (Appendix 3.1) and FICON guidance.
[4] Sources: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure and County of Riverside General Plan Noise Element, Policy 16.3.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified; "RMS" = root-mean-square

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at ten locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday October 16th, 2019. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (18)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (4) Further, FTA guidance states, t*hat 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*. (11)

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

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

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Additional median noise levels (L_{50}) are provided on Table 5-1 consistent with the City of La Quinta Municipal Code exterior noise level standards. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise located on 58th Avenue in front of entrance to Coral Mountain and west of Salida del Sol. The noise levels at this location consist primarily of traffic noise from 58th Avenue and background residential land use noise source activities. The noise level measurements collected show an overall 24-hour exterior noise level of 58.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 54.2 dBA L_{eq} with an average nighttime noise level of 51.5 dBA L_{eq}.
- Location L2 represents the noise levels on 58th Avenue south of a single-family residential home at 57925 Barristo Circle. The noise levels at this location consist primarily of traffic noise from 58th Avenue and background residential land use noise source activities. The noise level measurements collected show an overall 24-hour exterior noise level of 67.6 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.5 dBA L_{eq} with an average nighttime noise level of 60.7 dBA L_{eq}.
- Location L3 represents the noise levels located northeast of Madison Street and 58th Avenue adjacent to wall enclosing golf course. The noise levels at this location consist primarily of traffic noise from 58th Avenue and Madison Street. The noise level measurements collected show an overall 24-hour exterior noise level of 63.6 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.2 dBA L_{eq} with an average nighttime noise level of 55.6 dBA L_{eq}.
- Location L4 represents the noise levels southeast of Madison Street and 58th Avenue. The noise level measurements collected show an overall 24-hour exterior noise level of 60.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 54.5 dBA L_{eq} with an average nighttime noise level of 53.2 dBA L_{eq}. The noise levels at this location consist primarily of traffic noise from Street and 58th Avenue
- Location L5 represents the noise levels south of 58th Avenue outside northwest corner of the Analusia Country Club. The 24-hour CNEL indicates that the overall exterior noise level is 63.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 59.7 dBA L_{eq} with an average nighttime noise level of 56.1 dBA L_{eq}. Noise levels at this location are primarily due to traffic from Madison Street, 58th Avenue, and background residential land use activities.
- Location L6 represents the noise levels on Calle Conchita southeast of an existing single-family residential home at 80900 Calle Conchita. Noise levels at this location are primarily from traffic on Madison Street. The noise level measurements collected show an overall 24-hour

exterior noise level of 63.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.7 dBA L_{eq} with an average nighttime noise level of 55.8 dBA L_{eq}.

- Location L7 represents noise levels on 60th Avenue north of gated entrance to a future single-family residential community. The noise level measurements collected show an overall 24-hour exterior noise level of 63.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 57.9 dBA L_{eq} with an average nighttime noise level of 56.1 dBA L_{eq}. The noise levels at this location primarily consist of traffic on 60th Ave. and background residential land use.
- Location L8 represents noise levels on the western end of 60th Avenue south of an existing single-family residential home at 80800 60th Avenue. Noise levels at this location are primarily from background residential use. The noise level measurements collected show an overall 24-hour exterior noise level of 47.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 43.8 dBA L_{eq} with an average nighttime noise level of 39.9 dBA L_{eq}.
- Location L9 represents noise levels on Jefferson Street north of Quarry Lane. Noise levels at this location are primarily from traffic on Jefferson Street. The noise level measurements collected show an overall 24-hour exterior noise level of 56.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 51.7 dBA L_{eq} with an average nighttime noise level of 48.9 dBA L_{eq}.
- Location L10 represents the noise levels on 58th Avenue. east of 58th Avenue. and Stone Creek Way intersection. Noise levels at this location primarily consist of traffic on 58th Avenue. The noise level measurements collected show an overall 24-hour exterior noise level of 63.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.9 dBA L_{eq} with an average nighttime noise level of 54.2 dBA L_{eq}.

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

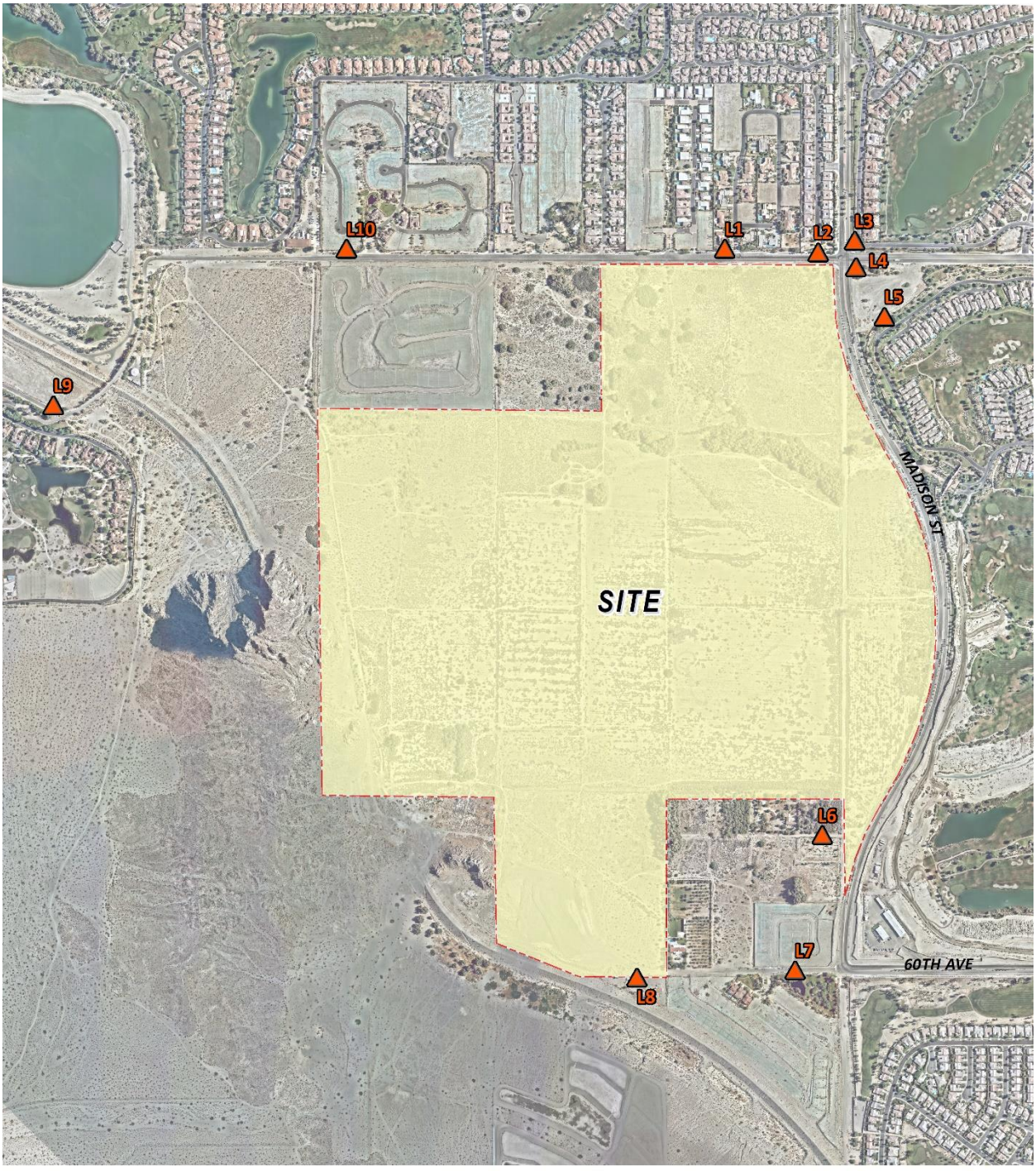
The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

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

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	
L1	Located on 58th Ave. in front of entrance to Coral Mountain and west of Salida del Sol.	54.2	51.5	58.5
L2	Located on 58th Ave. south of home at 57925 Barristo Cir.	62.5	60.7	67.6
L3	Located northeast of Madison St. and 58th Ave. adjacent to wall enclosing golf course.	61.2	55.6	63.6
L4	Located on the southeast corner of 58th Ave, and Madison St.	54.5	53.2	60.1
L5	Located south of 58th Ave. outside northwest corner of the Analusia Country Club.	59.7	56.1	63.3
L6	Located on Calle Conchita southeast of home at 80900 Calle Conchita.	58.7	55.8	63.0
L7	Located on 60th Ave. north of gated entrance to single family homes.	57.9	56.1	63.1
L8	Located towards the western end of 60th Ave. south of home at 80800 60th Ave.	43.8	39.9	47.3
L9	Located on Jefferson St. north of Quarry Ln.	51.7	48.9	56.0
L10	Located on 58th Ave. slightly east of 58th Ave. and Stone Creek Way intersection.	61.9	54.2	63.3

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (19) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (20) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (21)

This methodology is consistent with the County of Riverside Office of Industrial Hygiene *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures*, which specifically requires the FHWA RD-77-108 model to be used in analysis within the County's jurisdiction. (22)

6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 29 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of La Quinta General Plan Circulation Element, and the posted vehicle speeds. Consistent with *Coral Mountain Specific Plan Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) the off-site traffic noise analysis maintains a peak hour to average daily traffic (peak-to-daily) relationship of approximately 9.30% and includes the following traffic scenarios.

- Existing (2019)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Project (EAP)
- Existing Plus Ambient Growth Plus Cumulative Projects without and with Project for each of the following phases (EAC and EAPC):
    - Project Phase 1 (2021)
    - Project Phase 2 (2023)

  - Project Buildout (Phase 3, 2026)
  - Project Buildout (Phase 3, 2026) – Special Event
- General Plan buildout (2040) Without Project Conditions – establishes future year baseline to evaluate the proposed Project.
- General Plan buildout (2040) With Project Conditions – represents future year baseline traffic conditions with the proposed Project.

The average daily traffic (ADT) volumes used for this study are presented on Table 6-2. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Location	Adjacent Land Use[1]	Roadway Classification[2]	Distance From Centerline To Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Jefferson St.	n/o Avenue 50	City of La Quinta	GC/LDR	Major Arterial	64'	55
2	Jefferson St.	n/o Avenue 52	City of La Quinta	LDR/MHR/OS/GC	Major Arterial	64'	55
3	Jefferson St.	n/o Avenue 54	City of La Quinta	MHR/OS	Major Arterial	64'	55
4	Madison St.	n/o Avenue 50	City of La Quinta	Festival District	Primary Arterial	54'	50
5	Madison St.	n/o Avenue 52	City of La Quinta	LDR	Primary Arterial	54'	50
6	Madison St.	n/o Avenue 54	City of La Quinta	LDR	Primary Arterial	54'	50
7	Madison St.	n/o Airport Bl.	City of La Quinta	LDR/OS	Primary Arterial	54'	50
8	Madison St.	n/o Avenue 58	City of La Quinta	LDR/OS	Primary Arterial	54'	50
9	Madison St.	n/o Avenue 60	City of La Quinta	LDR/GC	Secondary Arterial	51'	45
10	Monroe St.	n/o Avenue 50	City of Indio	LDR	Boulevard	64'	50
11	Monroe St.	n/o Avenue 52	City of Indio	LDR	Boulevard	64'	50
12	Monroe St.	n/o Avenue 54	City of La Quinta	LDR	Primary Arterial	54'	50
13	Monroe St.	n/o Airport Bl.	City of La Quinta	LDR	Primary Arterial	54'	50
14	Monroe St.	n/o Avenue 58	City of La Quinta	LDR/GC	Primary Arterial	54'	50
15	Monroe St.	n/o Avenue 60	City of La Quinta	LDR/GC	Primary Arterial	54'	50
16	Avenue 50	w/o Jefferson St.	City of La Quinta	LDR/GC	Primary Arterial	54'	50
17	Avenue 50	w/o Madison St.	City of La Quinta	LDR/GC	Primary Arterial	54'	50
18	Avenue 50	e/o Monroe St.	City of Indio	LDR	Boulevard	64'	50
19	Avenue 52	w/o Monroe St.	City of La Quinta	GC/OS	Primary Arterial	54'	50
20	Avenue 54	w/o Madison St.	City of La Quinta	LDR/MHR/GC/OS	Primary Arterial	54'	50
21	Avenue 54	w/o Monroe St.	City of La Quinta	LDR/MHR/OS	Primary Arterial	54'	50
22	Airport Bl.	w/o Monroe St.	City of La Quinta	LDR/OS	Primary Arterial	54'	50
23	Avenue 58	w/o Madison St.	City of La Quinta	LDR/MHR	Secondary Arterial	51'	45
24	Avenue 58	w/o Monroe St.	City of La Quinta	LDR/MCF	Secondary Arterial	51'	45

ID	Roadway	Segment	Location	Adjacent Land Use[1]	Roadway Classification[2]	Distance From Centerline To Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
25	Avenue 58	w/o Jackson St.	Riverside County	LDR	Major	59'	50
26	Avenue 58	e/o Jackson St.	Riverside County	LDR	Major	59'	50
27	Avenue 60	w/o Madison St.	City of La Quinta	LDR	Collector	40'	40
28	Avenue 60	w/o Monroe St.	City of La Quinta	LDR/MHR/OS	Secondary Arterial	51'	45
29	Avenue 60	e/o Monroe St.	Riverside County	LDR/MHR	Arterial	64'	50

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] Distance to adjacent land use based on the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element.
[3] Source: The Wave-Coral Mountain Traffic Impact Analysis, Urban Crossroads, Inc.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic (1,000's)[1]													
			Existing 2019		EA		EAC 2021		EAC 2023		EAC 2026		EACSE 2026		General Plan	
			No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project
1	Jefferson St.	n/o Avenue 50	22.8	23.3	28.2	28.7	32.0	32.1	33.8	33.9	36.5	37.0	36.5	37.0	51.5	52.0
2	Jefferson St.	n/o Avenue 52	16.2	16.9	19.4	20.1	22.9	23.0	24.0	24.1	25.8	26.5	25.8	26.5	34.3	35.0
3	Jefferson St.	n/o Avenue 54	12.7	13.6	16.3	17.2	18.4	18.6	19.8	20.0	21.7	22.5	21.7	22.6	32.2	33.0
4	Madison St.	n/o Avenue 50	5.9	6.4	9.0	9.5	8.2	8.3	9.1	9.2	10.8	11.3	10.8	11.3	22.5	23.0
5	Madison St.	n/o Avenue 52	6.9	7.7	11.3	12.1	9.4	9.5	10.9	11.0	13.3	14.0	13.3	14.0	32.3	33.0
6	Madison St.	n/o Avenue 54	4.5	5.8	7.5	8.8	7.5	7.8	8.6	8.9	10.4	11.7	10.4	11.8	23.7	25.0
7	Madison St.	n/o Airport Bl.	9.4	11.9	15.2	17.7	13.8	14.4	15.3	16.0	18.2	20.7	18.2	21.0	42.5	45.0
8	Madison St.	n/o Avenue 58	6.7	9.7	10.7	13.7	11.3	12.1	12.3	13.3	14.3	17.4	14.3	18.0	31.0	34.0
9	Madison St.	n/o Avenue 60	2.8	3.9	5.1	6.2	4.7	5.0	5.4	5.8	6.6	7.6	6.6	7.9	19.0	20.0
10	Monroe St.	n/o Avenue 50	9.6	10.1	10.2	10.7	12.8	12.9	13.2	13.3	13.8	14.3	13.8	14.3	15.1	15.6

ID	Roadway	Segment	Average Daily Traffic (1,000's)[1]													
			Existing 2019		EA		EAC 2021		EAC 2023		EAC 2026		EACSE 2026		General Plan	
			No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project	No Project	With Project
11	Monroe St.	n/o Avenue 52	7.5	8.2	9.7	10.4	10.7	10.8	11.7	11.8	13.1	13.8	13.1	13.8	19.3	20.0
12	Monroe St.	n/o Avenue 54	5.1	5.9	8.9	9.7	8.5	8.6	10.3	10.4	12.9	13.6	12.9	13.6	31.3	32.0
13	Monroe St.	n/o Airport Bl.	3.9	4.6	7.6	8.3	6.8	6.9	9.2	9.3	12.6	13.3	12.6	13.3	34.3	35.0
14	Monroe St.	n/o Avenue 58	3.4	4.4	6.1	7.1	6.7	6.9	9.0	9.3	12.0	13.1	12.0	13.2	24.9	26.0
15	Monroe St.	n/o Avenue 60	2.7	2.9	5.2	5.4	6.4	6.4	9.2	9.2	12.6	12.8	12.6	12.9	26.8	27.0
16	Avenue 50	w/o Jefferson St.	12.9	13.4	13.0	13.5	16.7	16.8	16.8	16.9	17.0	17.5	17.0	17.5	17.2	17.7
17	Avenue 50	w/o Madison St.	11.2	11.4	14.6	14.8	14.6	14.6	15.7	15.7	17.4	17.6	17.4	17.7	27.8	28.0
18	Avenue 50	e/o Monroe St.	9.3	9.5	11.9	12.1	11.1	11.1	11.9	11.9	13.3	13.5	13.3	13.6	20.8	21.0
19	Avenue 52	w/o Monroe St.	7.9	8.3	11.2	11.6	11.5	11.6	12.6	12.7	14.2	14.6	14.2	14.6	25.7	26.0
20	Avenue 54	w/o Madison St.	8.6	9.5	12.8	13.7	10.9	11.1	12.4	12.6	14.7	15.5	14.7	15.6	30.2	31.0
21	Avenue 54	w/o Monroe St.	5.3	5.6	7.7	8.0	6.5	6.6	7.7	7.8	9.3	9.7	9.3	9.7	17.7	18.0
22	Airport Bl.	w/o Monroe St.	2.0	2.3	4.0	4.3	2.9	3.0	3.5	3.6	4.4	4.8	4.4	4.8	16.7	17.0
23	Avenue 58	w/o Madison St.	1.6	2.2	2.8	3.4	4.8	5.1	5.0	5.5	5.7	6.2	5.7	6.7	11.9	12.5
24	Avenue 58	w/o Monroe St.	2.3	4.1	3.8	5.6	4.8	5.3	5.2	5.8	5.9	7.8	5.9	8.2	12.2	14.0
25	Avenue 58	w/o Jackson St.	1.8	2.7	3.8	4.7	2.7	2.9	3.6	3.8	4.9	5.7	4.9	5.8	18.2	19.0
26	Avenue 58	e/o Jackson St.	1.4	2.0	2.6	3.2	2.1	2.3	2.5	2.7	3.3	3.9	3.3	4.0	9.4	10.0
27	Avenue 60	w/o Madison St.	0.1	1.3	0.6	1.8	0.7	0.9	0.8	1.0	1.1	2.3	1.1	2.3	20.8	22.0
28	Avenue 60	w/o Monroe St.	3.2	4.5	6.0	7.3	4.7	5.1	5.4	5.9	6.9	8.2	6.9	8.5	22.7	24.0
29	Avenue 60	e/o Monroe St.	1.2	1.9	2.5	3.2	4.4	4.6	4.8	5.1	5.7	6.4	5.7	6.6	14.3	15.0

[1] Source: Coral Mountain Specific Plan Traffic Impact Analysis, Urban Crossroads, Inc.
"EA" = Existing plus Ambient Growth; "EAC" = EA plus Cumulative; "EACSE"= EAC Special Event

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	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Source: Typical Southern California vehicle mix.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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

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

[1] Source: Typical Southern California vehicle mix and the County of Riverside Office of Industrial Hygiene.

6.1.2 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-5. To predict the future on-site noise environment at the Project site, parameters including the number of lanes and daily volume thresholds were obtained from the City of La Quinta General Plan Transportation Element and *Coral Mountain Specific Plan Traffic Impact Analysis*. For the purposes of this analysis, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (21)

TABLE 6-5: ON-SITE ROADWAY PARAMETERS

Roadway	Lanes	Classification[1]	Average Daily Traffic Volume[1]	Speed Limit (mph)[2]	Site Conditions
Avenue 58	4	Secondary Arterial	12,500	45	Soft
Madison Street	4	Secondary Arterial	20,000	45	Soft

[1] Source: The Wave at Coral Mountain Traffic Impact Analysis General Plan Buildout (2040)
[2] Posted speed limit.

The site plan is used to identify the relationship between the roadway centerline elevation, the pad elevation and the centerline distance to any intervening noise barriers, and the building façade. The exterior noise level impacts were placed five feet above the finished floor elevation at the outdoor living areas and proposed building façades. Second-floor receivers were located 14 feet above the finished floor elevation.

6.2 VIBRATION ASSESSMENT

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

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

TABLE 6-6: 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

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment

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7 OFF-SITE TRANSPORTATION NOISE IMPACTS

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

- Existing Without / With Project: This scenario refers to the existing present-day 2019 noise conditions, without and with the development of the full Project (Phase 3). The Existing With Project scenario will not actually occur since the Project would not be fully constructed and operational until Phase 3 2026 conditions.
- Existing plus Ambient (EA) Without / With Project: This scenario refers to the existing present-day 2019 noise conditions plus the estimated 7 years of background growth in ambient traffic conditions without and with the development of the full Project (Phase 3).
- Existing plus Ambient plus Cumulative (EAC) 2021 Without / With Project: This scenario refers to the existing plus ambient plus cumulative noise conditions at 2021 without and with the proposed Project Phase 1. Project Phase 1 includes the 12-acre wave basin facility, a 150-key hotel, 96 multifamily attached dwelling units, 26 single family detached dwelling units, and 10,000 square feet of retail
- Existing plus Ambient plus Cumulative (EAC) 2023 Without / With Project: This scenario refers to the existing plus ambient plus cumulative noise conditions at 2023 without and with the proposed Project Phase 2. In addition, to Project Phase 1, Project Phase 2 includes an additional 25,000 square feet of retail for a total of 12-acre wave basin facility, a 150-key hotel, 104 multifamily attached dwelling units, 26 single family detached dwelling units, and 35,000 square feet of retail
- Existing plus Ambient plus Cumulative (EAC) 2026 Without / With Project: This scenario refers to the existing plus ambient plus cumulative noise conditions at 2026 without and with the proposed Project Phase 3. In addition, to Project Phase 1 and 2, Project Phase 3 includes an additional 25,000 square feet of retail and 470 single family detached dwelling units for a total of 12-acre wave basin facility, a 150-key hotel, 104 multifamily attached dwelling units, 496 single family detached dwelling units, 60,000 square feet of retail.
- Existing plus Ambient plus Cumulative (EAC) 2026 Special Events: This scenario refers to the existing plus ambient plus cumulative plus special events noise conditions at 2026 with the proposed Project Phase 3. The applicant anticipates the potential occurrence of special events at this location involving attendance of not-to-exceed 2,500 guests per day arriving or departing on Saturdays (up to 4 events per year).
- General Plan (GP) 2040 Without / With Project: This scenario refers to the future General Plan buildout conditions at Year 2040 without and with the proposed Project. This scenario represents buildout of the General Plan land use and includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise Increase from the surrounding stationary noise sources within the Project study area. Tables 7-1 and 7-14 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

TABLE 7-1: EXISTING 2019 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	71.8	85	182	393
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	70.3	67	145	313
3	Jefferson St.	n/o Avenue 54	MHR/OS	69.3	57	123	266
4	Madison St.	n/o Avenue 50	Festival District	65.6	28	59	128
5	Madison St.	n/o Avenue 52	LDR	66.3	31	66	142
6	Madison St.	n/o Avenue 54	LDR	64.4	23	50	107
7	Madison St.	n/o Airport Bl.	LDR/OS	67.6	38	81	175
8	Madison St.	n/o Avenue 58	LDR/OS	66.2	30	65	139
9	Madison St.	n/o Avenue 60	LDR/GC	61.5	14	30	64
10	Monroe St.	n/o Avenue 50	LDR	66.2	36	77	166
11	Monroe St.	n/o Avenue 52	LDR	65.1	30	65	141
12	Monroe St.	n/o Avenue 54	LDR	65.0	25	54	116
13	Monroe St.	n/o Airport Bl.	LDR	63.8	21	45	97
14	Monroe St.	n/o Avenue 58	LDR/GC	63.2	19	41	89
15	Monroe St.	n/o Avenue 60	LDR/GC	62.2	16	35	76
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.0	46	100	216
17	Avenue 50	w/o Madison St.	LDR/GC	68.4	42	91	196
18	Avenue 50	e/o Monroe St.	LDR	66.1	35	75	162
19	Avenue 52	w/o Monroe St.	GC/OS	66.9	33	72	155
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	67.3	35	76	165
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	65.2	26	55	119
22	Airport Bl.	w/o Monroe St.	LDR/OS	60.9	13	29	62
23	Avenue 58	w/o Madison St.	LDR/MHR	59.1	10	20	44
24	Avenue 58	w/o Monroe St.	LDR/MCF	60.6	12	26	56
25	Avenue 58	w/o Jackson St.	LDR	59.4	12	25	54
26	Avenue 58	e/o Jackson St.	LDR	58.3	10	21	45
27	Avenue 60	w/o Madison St.	LDR	46.9	1	2	5
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	62.1	15	33	70
29	Avenue 60	e/o Monroe St.	LDR/MHR	57.3	9	20	42

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-2: EXISTING 2019 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	71.9	86	185	398
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	70.5	69	149	322
3	Jefferson St.	n/o Avenue 54	MHR/OS	69.6	60	129	278
4	Madison St.	n/o Avenue 50	Festival District	66.0	29	63	135
5	Madison St.	n/o Avenue 52	LDR	66.8	33	71	153
6	Madison St.	n/o Avenue 54	LDR	65.5	27	59	127
7	Madison St.	n/o Airport Bl.	LDR/OS	68.7	44	95	204
8	Madison St.	n/o Avenue 58	LDR/OS	67.8	38	83	178
9	Madison St.	n/o Avenue 60	LDR/GC	62.9	17	37	80
10	Monroe St.	n/o Avenue 50	LDR	66.4	37	80	172
11	Monroe St.	n/o Avenue 52	LDR	65.5	32	69	149
12	Monroe St.	n/o Avenue 54	LDR	65.6	28	59	128
13	Monroe St.	n/o Airport Bl.	LDR	64.5	23	50	108
14	Monroe St.	n/o Avenue 58	LDR/GC	64.3	23	49	105
15	Monroe St.	n/o Avenue 60	LDR/GC	62.5	17	37	80
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.2	48	103	221
17	Avenue 50	w/o Madison St.	LDR/GC	68.5	43	92	199
18	Avenue 50	e/o Monroe St.	LDR	66.2	36	76	165
19	Avenue 52	w/o Monroe St.	GC/OS	67.1	35	75	161
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	67.7	38	82	176
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	65.4	27	57	124
22	Airport Bl.	w/o Monroe St.	LDR/OS	61.5	15	32	68
23	Avenue 58	w/o Madison St.	LDR/MHR	60.4	12	25	55
24	Avenue 58	w/o Monroe St.	LDR/MCF	63.1	18	38	83
25	Avenue 58	w/o Jackson St.	LDR	61.2	15	33	70
26	Avenue 58	e/o Jackson St.	LDR	59.9	12	27	58
27	Avenue 60	w/o Madison St.	LDR	58.0	6	14	30
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	63.5	19	41	88
29	Avenue 60	e/o Monroe St.	LDR/MHR	59.3	12	27	57

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-3: EA WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	72.7	97	210	452
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.1	76	164	353
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.4	68	146	314
4	Madison St.	n/o Avenue 50	Festival District	67.5	37	79	170
5	Madison St.	n/o Avenue 52	LDR	68.4	43	92	197
6	Madison St.	n/o Avenue 54	LDR	66.7	32	70	150
7	Madison St.	n/o Airport Bl.	LDR/OS	69.7	52	112	240
8	Madison St.	n/o Avenue 58	LDR/OS	68.2	41	88	190
9	Madison St.	n/o Avenue 60	LDR/GC	64.1	21	44	96
10	Monroe St.	n/o Avenue 50	LDR	66.5	37	80	173
11	Monroe St.	n/o Avenue 52	LDR	66.3	36	78	167
12	Monroe St.	n/o Avenue 54	LDR	67.4	36	78	168
13	Monroe St.	n/o Airport Bl.	LDR	66.7	33	70	152
14	Monroe St.	n/o Avenue 58	LDR/GC	65.8	28	61	131
15	Monroe St.	n/o Avenue 60	LDR/GC	65.1	25	55	118
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.1	47	101	217
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	50	109	234
18	Avenue 50	e/o Monroe St.	LDR	67.1	41	89	192
19	Avenue 52	w/o Monroe St.	GC/OS	68.4	42	91	196
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.0	46	100	214
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.8	33	71	153
22	Airport Bl.	w/o Monroe St.	LDR/OS	63.9	21	46	99
23	Avenue 58	w/o Madison St.	LDR/MHR	61.5	14	30	64
24	Avenue 58	w/o Monroe St.	LDR/MCF	62.8	17	36	79
25	Avenue 58	w/o Jackson St.	LDR	62.6	19	41	88
26	Avenue 58	e/o Jackson St.	LDR	61.0	15	32	69
27	Avenue 60	w/o Madison St.	LDR	54.7	4	8	18
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.8	23	49	107
29	Avenue 60	e/o Monroe St.	LDR/MHR	60.5	15	32	69

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-4: EA WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	72.8	99	212	458
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.3	78	168	361
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.6	70	151	325
4	Madison St.	n/o Avenue 50	Festival District	67.7	38	82	176
5	Madison St.	n/o Avenue 52	LDR	68.7	45	96	207
6	Madison St.	n/o Avenue 54	LDR	67.4	36	78	167
7	Madison St.	n/o Airport Bl.	LDR/OS	70.4	57	124	266
8	Madison St.	n/o Avenue 58	LDR/OS	69.3	48	104	224
9	Madison St.	n/o Avenue 60	LDR/GC	64.9	23	51	109
10	Monroe St.	n/o Avenue 50	LDR	66.7	38	83	178
11	Monroe St.	n/o Avenue 52	LDR	66.6	38	81	175
12	Monroe St.	n/o Avenue 54	LDR	67.8	38	83	178
13	Monroe St.	n/o Airport Bl.	LDR	67.1	35	75	161
14	Monroe St.	n/o Avenue 58	LDR/GC	66.4	31	67	145
15	Monroe St.	n/o Avenue 60	LDR/GC	65.2	26	56	121
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.2	48	103	222
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	51	110	236
18	Avenue 50	e/o Monroe St.	LDR	67.2	42	90	194
19	Avenue 52	w/o Monroe St.	GC/OS	68.6	43	93	201
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.3	48	104	224
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.9	34	73	157
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.2	22	48	104
23	Avenue 58	w/o Madison St.	LDR/MHR	62.3	16	34	73
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.5	22	47	102
25	Avenue 58	w/o Jackson St.	LDR	63.6	22	47	102
26	Avenue 58	e/o Jackson St.	LDR	61.9	17	37	79
27	Avenue 60	w/o Madison St.	LDR	59.4	8	17	37
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	65.6	26	56	121
29	Avenue 60	e/o Monroe St.	LDR/MHR	61.5	17	38	81

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-5: EAC 2021 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.3	106	228	492
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.8	85	183	394
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.9	73	158	340
4	Madison St.	n/o Avenue 50	Festival District	67.1	34	74	159
5	Madison St.	n/o Avenue 52	LDR	67.6	38	81	175
6	Madison St.	n/o Avenue 54	LDR	66.7	32	70	150
7	Madison St.	n/o Airport Bl.	LDR/OS	69.3	49	105	225
8	Madison St.	n/o Avenue 58	LDR/OS	68.4	43	92	197
9	Madison St.	n/o Avenue 60	LDR/GC	63.7	19	42	91
10	Monroe St.	n/o Avenue 50	LDR	67.5	43	93	201
11	Monroe St.	n/o Avenue 52	LDR	66.7	38	83	178
12	Monroe St.	n/o Avenue 54	LDR	67.2	35	76	163
13	Monroe St.	n/o Airport Bl.	LDR	66.2	30	65	141
14	Monroe St.	n/o Avenue 58	LDR/GC	66.2	30	65	139
15	Monroe St.	n/o Avenue 60	LDR/GC	66.0	29	63	135
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.1	55	119	256
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	50	109	234
18	Avenue 50	e/o Monroe St.	LDR	66.8	39	85	183
19	Avenue 52	w/o Monroe St.	GC/OS	68.5	43	93	200
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.3	42	89	193
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.0	29	63	137
22	Airport Bl.	w/o Monroe St.	LDR/OS	62.5	17	37	80
23	Avenue 58	w/o Madison St.	LDR/MHR	63.8	20	43	92
24	Avenue 58	w/o Monroe St.	LDR/MCF	63.8	20	43	92
25	Avenue 58	w/o Jackson St.	LDR	61.2	15	33	70
26	Avenue 58	e/o Jackson St.	LDR	60.1	13	28	60
27	Avenue 60	w/o Madison St.	LDR	55.3	4	9	20
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	63.7	19	42	91
29	Avenue 60	e/o Monroe St.	LDR/MHR	62.9	22	47	100

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.

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

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

"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;

"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-6: EAC 2021 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.3	106	229	493
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.9	85	183	395
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.9	74	159	343
4	Madison St.	n/o Avenue 50	Festival District	67.1	35	75	161
5	Madison St.	n/o Avenue 52	LDR	67.7	38	82	176
6	Madison St.	n/o Avenue 54	LDR	66.8	33	72	154
7	Madison St.	n/o Airport Bl.	LDR/OS	69.5	50	108	232
8	Madison St.	n/o Avenue 58	LDR/OS	68.7	45	96	207
9	Madison St.	n/o Avenue 60	LDR/GC	64.0	20	44	94
10	Monroe St.	n/o Avenue 50	LDR	67.5	44	94	202
11	Monroe St.	n/o Avenue 52	LDR	66.7	39	83	180
12	Monroe St.	n/o Avenue 54	LDR	67.3	35	76	165
13	Monroe St.	n/o Airport Bl.	LDR	66.3	31	66	142
14	Monroe St.	n/o Avenue 58	LDR/GC	66.3	31	66	142
15	Monroe St.	n/o Avenue 60	LDR/GC	66.0	29	63	135
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	55	119	257
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	50	109	234
18	Avenue 50	e/o Monroe St.	LDR	66.8	39	85	183
19	Avenue 52	w/o Monroe St.	GC/OS	68.6	43	93	201
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.4	42	91	195
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.1	30	64	138
22	Airport Bl.	w/o Monroe St.	LDR/OS	62.7	18	38	82
23	Avenue 58	w/o Madison St.	LDR/MHR	64.1	21	44	96
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.3	21	46	98
25	Avenue 58	w/o Jackson St.	LDR	61.5	16	34	74
26	Avenue 58	e/o Jackson St.	LDR	60.5	14	29	63
27	Avenue 60	w/o Madison St.	LDR	56.4	5	11	23
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.1	21	44	96
29	Avenue 60	e/o Monroe St.	LDR/MHR	63.1	22	48	103

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-7: EAC 2023 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.5	110	237	510
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.0	88	189	406
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.2	77	166	357
4	Madison St.	n/o Avenue 50	Festival District	67.5	37	79	171
5	Madison St.	n/o Avenue 52	LDR	68.3	42	89	193
6	Madison St.	n/o Avenue 54	LDR	67.3	35	76	165
7	Madison St.	n/o Airport Bl.	LDR/OS	69.8	52	112	242
8	Madison St.	n/o Avenue 58	LDR/OS	68.8	45	97	209
9	Madison St.	n/o Avenue 60	LDR/GC	64.3	21	46	99
10	Monroe St.	n/o Avenue 50	LDR	67.6	44	95	205
11	Monroe St.	n/o Avenue 52	LDR	67.1	41	88	189
12	Monroe St.	n/o Avenue 54	LDR	68.0	40	86	186
13	Monroe St.	n/o Airport Bl.	LDR	67.6	37	80	172
14	Monroe St.	n/o Avenue 58	LDR/GC	67.5	37	79	170
15	Monroe St.	n/o Avenue 60	LDR/GC	67.6	37	80	172
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	55	119	257
17	Avenue 50	w/o Madison St.	LDR/GC	69.9	53	114	246
18	Avenue 50	e/o Monroe St.	LDR	67.1	41	89	192
19	Avenue 52	w/o Monroe St.	GC/OS	68.9	46	99	212
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.8	45	97	210
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.8	33	71	153
22	Airport Bl.	w/o Monroe St.	LDR/OS	63.4	19	42	90
23	Avenue 58	w/o Madison St.	LDR/MHR	64.0	20	44	94
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.2	21	45	97
25	Avenue 58	w/o Jackson St.	LDR	62.4	18	40	85
26	Avenue 58	e/o Jackson St.	LDR	60.8	14	31	67
27	Avenue 60	w/o Madison St.	LDR	55.9	5	10	21
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.3	21	46	99
29	Avenue 60	e/o Monroe St.	LDR/MHR	63.3	23	49	106

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-8: EAC 2023 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.5	110	237	511
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.1	88	189	407
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.2	78	167	360
4	Madison St.	n/o Avenue 50	Festival District	67.6	37	80	172
5	Madison St.	n/o Avenue 52	LDR	68.3	42	90	194
6	Madison St.	n/o Avenue 54	LDR	67.4	36	78	168
7	Madison St.	n/o Airport Bl.	LDR/OS	70.0	54	116	249
8	Madison St.	n/o Avenue 58	LDR/OS	69.2	47	102	220
9	Madison St.	n/o Avenue 60	LDR/GC	64.6	22	48	104
10	Monroe St.	n/o Avenue 50	LDR	67.6	44	96	206
11	Monroe St.	n/o Avenue 52	LDR	67.1	41	88	190
12	Monroe St.	n/o Avenue 54	LDR	68.1	40	87	187
13	Monroe St.	n/o Airport Bl.	LDR	67.6	37	80	173
14	Monroe St.	n/o Avenue 58	LDR/GC	67.6	37	80	173
15	Monroe St.	n/o Avenue 60	LDR/GC	67.6	37	80	172
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	56	120	258
17	Avenue 50	w/o Madison St.	LDR/GC	69.9	53	114	246
18	Avenue 50	e/o Monroe St.	LDR	67.1	41	89	192
19	Avenue 52	w/o Monroe St.	GC/OS	69.0	46	99	213
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.9	46	99	212
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.8	33	72	154
22	Airport Bl.	w/o Monroe St.	LDR/OS	63.5	20	43	92
23	Avenue 58	w/o Madison St.	LDR/MHR	64.4	22	47	101
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.6	22	48	104
25	Avenue 58	w/o Jackson St.	LDR	62.6	19	41	88
26	Avenue 58	e/o Jackson St.	LDR	61.2	15	33	70
27	Avenue 60	w/o Madison St.	LDR	56.9	5	12	25
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.7	23	49	105
29	Avenue 60	e/o Monroe St.	LDR/MHR	63.6	24	51	111

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-9: EAC 2026 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	116	249	537
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.4	92	198	426
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.6	82	176	380
4	Madison St.	n/o Avenue 50	Festival District	68.2	41	89	191
5	Madison St.	n/o Avenue 52	LDR	69.2	47	102	220
6	Madison St.	n/o Avenue 54	LDR	68.1	40	87	187
7	Madison St.	n/o Airport Bl.	LDR/OS	70.5	58	126	271
8	Madison St.	n/o Avenue 58	LDR/OS	69.5	50	107	231
9	Madison St.	n/o Avenue 60	LDR/GC	65.2	24	53	113
10	Monroe St.	n/o Avenue 50	LDR	67.8	46	98	211
11	Monroe St.	n/o Avenue 52	LDR	67.6	44	95	204
12	Monroe St.	n/o Avenue 54	LDR	69.0	46	100	216
13	Monroe St.	n/o Airport Bl.	LDR	68.9	46	99	212
14	Monroe St.	n/o Avenue 58	LDR/GC	68.7	44	95	205
15	Monroe St.	n/o Avenue 60	LDR/GC	68.9	46	99	212
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	56	120	259
17	Avenue 50	w/o Madison St.	LDR/GC	70.3	57	122	263
18	Avenue 50	e/o Monroe St.	LDR	67.6	44	96	206
19	Avenue 52	w/o Monroe St.	GC/OS	69.4	50	107	230
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.6	51	109	235
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.6	37	80	173
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.3	23	49	105
23	Avenue 58	w/o Madison St.	LDR/MHR	64.6	22	48	103
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.7	23	49	105
25	Avenue 58	w/o Jackson St.	LDR	63.7	23	49	105
26	Avenue 58	e/o Jackson St.	LDR	62.0	17	37	81
27	Avenue 60	w/o Madison St.	LDR	57.3	6	12	26
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	65.4	25	54	117
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.0	26	55	119

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-10: EAC 2026 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	117	252	542
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.5	94	201	434
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.8	84	181	389
4	Madison St.	n/o Avenue 50	Festival District	68.4	43	92	197
5	Madison St.	n/o Avenue 52	LDR	69.4	49	106	228
6	Madison St.	n/o Avenue 54	LDR	68.6	44	94	202
7	Madison St.	n/o Airport Bl.	LDR/OS	71.1	64	137	295
8	Madison St.	n/o Avenue 58	LDR/OS	70.3	57	122	263
9	Madison St.	n/o Avenue 60	LDR/GC	65.8	27	58	125
10	Monroe St.	n/o Avenue 50	LDR	67.9	47	100	216
11	Monroe St.	n/o Avenue 52	LDR	67.8	46	98	211
12	Monroe St.	n/o Avenue 54	LDR	69.2	48	104	223
13	Monroe St.	n/o Airport Bl.	LDR	69.2	47	102	220
14	Monroe St.	n/o Avenue 58	LDR/GC	69.1	47	101	218
15	Monroe St.	n/o Avenue 60	LDR/GC	69.0	46	100	214
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.3	57	123	264
17	Avenue 50	w/o Madison St.	LDR/GC	70.4	57	123	265
18	Avenue 50	e/o Monroe St.	LDR	67.7	45	97	208
19	Avenue 52	w/o Monroe St.	GC/OS	69.6	50	109	234
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.8	52	113	244
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.8	38	83	178
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.7	24	52	112
23	Avenue 58	w/o Madison St.	LDR/MHR	64.9	23	51	109
24	Avenue 58	w/o Monroe St.	LDR/MCF	65.9	27	59	127
25	Avenue 58	w/o Jackson St.	LDR	64.4	25	54	116
26	Avenue 58	e/o Jackson St.	LDR	62.8	19	42	90
27	Avenue 60	w/o Madison St.	LDR	60.5	9	20	43
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	66.2	28	61	131
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.5	28	60	129

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-11: EAC 2026 WITHOUT PROJECT WITHOUT SPECIAL EVENTS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	116	249	537
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.4	92	198	426
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.6	82	176	380
4	Madison St.	n/o Avenue 50	Festival District	68.2	41	89	191
5	Madison St.	n/o Avenue 52	LDR	69.2	47	102	220
6	Madison St.	n/o Avenue 54	LDR	68.1	40	87	187
7	Madison St.	n/o Airport Bl.	LDR/OS	70.5	58	126	271
8	Madison St.	n/o Avenue 58	LDR/OS	69.5	50	107	231
9	Madison St.	n/o Avenue 60	LDR/GC	65.2	24	53	113
10	Monroe St.	n/o Avenue 50	LDR	67.8	46	98	211
11	Monroe St.	n/o Avenue 52	LDR	67.6	44	95	204
12	Monroe St.	n/o Avenue 54	LDR	69.0	46	100	216
13	Monroe St.	n/o Airport Bl.	LDR	68.9	46	99	212
14	Monroe St.	n/o Avenue 58	LDR/GC	68.7	44	95	205
15	Monroe St.	n/o Avenue 60	LDR/GC	68.9	46	99	212
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	56	120	259
17	Avenue 50	w/o Madison St.	LDR/GC	70.3	57	122	263
18	Avenue 50	e/o Monroe St.	LDR	67.6	44	96	206
19	Avenue 52	w/o Monroe St.	GC/OS	69.4	50	107	230
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.6	51	109	235
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.6	37	80	173
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.3	23	49	105
23	Avenue 58	w/o Madison St.	LDR/MHR	64.6	22	48	103
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.7	23	49	105
25	Avenue 58	w/o Jackson St.	LDR	63.7	23	49	105
26	Avenue 58	e/o Jackson St.	LDR	62.0	17	37	81
27	Avenue 60	w/o Madison St.	LDR	57.3	6	12	26
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	65.4	25	54	117
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.0	26	55	119

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-12: EAC 2026 WITH PROJECT WITH SPECIAL EVENTS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	117	252	542
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.5	94	201	434
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.8	84	181	390
4	Madison St.	n/o Avenue 50	Festival District	68.4	43	92	197
5	Madison St.	n/o Avenue 52	LDR	69.4	49	106	228
6	Madison St.	n/o Avenue 54	LDR	68.6	44	94	203
7	Madison St.	n/o Airport Bl.	LDR/OS	71.1	64	138	298
8	Madison St.	n/o Avenue 58	LDR/OS	70.5	58	125	269
9	Madison St.	n/o Avenue 60	LDR/GC	66.0	28	59	128
10	Monroe St.	n/o Avenue 50	LDR	67.9	47	100	216
11	Monroe St.	n/o Avenue 52	LDR	67.8	46	98	211
12	Monroe St.	n/o Avenue 54	LDR	69.2	48	104	223
13	Monroe St.	n/o Airport Bl.	LDR	69.2	47	102	220
14	Monroe St.	n/o Avenue 58	LDR/GC	69.1	47	102	219
15	Monroe St.	n/o Avenue 60	LDR/GC	69.0	46	100	216
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.3	57	123	264
17	Avenue 50	w/o Madison St.	LDR/GC	70.4	57	124	266
18	Avenue 50	e/o Monroe St.	LDR	67.7	45	97	209
19	Avenue 52	w/o Monroe St.	GC/OS	69.6	50	109	234
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.8	53	114	245
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.8	38	83	178
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.7	24	52	112
23	Avenue 58	w/o Madison St.	LDR/MHR	65.3	25	53	115
24	Avenue 58	w/o Monroe St.	LDR/MCF	66.2	28	61	131
25	Avenue 58	w/o Jackson St.	LDR	64.5	25	54	117
26	Avenue 58	e/o Jackson St.	LDR	62.9	20	42	92
27	Avenue 60	w/o Madison St.	LDR	60.5	9	20	43
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	66.3	29	62	134
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.7	28	61	131

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-13: GENERAL PLAN 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	75.4	146	314	676
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	73.6	111	239	515
3	Jefferson St.	n/o Avenue 54	MHR/OS	73.3	106	229	494
4	Madison St.	n/o Avenue 50	Festival District	71.4	67	145	312
5	Madison St.	n/o Avenue 52	LDR	73.0	86	185	398
6	Madison St.	n/o Avenue 54	LDR	71.7	70	150	323
7	Madison St.	n/o Airport Bl.	LDR/OS	74.2	103	222	477
8	Madison St.	n/o Avenue 58	LDR/OS	72.8	83	180	387
9	Madison St.	n/o Avenue 60	LDR/GC	69.8	49	107	230
10	Monroe St.	n/o Avenue 50	LDR	68.2	48	104	224
11	Monroe St.	n/o Avenue 52	LDR	69.2	57	123	264
12	Monroe St.	n/o Avenue 54	LDR	72.9	84	181	389
13	Monroe St.	n/o Airport Bl.	LDR	73.3	89	192	414
14	Monroe St.	n/o Avenue 58	LDR/GC	71.9	72	155	334
15	Monroe St.	n/o Avenue 60	LDR/GC	72.2	76	163	351
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.3	56	121	261
17	Avenue 50	w/o Madison St.	LDR/GC	72.4	77	167	360
18	Avenue 50	e/o Monroe St.	LDR	69.6	60	129	278
19	Avenue 52	w/o Monroe St.	GC/OS	72.0	74	158	341
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	72.7	82	176	380
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	70.4	57	124	266
22	Airport Bl.	w/o Monroe St.	LDR/OS	70.1	55	119	256
23	Avenue 58	w/o Madison St.	LDR/MHR	67.8	36	78	168
24	Avenue 58	w/o Monroe St.	LDR/MCF	67.9	37	79	171
25	Avenue 58	w/o Jackson St.	LDR	69.4	54	117	251
26	Avenue 58	e/o Jackson St.	LDR	66.6	35	75	162
27	Avenue 60	w/o Madison St.	LDR	70.1	40	87	188
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	70.6	56	120	259
29	Avenue 60	e/o Monroe St.	LDR/MHR	68.0	47	102	220

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

TABLE 7-14: GENERAL PLAN 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Jefferson St.	n/o Avenue 50	GC/LDR	75.4	147	316	680
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	73.7	113	243	522
3	Jefferson St.	n/o Avenue 54	MHR/OS	73.4	108	233	502
4	Madison St.	n/o Avenue 50	Festival District	71.5	68	147	317
5	Madison St.	n/o Avenue 52	LDR	73.1	87	187	403
6	Madison St.	n/o Avenue 54	LDR	71.9	72	156	335
7	Madison St.	n/o Airport Bl.	LDR/OS	74.4	107	230	496
8	Madison St.	n/o Avenue 58	LDR/OS	73.2	89	191	411
9	Madison St.	n/o Avenue 60	LDR/GC	70.0	51	110	238
10	Monroe St.	n/o Avenue 50	LDR	68.3	49	106	229
11	Monroe St.	n/o Avenue 52	LDR	69.4	58	126	271
12	Monroe St.	n/o Avenue 54	LDR	73.0	85	183	395
13	Monroe St.	n/o Airport Bl.	LDR	73.4	90	195	419
14	Monroe St.	n/o Avenue 58	LDR/GC	72.1	74	160	344
15	Monroe St.	n/o Avenue 60	LDR/GC	72.2	76	164	353
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.4	57	124	266
17	Avenue 50	w/o Madison St.	LDR/GC	72.4	78	168	361
18	Avenue 50	e/o Monroe St.	LDR	69.6	60	130	280
19	Avenue 52	w/o Monroe St.	GC/OS	72.1	74	160	344
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	72.8	83	180	387
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	70.5	58	125	269
22	Airport Bl.	w/o Monroe St.	LDR/OS	70.2	56	120	259
23	Avenue 58	w/o Madison St.	LDR/MHR	68.0	37	81	174
24	Avenue 58	w/o Monroe St.	LDR/MCF	68.5	40	87	187
25	Avenue 58	w/o Jackson St.	LDR	69.6	56	120	259
26	Avenue 58	e/o Jackson St.	LDR	66.8	36	78	169
27	Avenue 60	w/o Madison St.	LDR	70.3	42	90	195
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	70.8	58	125	268
29	Avenue 60	e/o Monroe St.	LDR/MHR	68.2	49	105	227

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial;
"MCF" = Major Community Facility; "OS" = Open Space

7.2 EXISTING CONDITIONS PROJECT TRAFFIC NOISE LEVEL INCREASE

This analysis relies on a comparative review of the off-site traffic noise level increases, without and with project ADT traffic volumes from the Project traffic study. Using the incremental off-site traffic noise significance criteria outlined in Section 4, the impacts on nearby study area roadway segments for all the with the Project traffic conditions are evaluated. The incremental relative significance criteria identify potential impacts if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels by a *readily perceptible* 5 dBA or greater. In areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase is used and when the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact.

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed (Phase 1, 2 & 3) and operational until year 2026 cumulative conditions. Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 46.9 to 71.8 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 58.0 to 71.9 dBA CNEL. As shown on Table 7-15 the Project will generate a noise level increase of up to 11.1 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under Existing with Project conditions at the following two roadway segments:

- Madison Street north of Avenue 58 (Segment 8)
- Avenue 60 west of Madison Street (Segment 27)

All other roadway segments are shown to experience *less than significant* noise level impacts under Existing plus Project conditions. However, this scenario is provided solely for analytical purposes and will not occur, since the Project will not be full developed (Phase 1, 2 & 3) and occupied under Existing 2019 conditions. Therefore, no mitigation measures are considered to reduce the Existing with Project condition traffic noise level increases, and impacts are considered *less than significant* since they will not actually occur.

TABLE 7-15: EXISTING 2019 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	71.8	71.9	0.1	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	70.3	70.5	0.2	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	69.3	69.6	0.3	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	65.6	66.0	0.4	1.5	No
5	Madison St.	n/o Avenue 52	LDR	66.3	66.8	0.5	1.5	No
6	Madison St.	n/o Avenue 54	LDR	64.4	65.5	1.1	3.0	No
7	Madison St.	n/o Airport Bl.	LDR/OS	67.6	68.7	1.1	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	66.2	67.8	1.6	1.5	Yes
9	Madison St.	n/o Avenue 60	LDR/GC	61.5	62.9	1.4	3.0	No
10	Monroe St.	n/o Avenue 50	LDR	66.2	66.4	0.2	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	65.1	65.5	0.4	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	65.0	65.6	0.6	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	63.8	64.5	0.7	3.0	No
14	Monroe St.	n/o Avenue 58	LDR/GC	63.2	64.3	1.1	3.0	No
15	Monroe St.	n/o Avenue 60	LDR/GC	62.2	62.5	0.3	3.0	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.0	69.2	0.2	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	68.4	68.5	0.1	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	66.1	66.2	0.1	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	66.9	67.1	0.2	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	67.3	67.7	0.4	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	65.2	65.4	0.2	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	60.9	61.5	0.6	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	59.1	60.4	1.3	5.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	60.6	63.1	2.5	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	59.4	61.2	1.8	5.0	No
26	Avenue 58	e/o Jackson St.	LDR	58.3	59.9	1.6	5.0	No
27	Avenue 60	w/o Madison St.	LDR	46.9	58.0	11.1	5.0	Yes
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	62.1	63.5	1.4	3.0	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	57.3	59.3	2.0	5.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.3 EA PROJECT TRAFFIC NOISE LEVEL INCREASE

Table 7-3 presents the EA without Project conditions CNEL noise levels which are expected to range from 54.7 to 72.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-4 shows the EA with Project conditions will range from 59.4 to 72.8 dBA CNEL. As shown on Table 7-16 the Project will generate a noise level increase of up to 4.7 dBA CNEL on the study area roadway segments. However, this scenario is provided solely for analytical purposes and will not occur, since the Project will not be full developed (Phase 1, 2 & 3) and occupied under EA with Project conditions. Therefore, no mitigation measures are considered to reduce the EA with Project condition traffic noise level increases, and impacts are considered *less than significant* since they will not actually occur.

TABLE 7-16: EA OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	72.7	72.8	0.1	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.1	71.3	0.2	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.4	70.6	0.2	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	67.5	67.7	0.2	1.5	No
5	Madison St.	n/o Avenue 52	LDR	68.4	68.7	0.3	1.5	No
6	Madison St.	n/o Avenue 54	LDR	66.7	67.4	0.7	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	69.7	70.4	0.7	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	68.2	69.3	1.1	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	64.1	64.9	0.8	3.0	No
10	Monroe St.	n/o Avenue 50	LDR	66.5	66.7	0.2	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	66.3	66.6	0.3	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	67.4	67.8	0.4	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	66.7	67.1	0.4	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	65.8	66.4	0.6	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	65.1	65.2	0.1	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	69.1	69.2	0.1	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	69.6	0.0	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	67.1	67.2	0.1	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	68.4	68.6	0.2	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.0	69.3	0.3	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.8	66.9	0.1	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	63.9	64.2	0.3	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	61.5	62.3	0.8	3.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	62.8	64.5	1.7	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	62.6	63.6	1.0	3.0	No
26	Avenue 58	e/o Jackson St.	LDR	61.0	61.9	0.9	3.0	No
27	Avenue 60	w/o Madison St.	LDR	54.7	59.4	4.7	5.0	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.8	65.6	0.8	3.0	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	60.5	61.5	1.0	3.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.4 EAC 2021 PROJECT TRAFFIC NOISE LEVEL INCREASE

Table 7-5 presents the EAC 2021 without Project conditions CNEL noise levels are expected to range from 55.3 to 73.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-6 shows the EAC 2021 with Project conditions will range from 56.4 to 73.3 dBA CNEL. As shown on Table 7-17 the Project will generate a noise level increase of up to 1.1 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under EAC 2021 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-17: EAC 2021 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.3	73.3	0.0	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	71.8	71.9	0.1	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	70.9	70.9	0.0	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	67.1	67.1	0.0	1.5	No
5	Madison St.	n/o Avenue 52	LDR	67.6	67.7	0.1	1.5	No
6	Madison St.	n/o Avenue 54	LDR	66.7	66.8	0.1	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	69.3	69.5	0.2	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	68.4	68.7	0.3	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	63.7	64.0	0.3	3.0	No
10	Monroe St.	n/o Avenue 50	LDR	67.5	67.5	0.0	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	66.7	66.7	0.0	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	67.2	67.3	0.1	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	66.2	66.3	0.1	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	66.2	66.3	0.1	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	66.0	66.0	0.0	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.1	70.2	0.1	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	69.6	69.6	0.0	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	66.8	66.8	0.0	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	68.5	68.6	0.1	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.3	68.4	0.1	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.0	66.1	0.1	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	62.5	62.7	0.2	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	63.8	64.1	0.3	3.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	63.8	64.3	0.5	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	61.2	61.5	0.3	3.0	No
26	Avenue 58	e/o Jackson St.	LDR	60.1	60.5	0.4	3.0	No
27	Avenue 60	w/o Madison St.	LDR	55.3	56.4	1.1	5.0	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	63.7	64.1	0.4	3.0	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	62.9	63.1	0.2	3.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.5 EAC 2023 PROJECT TRAFFIC NOISE LEVEL INCREASE

Table 7-7 presents the EAC 2023 without Project conditions CNEL noise levels are expected to range from 55.9 to 73.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-8 shows the EAC 2023 with Project conditions will range from 56.9 to 73.5 dBA CNEL. As shown on Table 7-18 the Project will generate a noise level increase of up to 1.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under EAC 2023 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-18: EAC 2023 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.5	73.5	0.0	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.0	72.1	0.1	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.2	71.2	0.0	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	67.5	67.6	0.1	1.5	No
5	Madison St.	n/o Avenue 52	LDR	68.3	68.3	0.0	1.5	No
6	Madison St.	n/o Avenue 54	LDR	67.3	67.4	0.1	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	69.8	70.0	0.2	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	68.8	69.2	0.4	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	64.3	64.6	0.3	3.0	No
10	Monroe St.	n/o Avenue 50	LDR	67.6	67.6	0.0	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	67.1	67.1	0.0	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	68.0	68.1	0.1	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	67.6	67.6	0.0	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	67.5	67.6	0.1	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	67.6	67.6	0.0	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	70.2	0.0	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	69.9	69.9	0.0	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	67.1	67.1	0.0	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	68.9	69.0	0.1	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	68.8	68.9	0.1	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	66.8	66.8	0.0	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	63.4	63.5	0.1	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	64.0	64.4	0.4	3.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.2	64.6	0.4	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	62.4	62.6	0.2	3.0	No
26	Avenue 58	e/o Jackson St.	LDR	60.8	61.2	0.4	3.0	No
27	Avenue 60	w/o Madison St.	LDR	55.9	56.9	1.0	5.0	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	64.3	64.7	0.4	3.0	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	63.3	63.6	0.3	3.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.6 EAC 2026 PROJECT TRAFFIC NOISE LEVEL INCREASE

Table 7-9 presents the EAC 2026 without Project conditions CNEL noise levels are expected to range from 57.3 to 73.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-10 shows the EAC 2026 with Project conditions will range from 60.5 to 73.9 dBA CNEL. As shown on Table 7-19 the Project will generate a noise level increase of up to 3.2 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under EAC 2026 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-19: EAC 2026 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	73.9	0.0	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.4	72.5	0.1	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.6	71.8	0.2	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	68.2	68.4	0.2	1.5	No
5	Madison St.	n/o Avenue 52	LDR	69.2	69.4	0.2	1.5	No
6	Madison St.	n/o Avenue 54	LDR	68.1	68.6	0.5	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	70.5	71.1	0.6	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	69.5	70.3	0.8	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	65.2	65.8	0.6	1.5	No
10	Monroe St.	n/o Avenue 50	LDR	67.8	67.9	0.1	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	67.6	67.8	0.2	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	69.0	69.2	0.2	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	68.9	69.2	0.3	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	68.7	69.1	0.4	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	68.9	69.0	0.1	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	70.3	0.1	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	70.3	70.4	0.1	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	67.6	67.7	0.1	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	69.4	69.6	0.2	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.6	69.8	0.2	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.6	67.8	0.2	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.3	64.7	0.4	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	64.6	64.9	0.3	3.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.7	65.9	1.2	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	63.7	64.4	0.7	3.0	No
26	Avenue 58	e/o Jackson St.	LDR	62.0	62.8	0.8	3.0	No
27	Avenue 60	w/o Madison St.	LDR	57.3	60.5	3.2	5.0	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	65.4	66.2	0.8	1.5	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.0	64.5	0.5	3.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.7 EAC 2026 PROJECT SPECIAL EVENTS TRAFFIC NOISE LEVEL INCREASE

Table 7-11 presents the EAC 2026 without Project conditions CNEL noise levels are expected to range from 57.3 to 73.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. The applicant anticipates the potential occurrence of special events at this location involving attendance of not-to-exceed 2,500 guests per day arriving or departing on Saturdays (up to 4 events per year).

Table 7-12 shows the EAC 2026 with Project with Special Event conditions will range from 60.5 to 73.9 dBA CNEL. As shown on Table 7-20 the Project will generate a noise level increase of up to 3.2 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under EAC 2026 with Project Special Event conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-20: EAC 2026 SPECIAL EVENT OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	73.9	73.9	0.0	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	72.4	72.5	0.1	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	71.6	71.8	0.2	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	68.2	68.4	0.2	1.5	No
5	Madison St.	n/o Avenue 52	LDR	69.2	69.4	0.2	1.5	No
6	Madison St.	n/o Avenue 54	LDR	68.1	68.6	0.5	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	70.5	71.1	0.6	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	69.5	70.5	1.0	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	65.2	66.0	0.8	1.5	No
10	Monroe St.	n/o Avenue 50	LDR	67.8	67.9	0.1	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	67.6	67.8	0.2	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	69.0	69.2	0.2	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	68.9	69.2	0.3	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	68.7	69.1	0.4	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	68.9	69.0	0.1	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.2	70.3	0.1	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	70.3	70.4	0.1	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	67.6	67.7	0.1	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	69.4	69.6	0.2	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	69.6	69.8	0.2	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	67.6	67.8	0.2	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	64.3	64.7	0.4	3.0	No
23	Avenue 58	w/o Madison St.	LDR/MHR	64.6	65.3	0.7	3.0	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	64.7	66.2	1.5	3.0	No
25	Avenue 58	w/o Jackson St.	LDR	63.7	64.5	0.8	3.0	No
26	Avenue 58	e/o Jackson St.	LDR	62.0	62.9	0.9	3.0	No
27	Avenue 60	w/o Madison St.	LDR	57.3	60.5	3.2	5.0	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	65.4	66.3	0.9	1.5	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	64.0	64.7	0.7	3.0	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

7.8 GENERAL PLAN 2040 PROJECT TRAFFIC NOISE LEVEL INCREASE

Table 7-13 presents the General Plan 2040 without Project conditions CNEL noise levels are expected to range from 66.6 to 75.4 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-14 shows the General Plan 2040 with Project conditions will range from 66.8 to 75.4 dBA CNEL. As shown on Table 7-21 the Project will generate a noise level increase of up to 0.6 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under General Plan 2040 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-21: GENERAL PLAN 2040 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Jefferson St.	n/o Avenue 50	GC/LDR	75.4	75.4	0.0	1.5	No
2	Jefferson St.	n/o Avenue 52	LDR/MHR/OS/GC	73.6	73.7	0.1	1.5	No
3	Jefferson St.	n/o Avenue 54	MHR/OS	73.3	73.4	0.1	1.5	No
4	Madison St.	n/o Avenue 50	Festival District	71.4	71.5	0.1	1.5	No
5	Madison St.	n/o Avenue 52	LDR	73.0	73.1	0.1	1.5	No
6	Madison St.	n/o Avenue 54	LDR	71.7	71.9	0.2	1.5	No
7	Madison St.	n/o Airport Bl.	LDR/OS	74.2	74.4	0.2	1.5	No
8	Madison St.	n/o Avenue 58	LDR/OS	72.8	73.2	0.4	1.5	No
9	Madison St.	n/o Avenue 60	LDR/GC	69.8	70.0	0.2	1.5	No
10	Monroe St.	n/o Avenue 50	LDR	68.2	68.3	0.1	1.5	No
11	Monroe St.	n/o Avenue 52	LDR	69.2	69.4	0.2	1.5	No
12	Monroe St.	n/o Avenue 54	LDR	72.9	73.0	0.1	1.5	No
13	Monroe St.	n/o Airport Bl.	LDR	73.3	73.4	0.1	1.5	No
14	Monroe St.	n/o Avenue 58	LDR/GC	71.9	72.1	0.2	1.5	No
15	Monroe St.	n/o Avenue 60	LDR/GC	72.2	72.2	0.0	1.5	No
16	Avenue 50	w/o Jefferson St.	LDR/GC	70.3	70.4	0.1	1.5	No
17	Avenue 50	w/o Madison St.	LDR/GC	72.4	72.4	0.0	1.5	No
18	Avenue 50	e/o Monroe St.	LDR	69.6	69.6	0.0	1.5	No
19	Avenue 52	w/o Monroe St.	GC/OS	72.0	72.1	0.1	1.5	No
20	Avenue 54	w/o Madison St.	LDR/MHR/GC/OS	72.7	72.8	0.1	1.5	No
21	Avenue 54	w/o Monroe St.	LDR/MHR/OS	70.4	70.5	0.1	1.5	No
22	Airport Bl.	w/o Monroe St.	LDR/OS	70.1	70.2	0.1	1.5	No
23	Avenue 58	w/o Madison St.	LDR/MHR	67.8	68.0	0.2	1.5	No
24	Avenue 58	w/o Monroe St.	LDR/MCF	67.9	68.5	0.6	1.5	No
25	Avenue 58	w/o Jackson St.	LDR	69.4	69.6	0.2	1.5	No
26	Avenue 58	e/o Jackson St.	LDR	66.6	66.8	0.2	1.5	No
27	Avenue 60	w/o Madison St.	LDR	70.1	70.3	0.2	1.5	No
28	Avenue 60	w/o Monroe St.	LDR/MHR/OS	70.6	70.8	0.2	1.5	No
29	Avenue 60	e/o Monroe St.	LDR/MHR	68.0	68.2	0.2	1.5	No

[1] Sources: City of La Quinta, City of Indio and County of Riverside General Plan Land Use Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).
"LDR" = Low Density Residential; "MHR" = Medium/High Density Residential; "GC" = General Commercial; "MCF" = Major Community Facility; "OS" = Open Space

8 ON-SITE TRANSPORTATION NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the noise exposure levels that would result from adjacent traffic noise sources in the Project study area, and to identify potential noise abatement measures that would achieve acceptable Project exterior and interior noise levels. Exterior noise levels are generally limited to outdoor living areas of frequent human use (e.g., backyards of single-family homes). Interior noise levels are evaluated at the first and second floor building façade.

The primary source of traffic noise affecting the Project site is anticipated to be from Avenue 58 and Madison Street. The Project will also experience some background traffic noise impacts from its internal streets and parking lots, however, due to the low traffic volume and low speeds of vehicles travelling on these roadways, traffic noise will not make a significant contribution to the noise environment beyond of the right-of-way of each road.

8.1 EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-3 to 6-5, the expected future exterior noise levels for the on-site building were calculated. Table 8-1 presents a summary of future exterior noise levels for the future low-density residential development within Planning Area II. The on-site exterior traffic noise levels indicate that the single-family residential development adjacent to Avenue 58 and Madison Street will experience exterior noise levels ranging from 66.7 to 68.8 dBA CNEL.

TABLE 8-1: EXTERIOR TRAFFIC NOISE LEVELS

Receiver Location	Roadway	Exterior Noise Level (dBA CNEL)[1]	Exterior Noise Level Threshold (dBA CNEL)[2]	Threshold Exceeded?
Planning Area II-LDR	Avenue 58	66.7	65	Yes
	Madison Street	68.8	65	Yes

[1] On-site traffic noise calculations included in Appendix 8.1.
[2] City of La Quinta exterior noise criteria (See Section 4).

To satisfy the City of La Quinta 65 dBA CNEL exterior noise level standards for residential land use, the construction of 6-foot-high noise barriers is required for the private outdoor living areas (backyards) of single-family residential uses adjacent to Avenue 58 and Madison Street in Planning Area II. With the recommended noise barriers shown on Exhibit ES-A, the future exterior noise levels at the outdoor living areas (backyards) of single-family residential uses in Planning Area II will be reduced to levels ranging from 57.4 to 59.4 dBA CNEL as shown on Table 8-2.

TABLE 8-2: EXTERIOR TRAFFIC NOISE LEVELS WITH NOISE ABATEMENT MEASURES

Receiver Location	Roadway	Exterior Noise Level (dBA CNEL)[1]	Exterior Noise Level Threshold (dBA CNEL)[2]	Threshold Exceeded?	Barrier Height (Feet)
Planning Area II-LDR	Avenue 58	57.4	65	No	6.0
	Madison Street	59.4	65	No	6.0

[1] On-site traffic noise calculations included in Appendix 8.1.
[2] City of La Quinta exterior noise criteria (See Section 4).

With the recommended noise barriers shown on Exhibit ES-A, the future exterior noise levels represent a *less than significant* noise impact. This noise analysis shows that the recommended noise barriers will satisfy the City of La Quinta 65 dBA CNEL exterior noise level standards at the outdoor living areas of frequent human use (e.g., backyards of single-family homes). The effective noise barrier height represents the minimum wall and/or berm combination height to satisfy the City of La Quinta exterior noise level standards. The on-site exterior traffic noise analysis calculations are provided in Appendix 8.1.

8.2 INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of La Quinta interior noise level standards, future noise levels were calculated at the first and second floor building façade locations.

8.2.1 NOISE REDUCTION METHODOLOGY

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." (23) (6) However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2) upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assembles free of cut outs or openings.

8.2.2 INTERIOR NOISE LEVEL ASSESSMENT

Table 8-3 shows that the Project buildings will require a windows-closed condition and a means of mechanical ventilation (e.g., air conditioning). Table 8-3 shows that the future exterior noise levels at the building façades are expected to range from 59.5 to 66.2 dBA CNEL. The interior noise level analysis shows that the City of La Quinta 45 dBA CNEL residential interior noise standards can be satisfied using standard building construction and windows with standard STC ratings of 27 for all lots/units. Therefore, the future on-site interior traffic noise impacts will be *less than significant*.

TABLE 8-3: INTERIOR NOISE LEVELS (CNEL)

Building (Façade)	Floor	Noise Level at Façade[1]	Required Interior NR[2]	Minimum Estimated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
Avenue 58	1	56.3	11.3	25	No	31.3	45	No
	2	65.5	20.5	25	No	40.5	45	No
Madison St.	1	58.3	13.3	25	No	33.3	45	No
	2	67.5	22.5	25	No	42.5	45	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction required to satisfy the 45 dBA CNEL interior noise standard for residential uses.
[3] Estimated minimum interior noise reduction with the recommended windows and standard building construction.
[4] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.
"NR" = Noise Reduction

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9 SENSITIVE RECEIVER LOCATIONS

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

Receivers are located in outdoor living areas (e.g., backyards) at 10 feet from any existing or proposed barriers or at the building façade, whichever is closer to the Project site, based on FHWA guidance, and consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Sensitive receiver locations in the Project study area include the nearby residential uses, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

R1: Located approximately 154 feet north of the Project site, R1 represents existing residential homes north of 58th Avenue. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing residential homes located north of the Project site at roughly 181 feet, on the north side of 58th Avenue. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing residential homes northeast of the intersection at 58th Avenue and Madison Street at approximately 231 feet from the Project site. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.

R4: Location R4 represents the existing residential homes southeast of the intersection at 58th Avenue and Madison Street at approximately 185 feet from the Project site. A 24-hour noise measurement near this location, L4, is used to describe the existing ambient noise environment.

R5: Location R5 represents the existing residential homes on the east side of Madison Street at approximately 352 feet from the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

R6: Location R6 represents the existing residential home located north of Calle Conchita about 134 feet from the project site. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.

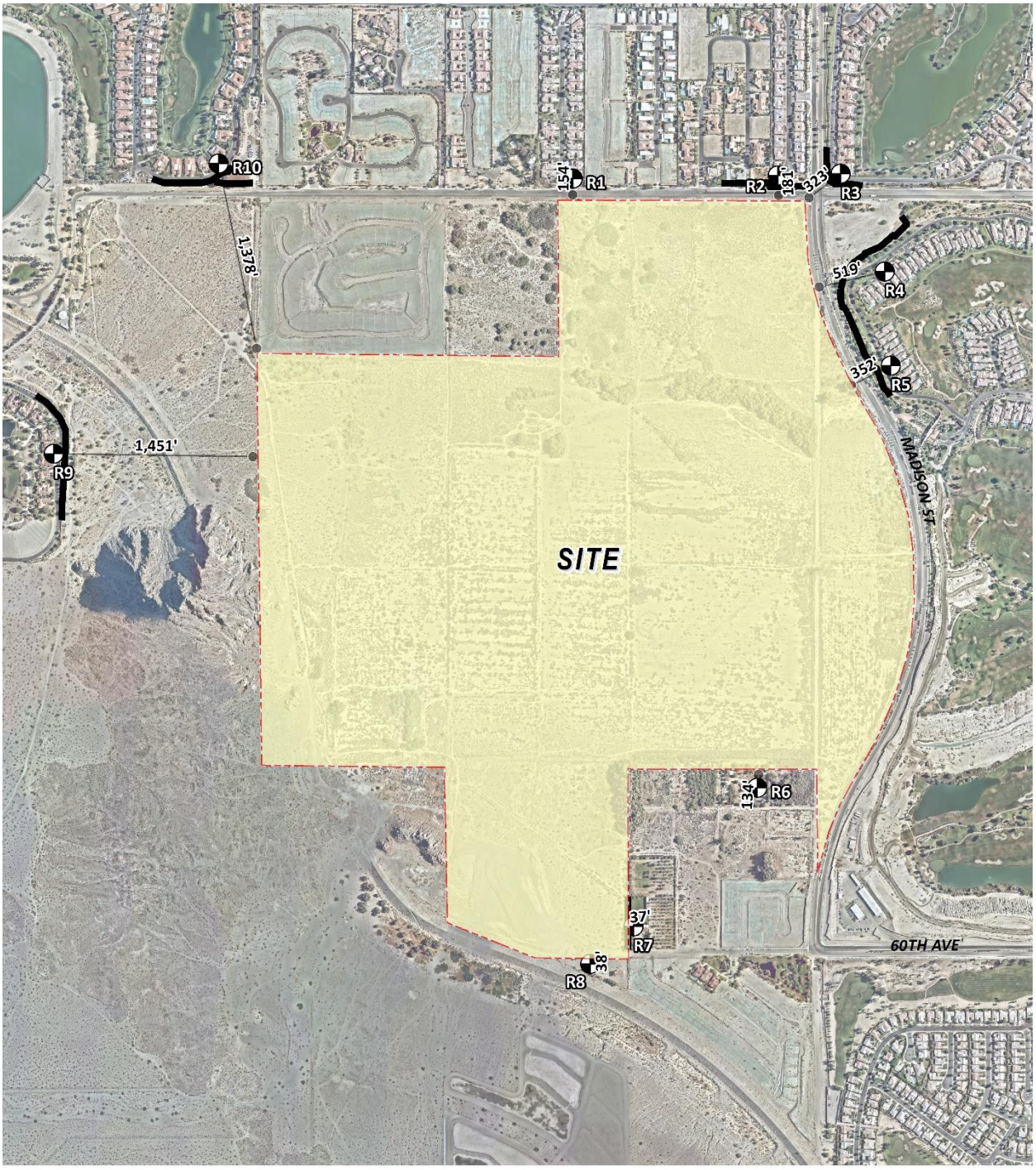
R7: Location R7 represents the existing residential homes located north of Avenue 60 about 37 feet from the project site. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.

R8: Location R8 represents the existing residential homes located south of Avenue 60 about 38 feet from the project site. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.

R9: Location R9 represents the existing residential homes located about 1,451 feet west of the Project site along Quarry Ranch Road. A 24-hour noise measurement was taken near this location, L9, to describe the existing ambient noise environment.

R10: Location R10 represents the existing residential homes located about 1,378 feet northwest of the Project site north of 58th Avenue. A 24-hour noise measurement was taken near this location, L10, to describe the existing ambient noise environment.

EXHIBIT 9-A: RECEIVER LOCATIONS



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10 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 9, resulting from operation of the proposed Coral Mountain Specific Plan Project. Exhibit 10-A identifies the representative off-site receiver locations, on-site receiver locations and noise source locations used to assess the operational noise levels. Appendix 10.1 includes the detailed calculations for the Project operational noise levels presented in this section.

10.1 REFERENCE NOISE LEVELS

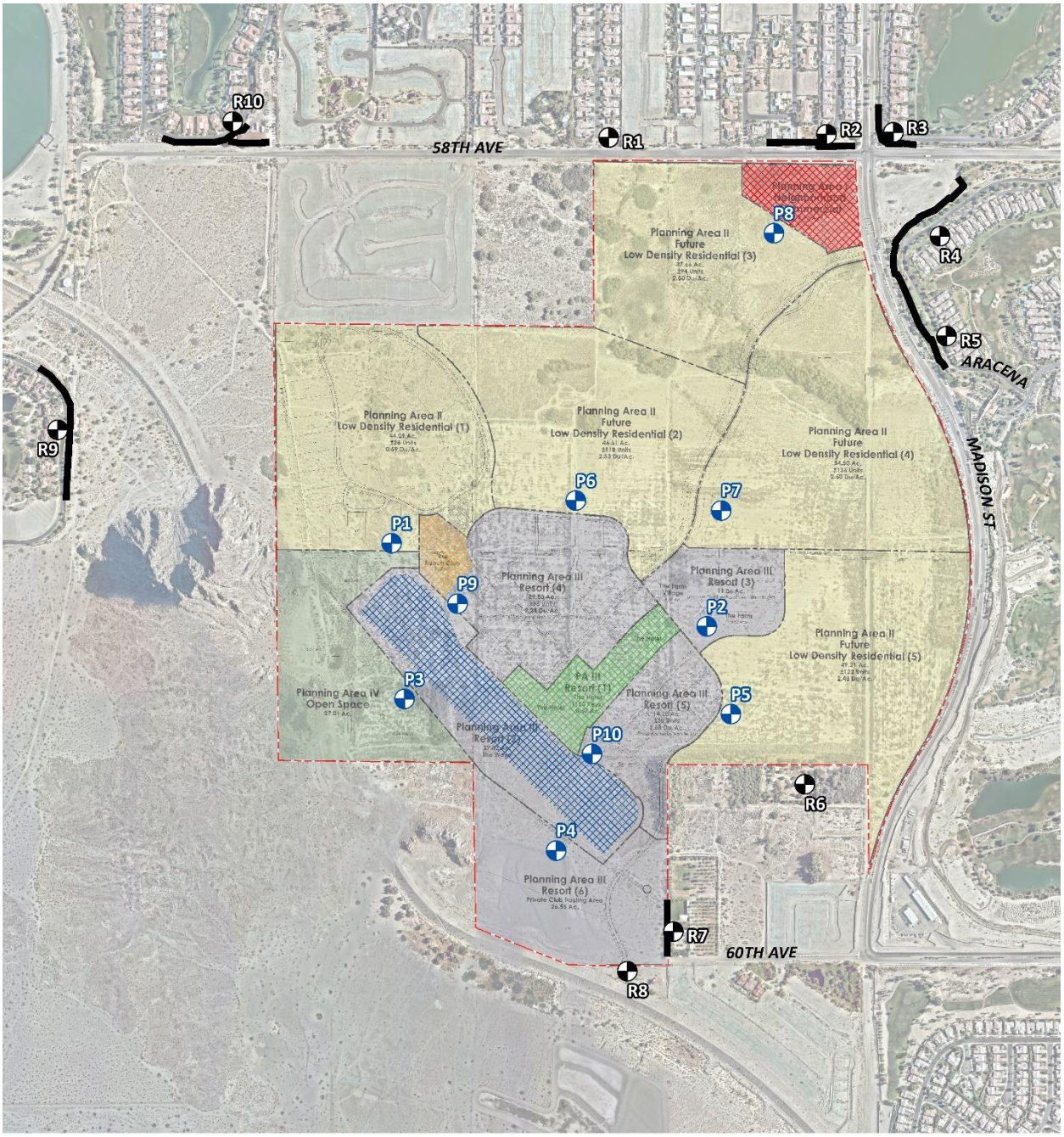
To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the wave basin/wave machine activity, outdoor pool/spa activity, outdoor activity, and neighborhood commercial land use activity all operating simultaneously. These noise level impacts will likely vary throughout the day. The operational noise sources will be limited to the daytime hours of 7:00 a.m. to 10:00 p.m. with no planned nighttime activity.

10.1.1 WAVE BASIN/WAVE MACHINE ACTIVITY

To describe the wave basin/wave machine activity, Urban Crossroads, Inc. collected reference noise level measurements at the existing Surf Ranch located at 18556 Jackson Avenue in the City of Lemoore, California. The Surf Ranch is a private facility with a proprietary wave machine technology capable of generating waves every 3 to 4 minutes. To create each wave, a large "sled" is pulled through the water using a cable system on metal rollers. Two buildings at each end of the cable system house the mechanical equipment and cable system.

To measure the noise levels associated with the wave machine, Urban Crossroads, Inc. collected reference noise level measurements at eight different locations around the Surf Ranch. The noise level measurement locations were selected to identify the unique noise characteristics associated with different stages of each wave. Prior to each wave, the control tower announces the event over the public address system. This is followed by the noise generated from the movement of the sled and an increase in noise levels from the mechanical equipment buildings. As the sled moves through the lagoon, noise from the cable and metal rollers is clearly audible. However, throughout each wave event, the primary noise source is simply the movement of water from each wave in the lagoon. Over a period of 53 minutes, ten wave events were measured at eight different locations on April 13, 2020. The reference noise levels suggest that during peak wave events, the Wave basin generates noise levels ranging from 62.6 dBA L_{eq} at end of the lagoon, 73.8 dBA L_{eq} in the lifeguard tower and 75.7 dBA L_{eq} near the cable roller system.

EXHIBIT 10-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



To describe the worst-case reference noise level conditions, the highest reference noise level describing each peak wave noise event of 75.7 dBA L_{eq} at a distance of 12 feet is used. This reference noise level likely overstates the expected noise levels from the wave basin/wave machine activity at the Coral Mountain Specific Plan since it only describes the actual wave event. In addition, improved designs plan for the Project have placed the cable roller system under the water surface to eliminate this noise source. The wave basin/wave machine activities will be limited to the daytime hours of 7:00 a.m. to 10:00 p.m. with no planned nighttime activities.

10.1.2 OUTDOOR POOL/SPA ACTIVITY

To determine the noise levels associated with outdoor hotel pool and spa activity, Urban Crossroads collected a reference noise level measurement on March 16th, 2005 at the Westin Hotel in the City of Rancho Mirage. The measured reference noise level at 50 feet is 57.8 dBA L_{eq}. The outdoor pool/spa activity noise levels include a waterfall, people talking, and children and adults swimming and playing in a pool. The outdoor pool/spa activities will be limited to the daytime hours of 7:00 a.m. to 10:00 p.m. with no planned nighttime activities.

10.1.3 OUTDOOR ACTIVITIES

To represent the potential noise level impacts associated with the Project's outdoor or beach club activities, a reference noise level measurement was collected on Wednesday, October 8th, 2014 at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise levels collected at the Founders Park are expected to overestimate the noise level activities within the outdoor fields and game areas at the Project site, since the reference noise level measurement includes parents speaking on cell phones, kids playing, and background youth soccer games, with coaches shouting instructions and people cheering and clapping. Using the uniform reference distance of 50 feet, the reference playground activity noise level is 43.4 dBA L_{eq}. The outdoor field activities will be limited to the daytime hours of 7:00 a.m. to 10:00 p.m. with no planned nighttime activities.

10.1.4 NEIGHBORHOOD COMMERCIAL

To describe the potential noise level impacts associated the proposed neighborhood commercial center a reference noise level measurement was collected at the Destination Ramon Commercial Center in Cathedral City on April 18, 2018. The noise level measurements collected show a peak hourly noise level of 54.8 dBA Leq when measured at 50 feet. The neighborhood commercial use will be limited to the daytime hours of 7:00 a.m. to 10:00 p.m. with no planned nighttime activities.

TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Ref. Distance (Feet)	Noise Source Height (Feet)	Min./Hour[5]		Reference Noise Level (dBA L_{eq})		Sound Power Level (dBA)[6]
				Day	Night	@ Ref. Dist.	@ 50 Feet	
Wave Basin/Wave Machine[1]	00:10:00	12'	5'	60	0	75.7	63.3	112.0
Outdoor Pool/Spa Activity[2]	00:10:00	5'	5'	60	0	77.8	57.8	103.3
Outdoor Activity[3]	00:15:00	5'	5'	60	0	63.4	43.4	84.3
Neighborhood Commercial[4]	00:01:00	20'	5'	60	0	62.8	54.8	99.6

[1] As measured by Urban Crossroads, Inc. on 4/13/2020 at the Surf Ranch in the City of Lemoore, CA.
[2] As measured by Urban Crossroads, Inc. on 3/16/2005 at the Westin Hotel in the City of Rancho Mirage.
[3] As measured by Urban Crossroads, Inc. on 10/8/2014 by Urban Crossroads, Inc. at the Founder's Park in the County of Orange.
[4] As measured by Urban Crossroads, Inc. on 4/18/2018 by Urban Crossroads, Inc. at Destination Ramon Commercial Center
[5] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Day" = 7:00 a.m. to 10:00 p.m.; "Night" = 10:00 p.m. to 7:00 a.m.
[6] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

10.2 CADNAA NOISE PREDICTION MODEL

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

Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (PWL) 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 (PWL) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish as a result 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. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. A default ground attenuation factor of 1.0 was used in the CadnaA noise analysis to account for hard site conditions. Appendix

10.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

10.3 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include wave basin/wave machine activity, outdoor pool/spa activity, outdoor activity, and neighborhood commercial land use activity, Urban Crossroads, Inc. calculated the off-site and on-site 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 receiver locations. Tables 10-2 shows the 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 39.8 to 53.3 dBA L_{eq}. The on-site project receiver locations are expected to range from 51.8 to 64.5 dBA $L_{eq.}$ In addition, the unmitigated exterior noise levels at the property line located approximately 200 feet east of the wave basin are estimated at 59.3 dBA L_{eq}. However, there are currently no outdoor living areas or receivers near this location.

TABLE 10-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]				
	Wave Basin/ Wave Machine	Outdoor Pool/ Spa Activity	Outdoor Activity	Neighborhood Commercial	Total
R1	44.2	36.0	19.0	41.8	46.6
R2	38.0	30.3	11.8	45.7	46.5
R3	37.4	29.7	10.9	42.5	43.8
R4	38.2	30.9	11.4	40.9	43.0
R5	39.3	32.3	12.1	37.7	42.1
R6	51.4	44.0	19.5	31.5	52.2
R7	45.0	38.9	11.5	28.9	46.0
R8	46.6	36.5	13.5	23.2	47.0
R9	41.1	30.3	15.3	23.5	41.5
R10	38.6	29.0	13.5	31.4	39.8
P1	58.3	43.8	37.2	32.4	58.5
P2	53.1	51.4	23.8	34.5	55.4
P3	61.1	46.7	29.2	30.5	61.3
P4	53.7	40.8	15.8	23.3	53.9
P5	53.9	48.6	22.0	32.8	55.1
P6	53.2	46.4	29.5	36.0	54.1
P7	50.4	45.6	23.5	37.6	51.8
P8	44.7	37.3	18.7	53.0	53.7
P9	62.2	47.9	38.6	32.5	62.4
P10	64.0	55.1	24.7	31.4	64.5

[1] See Exhibit 10-A for the off-site (R)eceiver and on-site (P)roject locations.
[2] Unmitigated CadnaA noise model calculations are included in Appendix 10.1.

10.4 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of La Quinta exterior noise level standards at the off-site and on-site receiver locations. Table 10-3 shows the operational noise levels associated with Coral Mountain Specific Plan Project will satisfy the City of La Quinta daytime exterior noise level standards with no planned nighttime operational noise source activity. Therefore, the operational noise impacts are considered *less than significant* at all receiver locations.

TABLE 10-3: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]	Noise Level Standards (dBA Leq)[3]	Noise Level Standards Exceeded?[4]
R1	46.6	65	No
R2	46.5	65	No
R3	43.8	65	No
R4	43.0	65	No
R5	42.1	65	No
R6	52.2	65	No
R7	46.0	65	No
R8	47.0	65	No
R9	41.5	65	No
R10	39.8	65	No
P1	58.5	65	No
P2	55.4	65	No
P3	61.3	65	No
P4	53.9	65	No
P5	55.1	65	No
P6	54.1	65	No
P7	51.8	65	No
P8	53.7	65	No
P9	62.4	65	No
P10	64.5	65	No

[1] See Exhibit 10-A for the off-site (R)eceiver and on-site (P)roject locations.
[2] Proposed Project daytime operational noise levels as shown on Tables 10-2.
[3] Exterior noise level standards for residential land use, as shown on Table 4-2.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?

10.4 PROJECT OPERATIONAL NOISE LEVEL INCREASE

To describe the Project operational noise level Increase, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations 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. (4) Instead, they must be logarithmically added using the following base equation:

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

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 Increase to the existing ambient noise environment. As indicated on Tables 10-4 the Project will generate unmitigated daytime operational noise level increase ranging from 0.0 to 4.9 dBA L_{eq} at nearby off-site receiver locations. This increase satisfies the incremental operational noise level criteria presented in Table 4-2. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

TABLE 10-4: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Meas. Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Threshold[7]	Threshold Exceeded?[7]
R1	46.6	L1	54.2	54.9	0.7	5.0	No
R2	46.5	L2	62.5	62.6	0.1	3.0	No
R3	43.8	L3	61.2	61.3	0.1	3.0	No
R4	43.0	L4	54.5	54.8	0.3	5.0	No
R5	42.1	L5	59.7	59.8	0.1	5.0	No
R6	52.2	L6	58.7	59.6	0.9	5.0	No
R7	46.0	L7	57.9	58.2	0.3	5.0	No
R8	47.0	L8	43.8	48.7	4.9	5.0	No
R9	41.5	L9	51.7	52.1	0.4	5.0	No
R10	39.8	L10	61.9	61.9	0.0	3.0	No

[1] See Exhibit 9-A for the off-site sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 10-3.
[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 Criteria as defined in Section 4.

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11 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 11-A shows the construction noise source locations in relation to the nearby sensitive receiver locations previously described in Section 8. In addition, Exhibit 11-A outlines the Project Phase 1 boundaries to describe the potential construction impacts from on planned residential development in Phase 3.

11.1 CONSTRUCTION NOISE LEVELS

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

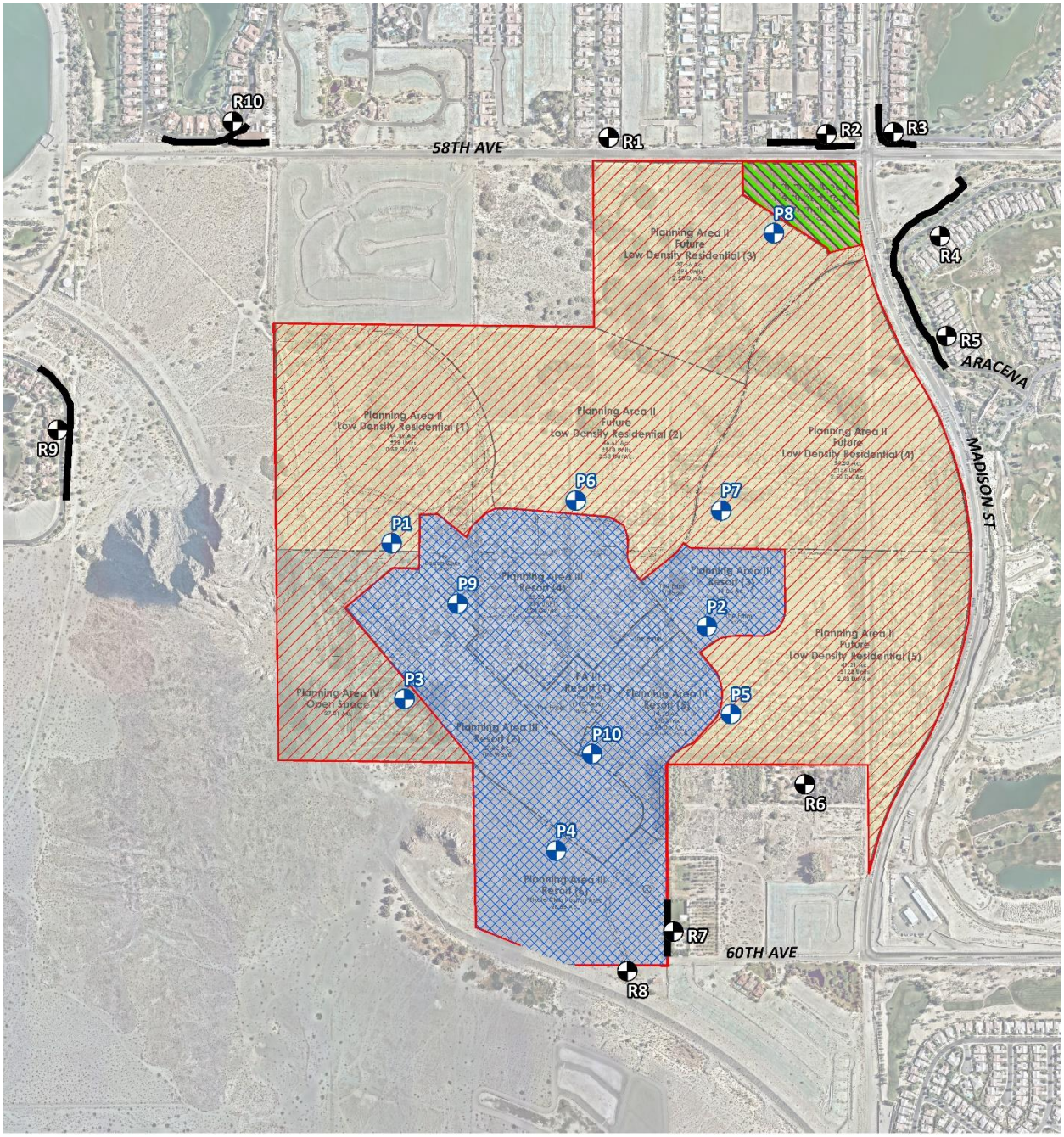
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver.

11.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 11-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 11-1 have been adjusted to describe a uniform reference distance of 50 feet.

EXHIBIT 11-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



LEGEND:

- Project Receiver Locations
- Receiver Locations
- Existing 6-Foot High Barrier
- Phase 1 Construction Activity
- Phase 2 & 3 Construction Activity
- Phase 1, 2 & 3 Construction Activity

TABLE 11-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Highest Reference Noise Level (dBA L_{eq})
Site Preparation	Scraper, Water Truck, & Dozer Activity	75.3	75.3
	Backhoe	64.2	
	Water Truck Pass-By & Backup Alarm	71.9	
Grading	Rough Grading Activities	73.5	73.5
	Water Truck Pass-By & Backup Alarm	71.9	
	Construction Vehicle Maintenance Activities	67.5	
Building Construction	Foundation Trenching	68.2	71.6
	Framing	62.3	
	Concrete Mixer Backup Alarms & Air Brakes	71.6	
Paving	Concrete Mixer Truck Movements	71.2	71.2
	Concrete Paver Activities	65.6	
	Concrete Mixer Pour & Paving Activities	65.9	
Architectural Coating	Air Compressors	65.2	65.2
	Generator	64.9	
	Crane	62.3	

11.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. To assess the worst-case construction noise levels, the Project construction noise analysis relies on the highest noise level impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of primary construction activity (Project site boundary) to each receiver location.

As shown on Table 11-2, the Project Phase 1 construction noise levels are expected to range from 58.0 to 76.5 dBA L_{eq} at the nearby receiver locations. The Project Phase 2 and Phase 3 construction noise levels are expected to range from 63.7 to 75.8 dBA L_{eq} as shown on Table 11-3. Appendix 11.1 includes the detailed CadnaA construction noise model inputs.

TABLE 11-2: PHASE 1 CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	65.6	63.8	61.9	61.5	55.5	65.6
R2	65.8	64.0	62.1	61.7	55.7	65.8
R3	63.0	61.2	59.3	58.9	52.9	63.0
R4	62.3	60.5	58.6	58.2	52.2	62.3
R5	61.6	59.8	57.9	57.5	51.5	61.6
R6	71.3	69.5	67.6	67.2	61.2	71.3
R7	72.5	70.7	68.8	68.4	62.4	72.5
R8	76.5	74.7	72.8	72.4	66.4	76.5
R9	58.7	56.9	55.0	54.6	48.6	58.7
R10	58.0	56.2	54.3	53.9	47.9	58.0

[1] Noise receiver locations are shown on Exhibit 11-A.

[2] Construction noise level calculations based on distance from the project site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 11.1.

TABLE 11-3: PHASE 2 & 3 CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	74.8	73.0	71.1	70.7	64.7	74.8
R2	69.9	68.1	66.2	65.8	59.8	69.9
R3	67.9	66.1	64.2	63.8	57.8	67.9
R4	68.8	67.0	65.1	64.7	58.7	68.8
R5	70.6	68.8	66.9	66.5	60.5	70.6
R6	75.8	74.0	72.1	71.7	65.7	75.8
R7	68.6	66.8	64.9	64.5	58.5	68.6
R8	67.5	65.7	63.8	63.4	57.4	67.5
R9	63.7	61.9	60.0	59.6	53.6	63.7
R10	64.0	62.2	60.3	59.9	53.9	64.0
P1	82.8	81.0	79.1	78.7	72.7	82.8
P2	76.8	75.0	73.1	72.7	66.7	76.8
P3	82.3	80.5	78.6	78.2	72.2	82.3
P4	70.6	68.8	66.9	66.5	60.5	70.6
P5	82.5	80.7	78.8	78.4	72.4	82.5
P6	82.9	81.1	79.2	78.8	72.8	82.9
P7	83.2	81.4	79.5	79.1	73.1	83.2
P8	83.1	81.3	79.4	79.0	73.0	83.1

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
P9	75.3	73.5	71.6	71.2	65.2	75.3
P10	72.6	70.8	68.9	68.5	62.5	72.6

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Construction noise level calculations based on distance from the project site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 11.1.

11.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. To evaluate whether the Project will generate potentially significant short-term noise levels at nearby receiver locations, a construction-related the NIOSH noise level threshold of 85 dBA L_{eq} is used as acceptable thresholds to assess construction noise level impacts. The construction noise analysis shows that the nearby receiver locations will satisfy the 85 dBA L_{eq} significance threshold during Project construction activities as shown on Tables 11-2 and 11-3. Therefore, the noise impacts due to Project construction noise is considered *less than significant* at all receiver locations.

11.5 CONSTRUCTION VIBRATION IMPACTS

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

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-6 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 11-4 presents the expected Project related vibration levels at the nearby receiver locations.

At distances ranging from 90 to 1,451 from Project construction activities, construction vibration velocity levels are estimated to range from 0.000 to 0.009 in/sec RMS and will remain below the threshold of 0.01 in/sec RMS at all receiver locations, as shown on Table 11-4. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

TABLE 11-4: CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver Levels (in/sec) PPV[2]					RMS Velocity Levels (in/sec)[3]	Threshold (in/sec) RMS[4]	Threshold Exceeded?[5]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration			
R1	154'	0.000	0.002	0.005	0.006	0.006	0.004	0.01	No
R2	181'	0.000	0.002	0.004	0.005	0.005	0.003	0.01	No
R3	323'	0.000	0.001	0.002	0.002	0.002	0.001	0.01	No
R4	519'	0.000	0.000	0.001	0.001	0.001	0.001	0.01	No
R5	352'	0.000	0.001	0.001	0.002	0.002	0.001	0.01	No
R6	134'	0.000	0.003	0.006	0.007	0.007	0.005	0.01	No
R7	90'	0.000	0.005	0.011	0.013	0.013	0.009	0.01	No
R8	90'	0.000	0.005	0.011	0.013	0.013	0.009	0.01	No
R9	1,451'	0.000	0.000	0.000	0.000	0.000	0.000	0.01	No
R10	1,378'	0.000	0.000	0.000	0.000	0.000	0.000	0.01	No

[1] Receiver locations are shown on Exhibit 11-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-6.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Source: County of Riverside General Plan Noise Element, Policy N 16.3.
[5] Does the vibration level exceed the maximum acceptable vibration threshold?

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

12 REFERENCES

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2. **Urban Crossroads, Inc.** *Coral Mountain Specific Plan Traffic Impact Analysis.* April 2020.
3. **Harris, Cyril M.** *Noise Control in Buildings.* s.l. : McGraw-Hill, Inc., 1994.
4. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
5. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
6. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
7. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
8. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
9. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.
10. **Occupational Safety and Health Administration.** *Standard 29 CRF, Part 1910.*
11. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment.* September 2018.
12. **Office of Planning and Research.** *State of California General Plan Guidelines.* 2018.
13. **City of La Quinta.** *General Plan Environmental Hazards Element, Noise.* December 2013.
14. —. *Municipal Code, Sections 9.100, 6.08.*
15. **National Institute for Occupational Safety and Health.** *Criteria for Recommended Standard: Occupational Noise Exposure.* June 1998.
16. **County of Riverside.** *General Plan Noise Element.* December 2015.
17. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
18. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
19. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
20. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
21. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
22. **County of Riverside, Office of Industrial Hygiene.** *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures.* April 2015.

23. **California Department of Transportation.** *Traffic Noise Analysis Protocol.* May 2011.

13 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Coral Mountain Specific Plan Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

Bill Lawson, P.E., INCE
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URBAN CROSSROADS, INC.
260 E. Baker Street, Suite 200
Costa Mesa, CA 92626
(949) 336-5979
blawson@urbanxroads.com

EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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

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APPENDIX 3.1:

CITY OF LA QUINTA MUNICIPAL CODE

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9.100.210 Noise control.

A. Purpose. The noise control standards for nonresidential land use districts set forth in this section are established to prevent excessive sound levels which are detrimental to the public health, welfare and safety or which are contrary to the public interest.

B. Noise Standards. Exterior noise standards are set forth below. Residential property, schools, hospitals, and churches are considered noise sensitive land uses, regardless of the land use district in which they are located. All other uses shall comply with the "other nonresidential" standard. All noise measurements shall be taken using standard noise measuring instruments. Measurements shall be taken within the receiving property at locations determined by director to be most appropriate to the individual situation.

Land Use Compatibility for Community Noise Environments

Land Uses	CNEL (dBA)						
	50	55	60	65	70	75	80
Residential – Single-Family Dwellings, Duplex, Mobile Homes	A						
		B					
					C		
						D	
Residential – Multiple Family		A					
			B				
					C		
						D	
Transient Lodging: Hotels and Motels	A						
			B				
					C		
							D
School Classrooms, Libraries, Churches, Hospitals, Nursing Homes and Convalescent Hospitals	A						
			B				
					C		
							D
Auditoriums, Concert Halls, Amphitheaters							
	B						
				C			
Sports Arenas, Outdoor Spectator Sports							
	B						
					C		
Playgrounds, Neighborhood Parks	A						
					C		
						D	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	A						
					C		
							D
Office Buildings, Business, Commercial and Professional	A						
					B		
						D	
Industrial, Manufacturing, Utilities, Agriculture	A						
					B		
						D	

Source: California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990.

Chart Legend

A Normally Acceptable: With no special noise reduction requirements assuming standard construction.

B Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

C Normally Unacceptable: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D Clearly Unacceptable: New construction or development should generally not be undertaken.

Exterior Noise Standards

Receiving Land Use	Noise Standard	Time Period
Noise sensitive	65 dB(A) 50 dB(A)	7:00 a.m.—10:00 p.m. 10:00 p.m.—7:00 a.m.
Other nonresidential	75 dB(A) 65 dB(A)	7:00 a.m.—10:00 p.m. 10:00 p.m.—7:00 a.m.

If the noise consists entirely of impact noise, simple tone noise, speech or music, or any combination thereof, each of the noise levels specified in the table in this section shall be reduced by five dB(A).

C. Noise Limits. It is unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when such noise causes the noise level, when measured on any adjacent property, to exceed:

1. The noise standard for a cumulative period of more than thirty minutes in any hour;
2. The noise standard plus five dB(A) for a cumulative period of more than fifteen minutes in any hour;
3. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour;
4. The noise standard plus fifteen dB(A) for a cumulative period of more than one minute in any hour; or
5. The noise standard plus twenty dB(A) for any period of time.

For purposes of this section, the term “cumulative period” means the number of minutes that a noise occurs within any hour, whether such minutes are consecutive or not.

D. Ambient Noise Level. If the ambient or background noise level exceeds any of the preceding noise categories, no increase above such ambient noise level shall be permitted.

E. Exemptions. The following are exempt from the noise restrictions of this section:

1. Emergency vehicles or other emergency operations.
2. City maintenance, construction or similar activities.
3. Construction activities regulated by Section 6.08.050 of the La Quinta Municipal Code.
4. Golf course maintenance activities between five-thirty a.m. and ending no later than eight p.m. on any given day.

F. Enforcement. The city manager or designee shall have the responsibility and authority to enforce the provisions of this section. (Ord. 565 § 1, 2017; Ord. 550 § 1, 2016)

APPENDIX 5.1:

STUDY AREA PHOTOS

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JN: 12642 Study Area Photos

L1_E
33, 37' 39.900000", 116, 15' 13.400000"

L1_N
33, 37' 39.830000", 116, 15' 13.430000"

L1_S
33, 37' 39.830000", 116, 15' 13.430000"

L1_W
33, 37' 39.900000", 116, 15' 13.400000"

L2_E
33, 37' 39.670000", 116, 15' 5.000000"

L2_N
33, 37' 39.670000", 116, 15' 5.030000"

JN: 12642 Study Area Photos

L2_S
33, 37' 39.680000", 116, 15' 5.030000"

L2_W
33, 37' 39.680000", 116, 15' 4.970000"

L3_E
33, 37' 40.370000", 116, 15' 1.730000"

L3_N
33, 37' 40.600000", 116, 15' 1.870000"

L3_S
33, 37' 40.600000", 116, 15' 1.870000"

L3_W
33, 37' 40.370000", 116, 15' 1.730000"

JN: 12642 Study Area Photos

L4_H
33, 37' 36.210000", 116, 15' 1.040000"

L4_N
33, 37' 35.640000", 116, 14' 59.700000"

L4_S
33, 37' 36.190000", 116, 15' 1.100000"

L4_W
33, 37' 36.220000", 116, 15' 1.040000"

L5_E
33, 37' 38.390000", 116, 15' 1.730000"

L5_N
33, 37' 37.150000", 116, 15' 1.700000"

L5_S
33, 37' 38.460000", 116, 15' 1.700000"

L5_W
33, 37' 38.350000", 116, 15' 1.700000"

L6_E
33, 36' 56.080000", 116, 15' 2.250000"

L6_N
33, 36' 53.960000", 116, 14' 58.540000"

L6_S
,

L6_W
33, 36' 55.980000", 116, 15' 2.200000"

JN: 12642 Study Area Photos

L7_E
33, 36' 46.100000", 116, 15' 7.170000"

L7_N
,

L7_S
,

L7_W
33, 36' 45.940000", 116, 15' 7.060000"

L8_E
33, 36' 45.670000", 116, 15' 21.180000"

L8_N
33, 36' 53.960000", 116, 14' 58.540000"

L8_S
33, 36' 45.670000", 116, 15' 21.180000"

L8_W
33, 36' 45.660000", 116, 15' 21.150000"

L9_E
33, 37' 28.040000", 116, 16' 13.330000"

L9_N
33, 38' 49.930000", 116, 16' 5.310000"

L9_S
33, 37' 28.020000", 116, 16' 13.330000"

L9_W
33, 37' 28.050000", 116, 16' 13.310000"

JN: 12642 Study Area Photos

L10_E
33, 37' 39.780000", 116, 15' 47.190000"

L10_N
33, 37' 39.760000", 116, 15' 47.190000"

L10_S
33, 37' 39.760000", 116, 15' 47.190000"

L10_W
33, 37' 39.820000", 116, 15' 47.210000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

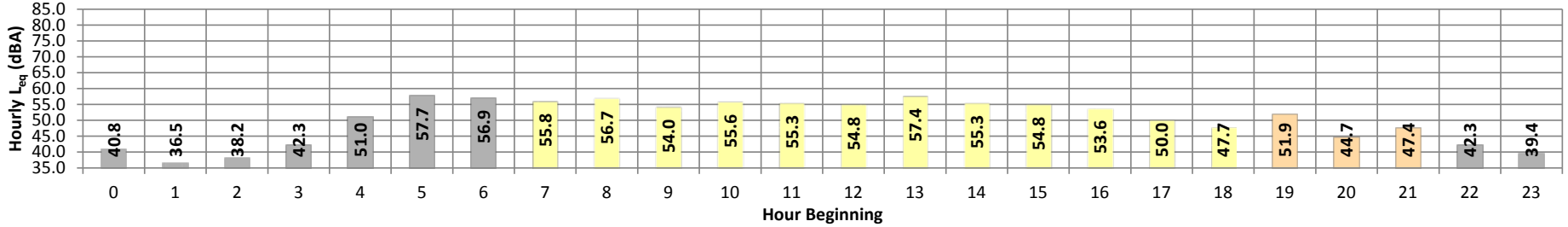
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L1 - Located along 58th Ave. in front of entrance to Coral Mountain and west of Salida del Sol.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	40.8	61.3	36.3	43.0	43.0	42.0	42.0	42.0	39.0	36.0	36.0	36.0	40.8	10.0	50.8
	1	36.5	43.9	36.3	39.0	39.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.5	10.0	46.5
	2	38.2	58.0	36.3	45.0	42.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0	38.2	10.0	48.2
	3	42.3	64.6	36.3	52.0	48.0	43.0	41.0	39.0	36.0	36.0	36.0	36.0	42.3	10.0	52.3
	4	51.0	71.7	36.3	64.0	62.0	56.0	52.0	43.0	39.0	36.0	36.0	36.0	51.0	10.0	61.0
	5	57.7	80.3	36.3	68.0	67.0	64.0	62.0	53.0	46.0	39.0	39.0	36.0	57.7	10.0	67.7
	6	56.9	80.5	41.0	68.0	67.0	63.0	59.0	51.0	48.0	44.0	43.0	42.0	56.9	10.0	66.9
Day	7	55.8	76.5	41.8	67.0	66.0	63.0	60.0	50.0	46.0	43.0	42.0	42.0	55.8	0.0	55.8
	8	56.7	80.1	39.3	67.0	65.0	62.0	60.0	51.0	44.0	41.0	41.0	39.0	56.7	0.0	56.7
	9	54.0	75.0	39.1	66.0	64.0	60.0	58.0	47.0	42.0	39.0	39.0	39.0	54.0	0.0	54.0
	10	55.6	77.9	37.6	67.0	65.0	61.0	59.0	49.0	43.0	39.0	39.0	39.0	55.6	0.0	55.6
	11	55.3	74.7	41.0	67.0	65.0	62.0	59.0	49.0	43.0	41.0	41.0	41.0	55.3	0.0	55.3
	12	54.8	73.0	40.9	66.0	64.0	61.0	60.0	49.0	43.0	41.0	41.0	41.0	54.8	0.0	54.8
	13	57.4	80.0	39.2	68.0	65.0	62.0	60.0	53.0	45.0	41.0	39.0	39.0	57.4	0.0	57.4
	14	55.3	78.2	38.7	66.0	65.0	61.0	59.0	50.0	44.0	40.0	39.0	39.0	55.3	0.0	55.3
	15	54.8	76.3	36.3	66.0	64.0	61.0	58.0	49.0	43.0	39.0	39.0	36.0	54.8	0.0	54.8
	16	53.6	73.1	36.3	66.0	64.0	60.0	57.0	45.0	40.0	36.0	36.0	36.0	53.6	0.0	53.6
	17	50.0	67.7	36.3	62.0	60.0	57.0	54.0	45.0	41.0	36.0	36.0	36.0	50.0	0.0	50.0
	18	47.7	67.4	36.3	60.0	57.0	53.0	50.0	44.0	41.0	37.0	36.0	36.0	47.7	0.0	47.7
Evening	19	51.9	80.5	36.3	62.0	59.0	53.0	49.0	43.0	41.0	39.0	39.0	37.0	51.9	5.0	56.9
	20	44.7	66.7	36.3	58.0	51.0	45.0	43.0	41.0	39.0	36.0	36.0	36.0	44.7	5.0	49.7
	21	47.4	74.1	36.3	58.0	54.0	47.0	45.0	43.0	39.0	36.0	36.0	36.0	47.4	5.0	52.4
Night	22	42.3	65.9	36.3	48.0	43.0	41.0	41.0	41.0	36.0	36.0	36.0	36.0	42.3	10.0	52.3
	23	39.4	45.9	36.3	42.0	42.0	41.0	41.0	39.0	39.0	37.0	36.0	36.0	39.4	10.0	49.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	47.7	67.4	36.3	60.0	57.0	53.0	50.0	44.0	40.0	36.0	36.0	36.0
	Max	57.4	80.1	41.8	68.0	66.0	63.0	60.0	53.0	46.0	43.0	42.0	42.0
Energy Average		54.9	Average:		65.7	63.7	60.3	57.8	48.4	42.9	39.4	39.0	38.6
Evening	Min	44.7	66.7	36.3	58.0	51.0	45.0	43.0	41.0	39.0	36.0	36.0	36.0
	Max	51.9	80.5	36.3	62.0	59.0	53.0	49.0	43.0	41.0	39.0	39.0	37.0
Energy Average		49.0	Average:		59.3	54.7	48.3	45.7	42.3	39.7	37.0	37.0	36.3
Night	Min	36.5	43.9	36.3	39.0	39.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
	Max	57.7	80.5	41.0	68.0	67.0	64.0	62.0	53.0	48.0	44.0	43.0	42.0
Energy Average		51.5	Average:		52.1	50.3	47.2	45.7	42.2	39.4	37.3	37.1	36.7

L_{eq} (dBA)

24-Hour	Daytime	Nighttime
53.4	54.2	51.5

24-Hour CNEL (dBA)

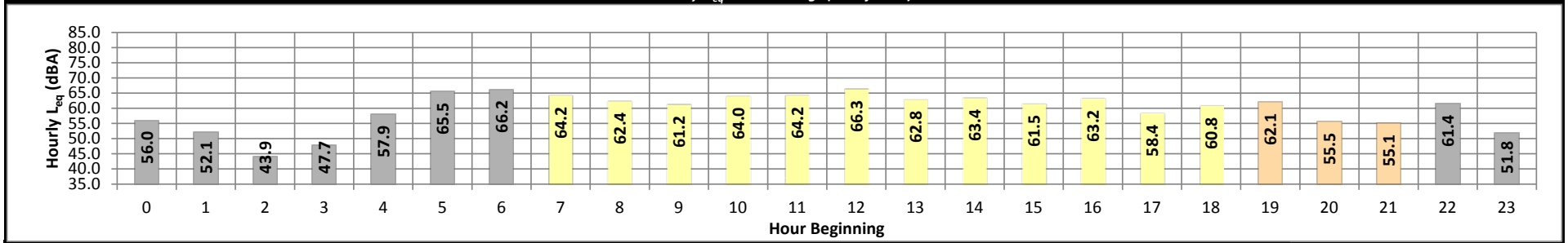
58.5

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 16, 2019 *Location:* L2 - Located along 58th Ave. South of home at 57925 Barristo Cir. *Meter:* Piccolo I *JN:* 12642

Project: 1840 The Wave at Coral Mountain *Analyst:* P. Mara

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	56.0	67.2	36.1	64.0	64.0	63.0	59.0	56.0	55.0	36.0	36.0	36.0	56.0	10.0	66.0
	1	52.1	62.0	36.1	57.0	57.0	56.0	56.0	55.0	47.0	36.0	36.0	36.0	52.1	10.0	62.1
	2	43.9	64.1	36.1	57.0	54.0	46.0	42.0	36.0	36.0	36.0	36.0	36.0	43.9	10.0	53.9
	3	47.7	71.9	36.1	59.0	55.0	51.0	48.0	38.0	36.0	36.0	36.0	36.0	47.7	10.0	57.7
	4	57.9	77.2	36.1	71.0	68.0	64.0	61.0	53.0	43.0	36.0	36.0	36.0	57.9	10.0	67.9
	5	65.5	90.3	36.1	77.0	74.0	70.0	68.0	61.0	55.0	46.0	44.0	40.0	65.5	10.0	75.5
	6	66.2	91.4	42.1	77.0	73.0	68.0	66.0	59.0	56.0	50.0	48.0	45.0	66.2	10.0	76.2
Day	7	64.2	87.0	43.7	76.0	73.0	69.0	66.0	58.0	54.0	48.0	47.0	45.0	64.2	0.0	64.2
	8	62.4	84.2	39.7	74.0	71.0	67.0	65.0	58.0	53.0	46.0	44.0	41.0	62.4	0.0	62.4
	9	61.2	79.7	39.1	72.0	70.0	67.0	65.0	59.0	53.0	45.0	43.0	41.0	61.2	0.0	61.2
	10	64.0	91.2	36.1	73.0	71.0	68.0	66.0	59.0	53.0	44.0	41.0	38.0	64.0	0.0	64.0
	11	64.2	88.2	36.1	76.0	72.0	69.0	67.0	60.0	54.0	45.0	43.0	38.0	64.2	0.0	64.2
	12	66.3	90.2	39.1	79.0	75.0	70.0	67.0	59.0	54.0	46.0	44.0	41.0	66.3	0.0	66.3
	13	62.8	84.0	38.1	73.0	71.0	68.0	66.0	60.0	55.0	46.0	44.0	40.0	62.8	0.0	62.8
	14	63.4	86.5	38.4	74.0	72.0	68.0	66.0	60.0	55.0	45.0	43.0	40.0	63.4	0.0	63.4
	15	61.5	82.8	40.3	71.0	69.0	66.0	65.0	59.0	55.0	48.0	46.0	43.0	61.5	0.0	61.5
	16	63.2	89.8	36.1	74.0	72.0	67.0	64.0	57.0	52.0	45.0	42.0	36.0	63.2	0.0	63.2
	17	58.4	79.8	36.1	69.0	68.0	64.0	62.0	55.0	51.0	40.0	39.0	36.0	58.4	0.0	58.4
	18	60.8	80.7	36.1	72.0	70.0	67.0	65.0	56.0	51.0	38.0	36.0	36.0	60.8	0.0	60.8
Evening	19	62.1	88.0	36.1	70.0	68.0	66.0	64.0	57.0	49.0	39.0	36.0	36.0	62.1	5.0	67.1
	20	55.5	75.4	36.1	68.0	64.0	59.0	58.0	52.0	44.0	38.0	36.0	36.0	55.5	5.0	60.5
	21	55.1	79.5	36.1	67.0	63.0	60.0	58.0	51.0	45.0	39.0	38.0	36.0	55.1	5.0	60.1
Night	22	61.4	76.4	36.1	74.0	74.0	66.0	58.0	55.0	49.0	36.0	36.0	36.0	61.4	10.0	71.4
	23	51.8	67.0	36.1	65.0	64.0	57.0	55.0	47.0	44.0	36.0	36.0	36.0	51.8	10.0	61.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.4	79.7	36.1	69.0	68.0	64.0	62.0	55.0	51.0	38.0	36.0	36.0
	Max	66.3	91.2	43.7	79.0	75.0	70.0	67.0	60.0	55.0	48.0	47.0	45.0
Energy Average		63.1	Average:		73.6	71.2	67.5	65.3	58.3	53.3	44.7	42.7	39.6
Evening	Min	55.1	75.4	36.1	67.0	63.0	59.0	58.0	51.0	44.0	38.0	36.0	36.0
	Max	62.1	88.0	36.1	70.0	68.0	66.0	64.0	57.0	49.0	39.0	38.0	36.0
Energy Average		58.8	Average:		68.3	65.0	61.7	60.0	53.3	46.0	38.7	36.7	36.0
Night	Min	43.9	62.0	36.1	57.0	54.0	46.0	42.0	36.0	36.0	36.0	36.0	36.0
	Max	66.2	91.4	42.1	77.0	74.0	70.0	68.0	61.0	56.0	50.0	48.0	45.0
Energy Average		60.7	Average:		66.8	64.8	60.1	57.0	51.1	46.8	38.7	38.2	37.4

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
61.9	62.5	60.7

24-Hour CNEL (dBA)

67.6

24-Hour Noise Level Measurement Summary

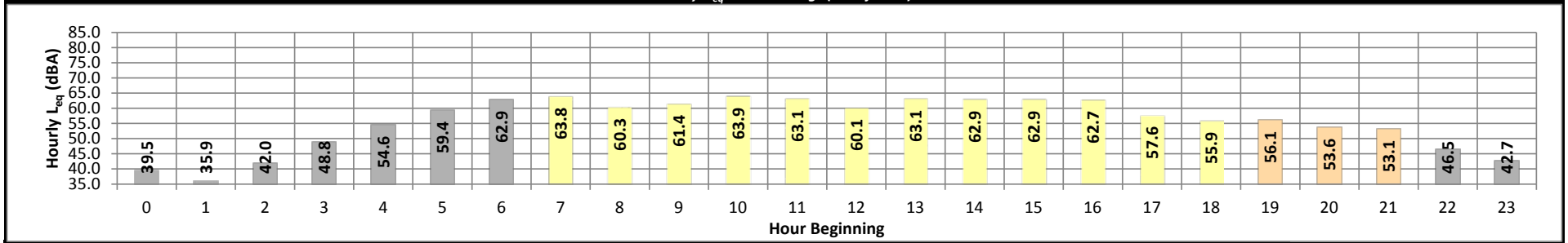
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L3 - Located northeast of Madison St. and 58th Ave. adjacent to wall enclosing golf course.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	39.5	56.6	36.2	51.0	49.0	44.0	41.0	36.0	36.0	36.0	36.0	36.0	39.5	10.0	49.5
	1	35.9	50.2	36.2	42.0	41.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0	35.9	10.0	45.9
	2	42.0	63.3	36.2	54.0	52.0	46.0	41.0	36.0	36.0	36.0	36.0	36.0	42.0	10.0	52.0
	3	48.8	74.1	36.2	60.0	57.0	53.0	50.0	39.0	36.0	36.0	36.0	36.0	48.8	10.0	58.8
	4	54.6	72.6	36.2	67.0	63.0	60.0	58.0	52.0	43.0	36.0	36.0	36.0	54.6	10.0	64.6
	5	59.4	79.5	36.2	69.0	67.0	64.0	62.0	58.0	55.0	46.0	43.0	37.0	59.4	10.0	69.4
	6	62.9	85.3	46.0	73.0	70.0	67.0	65.0	61.0	57.0	50.0	49.0	47.0	62.9	10.0	72.9
Day	7	63.8	89.4	44.5	72.0	70.0	67.0	65.0	60.0	56.0	50.0	49.0	46.0	63.8	0.0	63.8
	8	60.3	82.8	39.2	69.0	67.0	64.0	63.0	59.0	55.0	47.0	45.0	42.0	60.3	0.0	60.3
	9	61.4	80.5	39.2	71.0	69.0	67.0	65.0	61.0	57.0	47.0	44.0	41.0	61.4	0.0	61.4
	10	63.9	90.7	36.2	72.0	70.0	67.0	64.0	60.0	56.0	47.0	43.0	36.0	63.9	0.0	63.9
	11	63.1	84.5	36.2	74.0	71.0	67.0	65.0	60.0	56.0	48.0	46.0	39.0	63.1	0.0	63.1
	12	60.1	79.9	39.1	70.0	67.0	64.0	63.0	59.0	55.0	46.0	44.0	41.0	60.1	0.0	60.1
	13	63.1	85.5	40.0	74.0	70.0	67.0	65.0	60.0	55.0	47.0	45.0	41.0	63.1	0.0	63.1
	14	62.9	83.7	40.0	75.0	71.0	68.0	65.0	60.0	56.0	49.0	46.0	42.0	62.9	0.0	62.9
	15	62.9	84.1	40.2	75.0	71.0	66.0	64.0	59.0	56.0	49.0	47.0	43.0	62.9	0.0	62.9
	16	62.7	89.1	36.2	71.0	68.0	64.0	62.0	58.0	55.0	47.0	44.0	39.0	62.7	0.0	62.7
	17	57.6	78.0	36.2	67.0	65.0	62.0	60.0	56.0	53.0	42.0	39.0	36.0	57.6	0.0	57.6
	18	55.9	73.8	36.2	66.0	64.0	61.0	59.0	55.0	51.0	39.0	36.0	36.0	55.9	0.0	55.9
Evening	19	56.1	83.6	36.2	63.0	61.0	58.0	56.0	52.0	46.0	37.0	36.0	36.0	56.1	5.0	61.1
	20	53.6	76.4	36.2	66.0	64.0	58.0	56.0	50.0	43.0	37.0	36.0	36.0	53.6	5.0	58.6
	21	53.1	79.2	36.2	61.0	58.0	55.0	53.0	47.0	42.0	39.0	36.0	36.0	53.1	5.0	58.1
Night	22	46.5	68.0	36.2	58.0	56.0	52.0	50.0	41.0	38.0	36.0	36.0	36.0	46.5	10.0	56.5
	23	42.7	59.1	36.2	55.0	53.0	49.0	45.0	38.0	36.0	36.0	36.0	36.0	42.7	10.0	52.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	55.9	73.8	36.2	66.0	64.0	61.0	59.0	55.0	51.0	39.0	36.0	36.0
	Max	63.9	90.7	44.5	75.0	71.0	68.0	65.0	61.0	57.0	50.0	49.0	46.0
Energy Average		62.0	Average:		71.3	68.6	65.3	63.3	58.9	55.1	46.5	44.0	40.2
Evening	Min	53.1	76.4	36.2	61.0	58.0	55.0	53.0	47.0	42.0	37.0	36.0	36.0
	Max	56.1	83.6	36.2	66.0	64.0	58.0	56.0	52.0	46.0	39.0	36.0	36.0
Energy Average		54.5	Average:		63.3	61.0	57.0	55.0	49.7	43.7	37.7	36.0	36.0
Night	Min	35.9	50.2	36.2	42.0	41.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0
	Max	62.9	85.3	46.0	73.0	70.0	67.0	65.0	61.0	57.0	50.0	49.0	47.0
Energy Average		55.6	Average:		58.8	56.4	52.7	49.9	44.1	41.4	38.7	38.2	37.3

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
59.9	61.2	55.6

24-Hour CNEL (dBA)

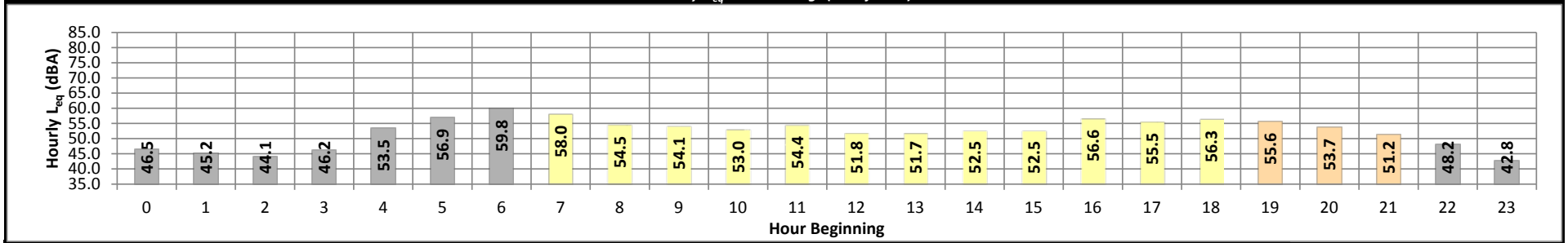
63.6

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 16, 2019 *Location:* L4 - Located on the southeast corner of 58th Ave. and Madison St. *Meter:* Piccolo I *JN:* 12642

Project: 1840 The Wave at Coral Mountain *Analyst:* P. Mara

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	46.5	59.1	35.0	52.0	50.0	48.0	47.0	46.0	46.0	44.0	39.0	36.0	46.5	10.0	56.5
	1	45.2	50.8	36.4	48.0	47.0	47.0	46.0	45.0	45.0	43.0	41.0	38.0	45.2	10.0	55.2
	2	44.1	60.7	35.0	54.0	52.0	48.0	46.0	44.0	39.0	35.0	35.0	35.0	44.1	10.0	54.1
	3	46.2	65.0	35.0	59.0	56.0	51.0	49.0	41.0	38.0	35.0	35.0	35.0	46.2	10.0	56.2
	4	53.5	69.7	35.4	65.0	62.0	60.0	58.0	51.0	45.0	38.0	38.0	37.0	53.5	10.0	63.5
	5	56.9	77.2	41.8	66.0	64.0	61.0	60.0	56.0	53.0	46.0	45.0	42.0	56.9	10.0	66.9
	6	59.8	81.8	45.7	66.0	65.0	63.0	62.0	59.0	56.0	51.0	50.0	48.0	59.8	10.0	69.8
Day	7	58.0	77.8	46.8	66.0	63.0	61.0	60.0	57.0	54.0	50.0	49.0	48.0	58.0	0.0	58.0
	8	54.5	66.0	40.8	62.0	61.0	59.0	58.0	55.0	51.0	46.0	45.0	42.0	54.5	0.0	54.5
	9	54.1	67.7	39.8	63.0	61.0	59.0	58.0	54.0	51.0	43.0	42.0	40.0	54.1	0.0	54.1
	10	53.0	70.4	37.4	62.0	60.0	58.0	57.0	53.0	49.0	42.0	40.0	38.0	53.0	0.0	53.0
	11	54.4	77.2	37.9	63.0	61.0	58.0	57.0	53.0	49.0	42.0	41.0	38.0	54.4	0.0	54.4
	12	51.8	69.4	38.0	61.0	58.0	56.0	55.0	51.0	47.0	41.0	40.0	38.0	51.8	0.0	51.8
	13	51.7	70.1	38.0	61.0	59.0	56.0	55.0	52.0	47.0	41.0	40.0	39.0	51.7	0.0	51.7
	14	52.5	72.3	38.0	62.0	60.0	57.0	55.0	52.0	48.0	42.0	41.0	39.0	52.5	0.0	52.5
	15	52.5	67.8	39.7	61.0	59.0	57.0	56.0	53.0	49.0	43.0	42.0	40.0	52.5	0.0	52.5
	16	56.6	82.2	37.3	66.0	62.0	58.0	57.0	54.0	49.0	41.0	39.0	38.0	56.6	0.0	56.6
	17	55.5	77.8	37.9	68.0	62.0	59.0	57.0	54.0	49.0	41.0	39.0	38.0	55.5	0.0	55.5
	18	56.3	76.2	38.0	66.0	63.0	60.0	58.0	54.0	51.0	43.0	40.0	38.0	56.3	0.0	56.3
Evening	19	55.6	77.7	37.9	62.0	61.0	58.0	57.0	54.0	52.0	51.0	50.0	39.0	55.6	5.0	60.6
	20	53.7	66.3	43.3	60.0	59.0	57.0	56.0	53.0	52.0	51.0	51.0	49.0	53.7	5.0	58.7
	21	51.2	69.9	37.7	60.0	58.0	55.0	54.0	52.0	46.0	38.0	38.0	38.0	51.2	5.0	56.2
Night	22	48.2	62.9	35.0	59.0	59.0	57.0	52.0	42.0	38.0	35.0	35.0	35.0	48.2	10.0	58.2
	23	42.8	59.4	35.0	55.0	52.0	47.0	45.0	39.0	37.0	35.0	35.0	35.0	42.8	10.0	52.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	51.7	66.0	37.3	61.0	58.0	56.0	55.0	51.0	47.0	41.0	39.0	38.0
	Max	58.0	82.2	46.8	68.0	63.0	61.0	60.0	57.0	54.0	50.0	49.0	48.0
Energy Average		54.7	Average:		63.4	60.8	58.2	56.9	53.5	49.5	42.9	41.5	39.7
Evening	Min	51.2	66.3	37.7	60.0	58.0	55.0	54.0	52.0	46.0	38.0	38.0	38.0
	Max	55.6	77.7	43.3	62.0	61.0	58.0	57.0	54.0	52.0	51.0	51.0	49.0
Energy Average		53.9	Average:		60.7	59.3	56.7	55.7	53.0	50.0	46.7	46.3	42.0
Night	Min	42.8	50.8	35.0	48.0	47.0	47.0	45.0	39.0	37.0	35.0	35.0	35.0
	Max	59.8	81.8	45.7	66.0	65.0	63.0	62.0	59.0	56.0	51.0	50.0	48.0
Energy Average		53.2	Average:		58.2	56.3	53.6	51.7	47.0	44.1	40.2	39.2	37.9

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
54.1	54.5	53.2

24-Hour CNEL (dBA)

60.1

24-Hour Noise Level Measurement Summary

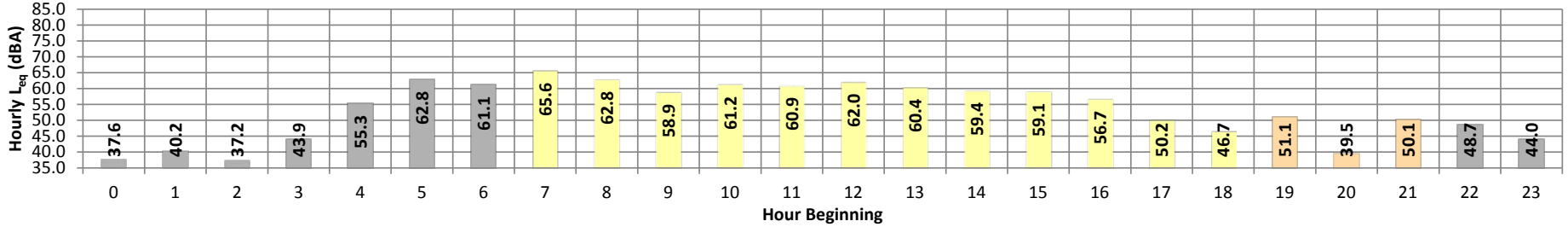
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L5 - Located south of 58th Ave. outside the northwest corner of the Analusia Country Club.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	37.6	42.8	35.7	39.0	39.0	39.0	38.0	38.0	37.0	35.0	35.0	35.0	37.6	10.0	47.6
	1	40.2	63.6	35.7	45.0	39.0	38.0	38.0	38.0	36.0	35.0	35.0	35.0	40.2	10.0	50.2
	2	37.2	44.5	35.7	39.0	39.0	38.0	38.0	37.0	35.0	35.0	35.0	35.0	37.2	10.0	47.2
	3	43.9	72.7	35.7	46.0	40.0	38.0	38.0	36.0	35.0	35.0	35.0	35.0	43.9	10.0	53.9
	4	55.3	78.7	35.7	68.0	66.0	60.0	54.0	43.0	38.0	35.0	35.0	35.0	55.3	10.0	65.3
	5	62.8	81.3	35.7	74.0	73.0	70.0	68.0	57.0	49.0	40.0	38.0	37.0	62.8	10.0	72.8
	6	61.1	81.4	40.3	74.0	72.0	67.0	63.0	51.0	47.0	42.0	41.0	40.0	61.1	10.0	71.1
Day	7	65.6	81.6	38.6	77.0	76.0	73.0	71.0	58.0	47.0	41.0	40.0	38.0	65.6	0.0	65.6
	8	62.8	81.6	40.0	75.0	73.0	69.0	66.0	55.0	50.0	42.0	41.0	40.0	62.8	0.0	62.8
	9	58.9	77.5	38.7	71.0	69.0	65.0	62.0	56.0	50.0	44.0	43.0	41.0	58.9	0.0	58.9
	10	61.2	80.8	35.7	73.0	71.0	68.0	66.0	51.0	40.0	35.0	35.0	35.0	61.2	0.0	61.2
	11	60.9	84.5	35.7	73.0	72.0	68.0	65.0	50.0	42.0	38.0	35.0	35.0	60.9	0.0	60.9
	12	62.0	86.0	35.7	74.0	71.0	66.0	63.0	48.0	42.0	36.0	35.0	35.0	62.0	0.0	62.0
	13	60.4	82.4	35.7	72.0	70.0	66.0	64.0	53.0	44.0	35.0	35.0	35.0	60.4	0.0	60.4
	14	59.4	78.0	35.7	72.0	70.0	67.0	64.0	48.0	40.0	35.0	35.0	35.0	59.4	0.0	59.4
	15	59.1	78.9	35.7	71.0	69.0	66.0	63.0	48.0	41.0	36.0	35.0	35.0	59.1	0.0	59.1
	16	56.7	78.8	35.7	70.0	68.0	62.0	56.0	42.0	37.0	35.0	35.0	35.0	56.7	0.0	56.7
	17	50.2	71.6	35.7	65.0	60.0	51.0	47.0	40.0	36.0	35.0	35.0	35.0	50.2	0.0	50.2
	18	46.7	69.9	35.7	56.0	52.0	50.0	48.0	41.0	40.0	35.0	35.0	35.0	46.7	0.0	46.7
Evening	19	51.1	77.7	35.7	62.0	56.0	48.0	46.0	42.0	40.0	35.0	35.0	35.0	51.1	5.0	56.1
	20	39.5	49.2	35.7	44.0	44.0	42.0	41.0	40.0	38.0	35.0	35.0	35.0	39.5	5.0	44.5
	21	50.1	74.6	35.7	64.0	59.0	49.0	45.0	38.0	36.0	35.0	35.0	35.0	50.1	5.0	55.1
Night	22	48.7	74.0	35.7	56.0	50.0	49.0	48.0	46.0	40.0	35.0	35.0	35.0	48.7	10.0	58.7
	23	44.0	48.8	35.7	45.0	45.0	45.0	45.0	44.0	44.0	35.0	35.0	35.0	44.0	10.0	54.0

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	46.7	69.9	35.7	56.0	52.0	50.0	47.0	40.0	36.0	35.0	35.0	35.0
	Max	65.6	86.0	40.0	77.0	76.0	73.0	71.0	58.0	50.0	44.0	43.0	41.0
Energy Average		60.6	Average:		70.8	68.4	64.3	61.3	49.2	42.4	37.3	36.6	36.2
Evening	Min	39.5	49.2	35.7	44.0	44.0	42.0	41.0	38.0	36.0	35.0	35.0	35.0
	Max	51.1	77.7	35.7	64.0	59.0	49.0	46.0	42.0	40.0	35.0	35.0	35.0
Energy Average		49.0	Average:		56.7	53.0	46.3	44.0	40.0	38.0	35.0	35.0	35.0
Night	Min	37.2	42.8	35.7	39.0	39.0	38.0	38.0	36.0	35.0	35.0	35.0	35.0
	Max	62.8	81.4	40.3	74.0	73.0	70.0	68.0	57.0	49.0	42.0	41.0	40.0
Energy Average		56.1	Average:		54.0	51.4	49.3	47.8	43.3	40.1	36.3	36.0	35.8

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
58.7	59.7	56.1

24-Hour CNEL (dBA)
63.3

24-Hour Noise Level Measurement Summary

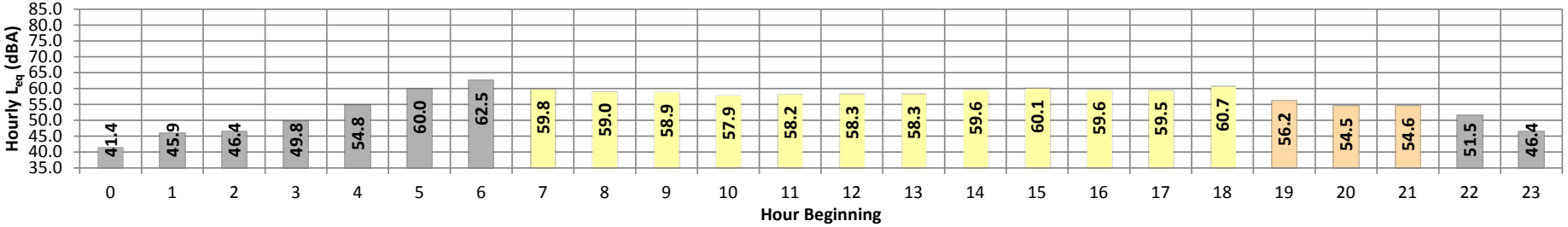
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L6 - Located along Cll Conchita southeast of home at 80900 Cll Conchita.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	41.4	63.8	34.8	49.0	43.0	41.0	40.0	37.0	37.0	35.0	35.0	35.0	41.4	10.0	51.4
	1	45.9	66.9	34.8	58.0	56.0	53.0	48.0	39.0	37.0	35.0	35.0	35.0	45.9	10.0	55.9
	2	46.4	69.8	34.8	60.0	53.0	45.0	44.0	39.0	37.0	35.0	35.0	35.0	46.4	10.0	56.4
	3	49.8	73.5	35.6	64.0	58.0	50.0	45.0	40.0	37.0	37.0	37.0	36.0	49.8	10.0	59.8
	4	54.8	75.1	37.6	67.0	65.0	61.0	58.0	46.0	41.0	37.0	37.0	37.0	54.8	10.0	64.8
	5	60.0	76.9	37.8	70.0	69.0	67.0	65.0	58.0	50.0	41.0	40.0	39.0	60.0	10.0	70.0
	6	62.5	85.9	43.1	71.0	70.0	68.0	66.0	61.0	55.0	49.0	48.0	44.0	62.5	10.0	72.5
Day	7	59.8	75.9	44.3	70.0	68.0	66.0	64.0	59.0	53.0	48.0	47.0	46.0	59.8	0.0	59.8
	8	59.0	72.8	44.1	68.0	67.0	65.0	64.0	59.0	53.0	47.0	46.0	45.0	59.0	0.0	59.0
	9	58.9	73.4	39.5	68.0	67.0	65.0	63.0	59.0	53.0	43.0	41.0	39.0	58.9	0.0	58.9
	10	57.9	73.9	39.4	67.0	66.0	64.0	63.0	58.0	50.0	42.0	41.0	40.0	57.9	0.0	57.9
	11	58.2	78.8	37.8	67.0	66.0	64.0	63.0	58.0	50.0	41.0	40.0	38.0	58.2	0.0	58.2
	12	58.3	73.6	37.8	68.0	66.0	64.0	63.0	58.0	51.0	42.0	40.0	37.0	58.3	0.0	58.3
	13	58.3	73.4	40.7	67.0	66.0	64.0	63.0	59.0	51.0	44.0	43.0	41.0	58.3	0.0	58.3
	14	59.6	73.0	39.6	68.0	67.0	66.0	65.0	60.0	52.0	42.0	41.0	40.0	59.6	0.0	59.6
	15	60.1	74.5	37.8	69.0	68.0	66.0	65.0	61.0	51.0	40.0	39.0	38.0	60.1	0.0	60.1
	16	59.6	75.9	34.8	69.0	67.0	66.0	65.0	60.0	51.0	39.0	37.0	37.0	59.6	0.0	59.6
	17	59.5	74.4	34.8	69.0	69.0	66.0	65.0	58.0	49.0	39.0	37.0	35.0	59.5	0.0	59.5
	18	60.7	80.2	37.7	71.0	69.0	67.0	66.0	56.0	47.0	39.0	37.0	37.0	60.7	0.0	60.7
Evening	19	56.2	71.7	34.8	67.0	66.0	64.0	62.0	53.0	44.0	37.0	37.0	35.0	56.2	5.0	61.2
	20	54.5	71.3	34.8	67.0	66.0	62.0	58.0	46.0	39.0	37.0	35.0	35.0	54.5	5.0	59.5
	21	54.6	75.6	34.8	68.0	66.0	59.0	54.0	39.0	37.0	35.0	35.0	35.0	54.6	5.0	59.6
Night	22	51.5	75.0	34.8	66.0	62.0	51.0	46.0	37.0	35.0	35.0	35.0	35.0	51.5	10.0	61.5
	23	46.4	71.9	34.8	57.0	49.0	40.0	38.0	35.0	35.0	35.0	35.0	35.0	46.4	10.0	56.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	57.9	72.8	34.8	67.0	66.0	64.0	63.0	56.0	47.0	39.0	37.0	35.0
	Max	60.7	80.2	44.3	71.0	69.0	67.0	66.0	61.0	53.0	48.0	47.0	46.0
Energy Average		59.2	Average:		68.4	67.2	65.3	64.1	58.8	50.9	42.2	40.8	39.4
Evening	Min	54.5	71.3	34.8	67.0	66.0	59.0	54.0	39.0	37.0	35.0	35.0	35.0
	Max	56.2	75.6	34.8	68.0	66.0	64.0	62.0	53.0	44.0	37.0	37.0	35.0
Energy Average		55.2	Average:		67.3	66.0	61.7	58.0	46.0	40.0	36.3	35.7	35.0
Night	Min	41.4	63.8	34.8	49.0	43.0	40.0	38.0	35.0	35.0	35.0	35.0	35.0
	Max	62.5	85.9	43.1	71.0	70.0	68.0	66.0	61.0	55.0	49.0	48.0	44.0
Energy Average		55.8	Average:		62.4	58.3	52.9	50.0	43.6	40.4	37.7	37.4	36.8

L_{eq} (dBA)

24-Hour	Daytime	Nighttime
57.8	58.7	55.8

24-Hour CNEL (dBA)

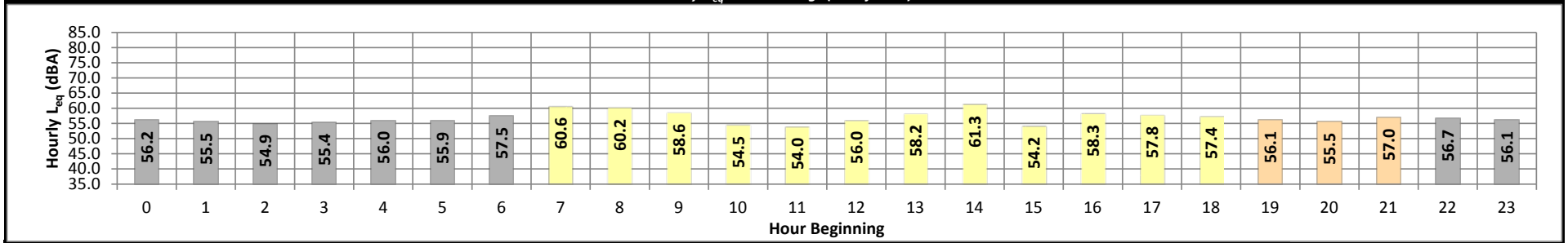
63.0

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 16, 2019 *Location:* L7 - Located along 60th Ave. north of gated entrace to single family homes. *Meter:* Piccolo I *JN:* 12642

Project: 1840 The Wave at Coral Mountain *Analyst:* P. Mara

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	56.2	58.8	52.3	58.0	58.0	57.0	57.0	56.0	56.0	54.0	53.0	52.0	56.2	10.0	66.2
	1	55.5	57.9	52.1	57.0	57.0	57.0	57.0	56.0	55.0	53.0	52.0	52.0	55.5	10.0	65.5
	2	54.9	57.4	51.7	57.0	57.0	56.0	56.0	55.0	54.0	52.0	52.0	52.0	54.9	10.0	64.9
	3	55.4	63.8	52.9	57.0	56.0	56.0	56.0	55.0	55.0	54.0	53.0	53.0	55.4	10.0	65.4
	4	56.0	59.9	52.7	58.0	58.0	58.0	57.0	57.0	55.0	53.0	53.0	53.0	56.0	10.0	66.0
	5	55.9	67.8	52.7	60.0	58.0	57.0	57.0	56.0	55.0	54.0	53.0	53.0	55.9	10.0	65.9
	6	57.5	78.4	53.3	64.0	62.0	59.0	58.0	57.0	56.0	54.0	54.0	53.0	57.5	10.0	67.5
Day	7	60.6	86.4	52.9	66.0	64.0	60.0	59.0	57.0	57.0	55.0	54.0	53.0	60.6	0.0	60.6
	8	60.2	74.4	53.2	64.0	63.0	62.0	62.0	61.0	59.0	56.0	55.0	54.0	60.2	0.0	60.2
	9	58.6	75.6	52.0	65.0	63.0	62.0	62.0	60.0	55.0	53.0	53.0	52.0	58.6	0.0	58.6
	10	54.5	64.2	52.3	57.0	56.0	56.0	56.0	55.0	54.0	53.0	53.0	52.0	54.5	0.0	54.5
	11	54.0	69.0	50.6	62.0	58.0	55.0	55.0	53.0	52.0	51.0	51.0	51.0	54.0	0.0	54.0
	12	56.0	74.1	50.8	62.0	60.0	59.0	58.0	56.0	55.0	52.0	51.0	51.0	56.0	0.0	56.0
	13	58.2	65.8	54.1	64.0	64.0	63.0	63.0	58.0	56.0	54.0	54.0	54.0	58.2	0.0	58.2
	14	61.3	85.9	51.9	67.0	64.0	63.0	62.0	59.0	57.0	53.0	53.0	52.0	61.3	0.0	61.3
	15	54.2	68.1	51.3	60.0	59.0	57.0	56.0	53.0	53.0	52.0	52.0	51.0	54.2	0.0	54.2
	16	58.3	84.6	52.5	65.0	61.0	57.0	57.0	56.0	54.0	53.0	53.0	52.0	58.3	0.0	58.3
	17	57.8	68.2	54.0	61.0	60.0	59.0	58.0	58.0	57.0	56.0	55.0	54.0	57.8	0.0	57.8
	18	57.4	71.6	53.6	62.0	59.0	58.0	58.0	57.0	57.0	55.0	55.0	53.0	57.4	0.0	57.4
Evening	19	56.1	63.0	52.7	58.0	57.0	57.0	57.0	56.0	56.0	54.0	54.0	53.0	56.1	5.0	61.1
	20	55.5	60.9	52.0	57.0	57.0	57.0	57.0	56.0	55.0	53.0	53.0	52.0	55.5	5.0	60.5
	21	57.0	65.6	53.1	58.0	58.0	58.0	58.0	57.0	57.0	55.0	55.0	53.0	57.0	5.0	62.0
Night	22	56.7	58.8	53.8	58.0	58.0	57.0	57.0	57.0	56.0	55.0	55.0	54.0	56.7	10.0	66.7
	23	56.1	58.5	52.2	57.0	57.0	57.0	57.0	56.0	56.0	54.0	53.0	52.0	56.1	10.0	66.1

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	54.0	64.2	50.6	57.0	56.0	55.0	55.0	53.0	52.0	51.0	51.0	51.0
	Max	61.3	86.4	54.1	67.0	64.0	63.0	63.0	61.0	59.0	56.0	55.0	54.0
Energy Average		58.2	Average:		62.9	60.9	59.3	58.8	56.9	55.5	53.6	53.3	52.4
Evening	Min	55.5	60.9	52.0	57.0	57.0	57.0	57.0	56.0	55.0	53.0	53.0	52.0
	Max	57.0	65.6	53.1	58.0	58.0	58.0	58.0	57.0	57.0	55.0	55.0	53.0
Energy Average		56.2	Average:		57.7	57.3	57.3	57.3	56.3	56.0	54.0	54.0	52.7
Night	Min	54.9	57.4	51.7	57.0	56.0	56.0	56.0	55.0	54.0	52.0	52.0	52.0
	Max	57.5	78.4	53.8	64.0	62.0	59.0	58.0	57.0	56.0	55.0	55.0	54.0
Energy Average		56.1	Average:		58.4	57.9	57.1	56.9	56.1	55.3	53.7	53.1	52.7

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
57.3	57.9	56.1

24-Hour CNEL (dBA)

63.1

24-Hour Noise Level Measurement Summary

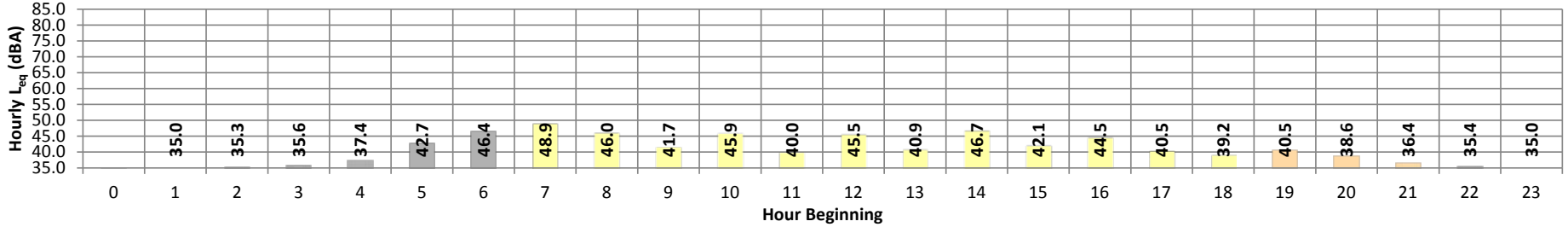
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L8 - Located towards the western end of 60th Ave. south of home at 80800 60th Ave.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	34.9	39.4	36.4	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	34.9	10.0	44.9
	1	35.0	41.1	36.4	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.0	10.0	45.0
	2	35.3	42.3	36.4	38.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.3	10.0	45.3
	3	35.6	45.7	36.4	41.0	39.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.6	10.0	45.6
	4	37.4	47.3	36.4	44.0	43.0	41.0	40.0	36.0	36.0	36.0	36.0	36.0	37.4	10.0	47.4
	5	42.7	56.1	36.4	53.0	50.0	47.0	45.0	42.0	39.0	36.0	36.0	36.0	42.7	10.0	52.7
	6	46.4	67.4	39.3	56.0	53.0	50.0	48.0	45.0	43.0	41.0	41.0	39.0	46.4	10.0	56.4
Day	7	48.9	70.0	39.3	58.0	57.0	53.0	51.0	47.0	44.0	41.0	41.0	40.0	48.9	0.0	48.9
	8	46.0	58.3	40.0	54.0	53.0	50.0	49.0	46.0	43.0	41.0	41.0	41.0	46.0	0.0	46.0
	9	41.7	60.4	36.4	48.0	46.0	45.0	44.0	41.0	40.0	38.0	36.0	36.0	41.7	0.0	41.7
	10	45.9	66.5	36.4	58.0	53.0	50.0	49.0	42.0	40.0	36.0	36.0	36.0	45.9	0.0	45.9
	11	40.0	60.1	36.4	49.0	46.0	43.0	41.0	38.0	36.0	36.0	36.0	36.0	40.0	0.0	40.0
	12	45.5	67.4	36.4	57.0	52.0	47.0	45.0	41.0	39.0	36.0	36.0	36.0	45.5	0.0	45.5
	13	40.9	55.2	36.4	49.0	48.0	44.0	42.0	41.0	39.0	36.0	36.0	36.0	40.9	0.0	40.9
	14	46.7	68.0	36.4	58.0	56.0	50.0	48.0	43.0	41.0	37.0	36.0	36.0	46.7	0.0	46.7
	15	42.1	56.9	36.4	51.0	49.0	47.0	45.0	42.0	39.0	36.0	36.0	36.0	42.1	0.0	42.1
	16	44.5	71.7	36.4	53.0	49.0	45.0	43.0	39.0	36.0	36.0	36.0	36.0	44.5	0.0	44.5
	17	40.5	54.5	36.4	50.0	48.0	46.0	43.0	39.0	36.0	36.0	36.0	36.0	40.5	0.0	40.5
	18	39.2	52.2	36.4	48.0	47.0	44.0	42.0	39.0	36.0	36.0	36.0	36.0	39.2	0.0	39.2
Evening	19	40.5	60.9	36.4	53.0	47.0	42.0	40.0	36.0	36.0	36.0	36.0	36.0	40.5	5.0	45.5
	20	38.6	58.4	36.4	50.0	45.0	39.0	38.0	36.0	36.0	36.0	36.0	36.0	38.6	5.0	43.6
	21	36.4	55.8	36.4	42.0	40.0	38.0	36.0	36.0	36.0	36.0	36.0	36.0	36.4	5.0	41.4
Night	22	35.4	46.4	36.4	42.0	38.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.4	10.0	45.4
	23	35.0	42.5	36.4	39.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.0	10.0	45.0

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	39.2	52.2	36.4	48.0	46.0	43.0	41.0	38.0	36.0	36.0	36.0	36.0
	Max	48.9	71.7	40.0	58.0	57.0	53.0	51.0	47.0	44.0	41.0	41.0	41.0
Energy Average		44.5	Average:		52.8	50.3	47.0	45.2	41.5	39.1	37.1	36.8	36.8
Evening	Min	36.4	55.8	36.4	42.0	40.0	38.0	36.0	36.0	36.0	36.0	36.0	36.0
	Max	40.5	60.9	36.4	53.0	47.0	42.0	40.0	36.0	36.0	36.0	36.0	36.0
Energy Average		38.8	Average:		48.3	44.0	39.7	38.0	36.0	36.0	36.0	36.0	36.0
Night	Min	34.9	39.4	36.4	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
	Max	46.4	67.4	39.3	56.0	53.0	50.0	48.0	45.0	43.0	41.0	41.0	39.0
Energy Average		39.9	Average:		42.8	40.8	39.3	38.8	37.7	37.1	36.6	36.6	36.3

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
42.7	43.8	39.9

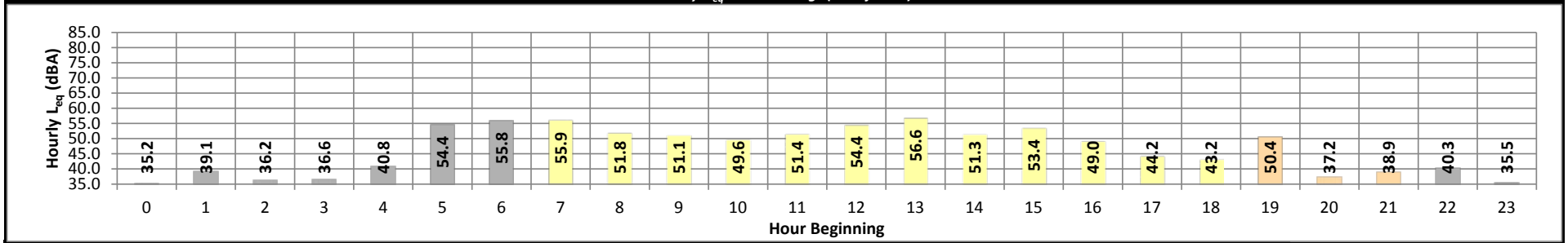
24-Hour CNEL (dBA)
47.3

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 16, 2019 *Location:* L9 - Located along Jefferson St. north of Quarry Ln. *Meter:* Piccolo I *JN:* 12642

Project: 1840 The Wave at Coral Mountain *Analyst:* P. Mara

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	35.2	45.0	36.3	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.2	10.0	45.2
	1	39.1	63.0	36.3	50.0	44.0	38.0	36.0	36.0	36.0	36.0	36.0	36.0	39.1	10.0	49.1
	2	36.2	45.8	36.3	41.0	39.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0	36.2	10.0	46.2
	3	36.6	55.3	36.3	39.0	38.0	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.6	10.0	46.6
	4	40.8	62.7	36.3	52.0	49.0	44.0	41.0	36.0	36.0	36.0	36.0	36.0	40.8	10.0	50.8
	5	54.4	83.7	36.3	61.0	59.0	55.0	52.0	43.0	39.0	36.0	36.0	36.0	54.4	10.0	64.4
	6	55.8	82.8	41.1	66.0	62.0	57.0	54.0	49.0	46.0	43.0	42.0	42.0	55.8	10.0	65.8
Day	7	55.9	78.6	41.1	68.0	62.0	57.0	55.0	49.0	46.0	43.0	42.0	42.0	55.9	0.0	55.9
	8	51.8	72.8	39.2	63.0	60.0	57.0	54.0	49.0	45.0	42.0	41.0	40.0	51.8	0.0	51.8
	9	51.1	69.8	36.3	63.0	61.0	56.0	53.0	47.0	44.0	39.0	39.0	36.0	51.1	0.0	51.1
	10	49.6	72.2	36.3	62.0	59.0	54.0	51.0	44.0	40.0	36.0	36.0	36.0	49.6	0.0	49.6
	11	51.4	71.9	36.3	64.0	60.0	56.0	54.0	46.0	42.0	36.0	36.0	36.0	51.4	0.0	51.4
	12	54.4	79.8	36.3	66.0	62.0	56.0	53.0	45.0	41.0	37.0	36.0	36.0	54.4	0.0	54.4
	13	56.6	84.2	36.3	68.0	64.0	57.0	54.0	47.0	42.0	37.0	36.0	36.0	56.6	0.0	56.6
	14	51.3	74.6	36.3	64.0	60.0	55.0	52.0	44.0	41.0	36.0	36.0	36.0	51.3	0.0	51.3
	15	53.4	78.0	36.3	66.0	62.0	57.0	54.0	47.0	41.0	36.0	36.0	36.0	53.4	0.0	53.4
	16	49.0	74.5	36.3	60.0	56.0	52.0	49.0	40.0	36.0	36.0	36.0	36.0	49.0	0.0	49.0
	17	44.2	69.2	36.3	56.0	52.0	47.0	44.0	39.0	36.0	36.0	36.0	36.0	44.2	0.0	44.2
	18	43.2	69.5	36.3	53.0	50.0	45.0	42.0	37.0	36.0	36.0	36.0	36.0	43.2	0.0	43.2
Evening	19	50.4	79.7	36.3	59.0	56.0	49.0	46.0	39.0	36.0	36.0	36.0	36.0	50.4	5.0	55.4
	20	37.2	51.0	36.3	46.0	42.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0	37.2	5.0	42.2
	21	38.9	60.1	36.3	50.0	46.0	40.0	38.0	36.0	36.0	36.0	36.0	36.0	38.9	5.0	43.9
Night	22	40.3	63.2	36.3	51.0	47.0	40.0	38.0	36.0	36.0	36.0	36.0	36.0	40.3	10.0	50.3
	23	35.5	48.5	36.3	42.0	39.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	35.5	10.0	45.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	43.2	69.2	36.3	53.0	50.0	45.0	42.0	37.0	36.0	36.0	36.0	36.0
	Max	56.6	84.2	41.1	68.0	64.0	57.0	55.0	49.0	46.0	43.0	42.0	42.0
Energy Average		52.5	Average:		62.8	59.0	54.1	51.3	44.5	40.8	37.5	37.2	36.8
Evening	Min	37.2	51.0	36.3	46.0	42.0	39.0	37.0	36.0	36.0	36.0	36.0	36.0
	Max	50.4	79.7	36.3	59.0	56.0	49.0	46.0	39.0	36.0	36.0	36.0	36.0
Energy Average		46.1	Average:		51.7	48.0	42.7	40.3	37.0	36.0	36.0	36.0	36.0
Night	Min	35.2	45.0	36.3	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
	Max	55.8	83.7	41.1	66.0	62.0	57.0	54.0	49.0	46.0	43.0	42.0	42.0
Energy Average		48.9	Average:		48.8	45.9	42.4	40.7	38.2	37.4	36.8	36.7	36.7

L_{eq} (dBA)

24-Hour	*Daytime*	*Nighttime*
50.9	**51.7**	**48.9**

24-Hour CNEL (dBA)

56.0

24-Hour Noise Level Measurement Summary

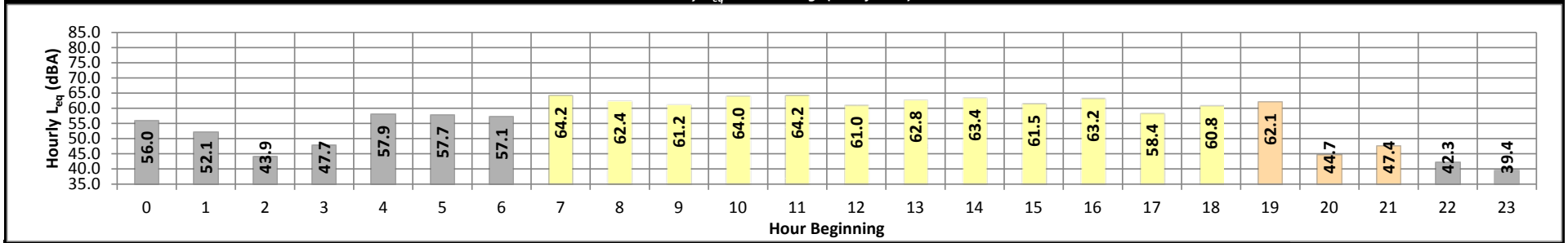
Date: Wednesday, October 16, 2019
Project: 1840 The Wave at Coral Mountain

Location: L10 - Located along 58th Ave slighty east of 58th Ave. and Stone Creek Way.

Meter: Piccolo I

JN: 12642
Analyst: P. Mara

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	56.0	67.2	36.1	64.0	64.0	63.0	59.0	56.0	55.0	36.0	36.0	36.0	56.0	10.0	66.0
	1	52.1	62.0	36.1	57.0	57.0	56.0	56.0	55.0	47.0	36.0	36.0	36.0	52.1	10.0	62.1
	2	43.9	64.1	36.1	57.0	54.0	46.0	42.0	36.0	36.0	36.0	36.0	36.0	43.9	10.0	53.9
	3	47.7	71.9	36.1	59.0	55.0	51.0	48.0	38.0	36.0	36.0	36.0	36.0	47.7	10.0	57.7
	4	57.9	77.2	36.1	71.0	68.0	64.0	61.0	53.0	43.0	36.0	36.0	36.0	57.9	10.0	67.9
	5	57.7	80.3	36.3	68.0	67.0	64.0	62.0	53.0	46.0	39.0	39.0	36.0	57.7	10.0	67.7
	6	57.1	74.2	37.3	68.0	67.0	64.0	62.0	54.0	47.0	41.0	39.0	39.0	57.1	10.0	67.1
Day	7	64.2	87.0	43.7	76.0	73.0	69.0	66.0	58.0	54.0	48.0	47.0	45.0	64.2	0.0	64.2
	8	62.4	84.2	39.7	74.0	71.0	67.0	65.0	58.0	53.0	46.0	44.0	41.0	62.4	0.0	62.4
	9	61.2	79.7	39.1	72.0	70.0	67.0	65.0	59.0	53.0	45.0	43.0	41.0	61.2	0.0	61.2
	10	64.0	91.2	36.1	73.0	71.0	68.0	66.0	59.0	53.0	44.0	41.0	38.0	64.0	0.0	64.0
	11	64.2	88.2	36.1	76.0	72.0	69.0	67.0	60.0	54.0	45.0	43.0	38.0	64.2	0.0	64.2
	12	61.0	83.8	36.1	72.0	70.0	66.0	64.0	58.0	53.0	46.0	43.0	40.0	61.0	0.0	61.0
	13	62.8	84.0	38.1	73.0	71.0	68.0	66.0	60.0	55.0	46.0	44.0	40.0	62.8	0.0	62.8
	14	63.4	86.5	38.4	74.0	72.0	68.0	66.0	60.0	55.0	45.0	43.0	40.0	63.4	0.0	63.4
	15	61.5	82.8	40.3	71.0	69.0	66.0	65.0	59.0	55.0	48.0	46.0	43.0	61.5	0.0	61.5
	16	63.2	89.8	36.1	74.0	72.0	67.0	64.0	57.0	52.0	45.0	42.0	36.0	63.2	0.0	63.2
	17	58.4	79.8	36.1	69.0	68.0	64.0	62.0	55.0	51.0	40.0	39.0	36.0	58.4	0.0	58.4
	18	60.8	80.7	36.1	72.0	70.0	67.0	65.0	56.0	51.0	38.0	36.0	36.0	60.8	0.0	60.8
Evening	19	62.1	88.0	36.1	70.0	68.0	66.0	64.0	57.0	49.0	39.0	36.0	36.0	62.1	5.0	67.1
	20	44.7	66.7	36.3	58.0	51.0	45.0	43.0	41.0	39.0	36.0	36.0	36.0	44.7	5.0	49.7
	21	47.4	74.1	36.3	58.0	54.0	47.0	45.0	43.0	39.0	36.0	36.0	36.0	47.4	5.0	52.4
Night	22	42.3	65.9	36.3	48.0	43.0	41.0	41.0	41.0	36.0	36.0	36.0	36.0	42.3	10.0	52.3
	23	39.4	45.9	36.3	42.0	42.0	41.0	41.0	39.0	39.0	37.0	36.0	36.0	39.4	10.0	49.4

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.4	79.7	36.1	69.0	68.0	64.0	62.0	55.0	51.0	38.0	36.0	36.0
	Max	64.2	91.2	43.7	76.0	73.0	69.0	67.0	60.0	55.0	48.0	47.0	45.0
Energy Average		62.5	Average:		73.0	70.8	67.2	65.1	58.3	53.3	44.7	42.6	39.5
Evening	Min	44.7	66.7	36.1	58.0	51.0	45.0	43.0	41.0	39.0	36.0	36.0	36.0
	Max	62.1	88.0	36.3	70.0	68.0	66.0	64.0	57.0	49.0	39.0	36.0	36.0
Energy Average		57.5	Average:		62.0	57.7	52.7	50.7	47.0	42.3	37.0	36.0	36.0
Night	Min	39.4	45.9	36.1	42.0	42.0	41.0	41.0	36.0	36.0	36.0	36.0	36.0
	Max	57.9	80.3	37.3	71.0	68.0	64.0	62.0	56.0	55.0	41.0	39.0	39.0
Energy Average		54.2	Average:		59.3	57.4	54.4	52.4	47.2	42.8	37.0	36.7	36.3

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
60.3	61.9	54.2

24-Hour CNEL (dBA)

63.3

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,120 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.44	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.80	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.75	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	63.9	62.7	56.3	54.8	63.2	63.5
Heavy Trucks:	63.9	62.8	53.8	55.0	63.4	63.5
Vehicle Noise:	72.1	70.6	67.7	62.8	71.3	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	169	365	786
CNEL:	85	182	393	846

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,507 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.04	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-18.28	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-22.24	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.4	65.6	59.6	68.2	68.8
Medium Trucks:	62.4	61.2	54.8	53.3	61.8	62.0
Heavy Trucks:	62.4	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.6	69.1	66.2	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	291	626
CNEL:	67	145	313	674

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,181 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-2.10	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-19.34	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-23.29	-0.52	-1.20	-5.31	0.000	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	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	61.3	60.2	53.8	52.2	60.7	60.9
Heavy Trucks:	61.4	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	69.5	68.1	65.1	60.2	68.8	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	247	532
CNEL:	57	123	266	573

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	549 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.02	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.25	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.21	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.2	62.6	60.8	54.8	63.4	64.0
Medium Trucks:	57.8	56.6	50.2	48.7	57.1	57.3
Heavy Trucks:	58.2	57.1	48.0	49.3	57.6	57.8
Vehicle Noise:	65.9	64.4	61.4	56.6	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	55	119	257
CNEL:	28	59	128	276

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	642 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.34	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.57	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.53	0.20	-1.20	-5.39	0.000	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	63.3	61.5	55.4	64.1	64.7
Medium Trucks:	58.4	57.2	50.9	49.3	57.8	58.0
Heavy Trucks:	58.9	57.7	48.7	50.0	58.3	58.4
Vehicle Noise:	66.6	65.1	62.1	57.3	65.8	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	61	132	285
CNEL:	31	66	142	306

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	419 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.0	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	56.6	55.4	49.0	47.5	55.9	56.2
Heavy Trucks:	57.0	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.7	63.3	60.2	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	99	214
CNEL:	23	50	107	230

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	874 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.99	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.23	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.19	0.20	-1.20	-5.39	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	59.8	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.4	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	350
CNEL:	38	81	175	376

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	623 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.46	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.70	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.66	0.20	-1.20	-5.39	0.000	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	63.1	61.4	55.3	63.9	64.5
Medium Trucks:	58.3	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	58.7	57.6	48.6	49.8	58.2	58.3
Vehicle Noise:	66.4	65.0	61.9	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	130	279
CNEL:	30	65	139	300

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	260 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-7.79	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-25.03	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-28.99	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	53.7	52.5	46.1	44.6	53.0	53.3
Heavy Trucks:	54.5	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.7	60.3	57.2	52.5	61.0	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	60	129
CNEL:	14	30	64	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	893 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.90	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.14	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.10	-1.33	-1.20	-5.31	0.000	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	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	58.3	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	58.8	57.6	48.6	49.9	58.2	58.3
Vehicle Noise:	66.5	65.0	62.0	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	72	154	333
CNEL:	36	77	166	358

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	698 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.97	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-21.21	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-25.17	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	57.3	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	57.7	56.6	47.5	48.8	57.1	57.3
Vehicle Noise:	65.4	63.9	60.9	56.1	64.7	65.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	61	131	282
CNEL:	30	65	141	303

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.65	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.89	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.84	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.5	62.0	60.2	54.1	62.8	63.4
Medium Trucks:	57.1	55.9	49.6	48.0	56.5	56.7
Heavy Trucks:	57.5	56.4	47.4	48.6	57.0	57.1
Vehicle Noise:	65.2	63.8	60.8	56.0	64.5	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	108	233
CNEL:	25	54	116	250

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	363 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.81	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-24.05	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-28.01	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.4	60.8	59.0	53.0	61.6	62.2
Medium Trucks:	56.0	54.8	48.4	46.9	55.3	55.5
Heavy Trucks:	56.4	55.3	46.2	47.5	55.8	56.0
Vehicle Noise:	64.1	62.6	59.6	54.8	63.4	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	42	90	195
CNEL:	21	45	97	209

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	316 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.41	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-24.65	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-28.60	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.8	60.2	58.4	52.4	61.0	61.6
Medium Trucks:	55.4	54.2	47.8	46.3	54.7	55.0
Heavy Trucks:	55.8	54.7	45.6	46.9	55.2	55.4
Vehicle Noise:	63.5	62.0	59.0	54.2	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	38	82	178
CNEL:	19	41	89	191

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	251 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.41	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-25.65	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-29.60	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.8	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	54.4	53.2	46.8	45.3	53.7	54.0
Heavy Trucks:	54.8	53.7	44.6	45.9	54.2	54.4
Vehicle Noise:	62.5	61.0	58.0	53.2	61.8	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	71	152
CNEL:	16	35	76	164

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.62	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.86	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.81	0.20	-1.20	-5.39	0.000	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	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.2	60.0	53.6	52.1	60.5	60.7
Heavy Trucks:	61.6	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	69.3	67.8	64.8	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	201	432
CNEL:	46	100	216	464

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,042 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.23	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.47	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.43	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.5	66.2	66.8
Medium Trucks:	60.5	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.0	59.9	50.8	52.1	60.4	60.5
Vehicle Noise:	68.7	67.2	64.2	59.4	67.9	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	85	183	393
CNEL:	42	91	196	423

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	865 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.04	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.28	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.23	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.6	63.0	61.3	55.2	63.8	64.4
Medium Trucks:	58.2	57.0	50.6	49.1	57.6	57.8
Heavy Trucks:	58.6	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	66.3	64.9	61.8	57.1	65.6	66.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	70	151	326
CNEL:	35	75	162	350

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	735 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.75	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.99	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.94	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.9	62.1	56.0	64.7	65.3
Medium Trucks:	59.0	57.8	51.5	49.9	58.4	58.6
Heavy Trucks:	59.4	58.3	49.3	50.5	58.9	59.0
Vehicle Noise:	67.1	65.7	62.7	57.9	66.4	66.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	67	145	312
CNEL:	33	72	155	335

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	800 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.38	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.62	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.57	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	64.2	62.5	56.4	65.0	65.6
Medium Trucks:	59.4	58.2	51.8	50.3	58.8	59.0
Heavy Trucks:	59.8	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	67.5	66.1	63.0	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	330
CNEL:	35	76	165	354

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	493 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.48	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.68	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	62.1	60.4	54.3	62.9	63.5
Medium Trucks:	57.3	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	57.7	56.6	47.6	48.8	57.2	57.3
Vehicle Noise:	65.4	64.0	60.9	56.1	64.7	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	111	239
CNEL:	26	55	119	257

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	186 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.71	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-26.95	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-30.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.5	57.9	56.1	50.1	58.7	59.3
Medium Trucks:	53.1	51.9	45.5	44.0	52.4	52.6
Heavy Trucks:	53.5	52.4	43.3	44.6	52.9	53.1
Vehicle Noise:	61.2	59.7	56.7	51.9	60.5	60.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	12	27	58	125
CNEL:	13	29	62	134

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	149 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-10.22	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-27.46	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-31.42	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.5	55.9	54.1	48.1	56.7	57.3
Medium Trucks:	51.2	50.1	43.7	42.1	50.6	50.8
Heavy Trucks:	52.1	51.0	41.9	43.2	51.6	51.7
Vehicle Noise:	59.3	57.9	54.7	50.1	58.6	59.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	41	89
CNEL:	10	20	44	95

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	214 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-8.65	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-25.89	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-29.84	0.46	-1.20	-5.42	0.000	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	57.5	55.7	49.6	58.3	58.9
Medium Trucks:	52.8	51.6	45.3	43.7	52.2	52.4
Heavy Trucks:	53.7	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	60.9	59.5	56.3	51.6	60.2	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	24	52	113
CNEL:	12	26	56	121

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	167 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-10.17	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-27.41	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-31.37	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.9	56.4	54.6	48.5	57.2	57.8
Medium Trucks:	51.5	50.3	44.0	42.4	50.9	51.1
Heavy Trucks:	51.9	50.8	41.8	43.0	51.4	51.5
Vehicle Noise:	59.6	58.2	55.2	50.4	58.9	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	23	50	108
CNEL:	12	25	54	116

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	130 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-11.26	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-28.50	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-32.46	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.9	55.3	53.5	47.4	56.1	56.7
Medium Trucks:	50.4	49.2	42.9	41.3	49.8	50.0
Heavy Trucks:	50.8	49.7	40.7	42.0	50.3	50.4
Vehicle Noise:	58.6	57.1	54.1	49.3	57.8	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	20	42	91
CNEL:	10	21	45	98

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	9 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-21.75	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-38.99	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-42.95	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	45.1	43.5	41.8	35.7	44.4	45.0
Medium Trucks:	39.1	37.9	31.6	30.0	38.5	38.7
Heavy Trucks:	40.5	39.4	30.3	31.6	39.9	40.0
Vehicle Noise:	47.2	45.7	42.5	37.9	46.4	46.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	1	2	5	11
CNEL:	1	2	5	12

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019) | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	298 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-7.21	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-24.45	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-28.41	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.5	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	54.3	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.1	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	62.3	60.9	57.7	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	65	141
CNEL:	15	33	70	151

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2019)
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	112 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-11.93	-1.24	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	81.00	-29.17	-1.22	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-33.13	-1.23	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.8	54.2	52.5	46.4	55.0	55.7
Medium Trucks:	49.4	48.2	41.9	40.3	48.8	49.0
Heavy Trucks:	49.8	48.7	39.7	40.9	49.3	49.4
Vehicle Noise:	57.5	56.1	53.0	48.3	56.8	57.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	18	39	85
CNEL:	9	20	42	91

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Jefferson St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,167 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.54	-0.54	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-16.70	-0.52	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.66	-0.52	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.6	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	64.0	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	64.0	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	72.2	70.7	67.8	62.9	71.4	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	172	370	798
CNEL:	86	185	398	858

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Jefferson St.
Road Segment: n/o Avenue 52
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,572 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.86	-0.54	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-18.10	-0.52	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-22.05	-0.52	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.2	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	62.6	61.4	55.0	53.5	61.9	62.2
Heavy Trucks:	62.6	61.5	52.5	53.7	62.1	62.2
Vehicle Noise:	70.8	69.3	66.4	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	139	299	644
CNEL:	69	149	322	693

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Jefferson St.
Road Segment: n/o Avenue 54
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,265 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.80	-0.54	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-19.04	-0.52	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-23.00	-0.52	-1.20	*-5.31*	0.000	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	66.7	64.9	58.8	67.5	68.1
Medium Trucks:	61.6	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	61.7	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	69.8	68.4	65.4	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	56	120	259	557
CNEL:	60	129	278	599

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	595 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.66	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.90	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.86	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.5	62.9	61.2	55.1	63.7	64.3
Medium Trucks:	58.1	56.9	50.6	49.0	57.5	57.7
Heavy Trucks:	58.5	57.4	48.4	49.6	58.0	58.1
Vehicle Noise:	66.2	64.8	61.7	57.0	65.5	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	126	271
CNEL:	29	63	135	291

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	716 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.10	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.7	62.0	55.9	64.5	65.1
Medium Trucks:	58.9	57.7	51.4	49.8	58.3	58.5
Heavy Trucks:	59.3	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.0	65.6	62.5	57.8	66.3	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	66	142	306
CNEL:	33	71	153	329

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.09	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.33	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.28	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	57.7	56.5	50.1	48.6	57.0	57.3
Heavy Trucks:	58.1	57.0	48.0	49.2	57.6	57.7
Vehicle Noise:	65.8	64.4	61.3	56.5	65.1	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	55	118	254
CNEL:	27	59	127	273

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,107 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.97	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.21	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.16	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.6	63.9	57.8	66.4	67.0
Medium Trucks:	60.8	59.6	53.2	51.7	60.2	60.4
Heavy Trucks:	61.2	60.1	51.1	52.3	60.7	60.8
Vehicle Noise:	68.9	67.5	64.4	59.7	68.2	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	190	410
CNEL:	44	95	204	440

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Madison St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	902 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.09	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	63.0	56.9	65.5	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.5	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	357
CNEL:	38	83	178	384

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Madison St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	363 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.36	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-23.59	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-27.55	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.8	58.0	51.9	60.6	61.2
Medium Trucks:	55.1	53.9	47.6	46.0	54.5	54.7
Heavy Trucks:	56.0	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	63.2	61.8	58.6	53.9	62.5	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	75	161
CNEL:	17	37	80	172

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Monroe St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	939 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.68	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.92	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.87	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.0	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	58.6	57.4	51.0	49.5	57.9	58.1
Heavy Trucks:	59.0	57.9	48.8	50.1	58.4	58.6
Vehicle Noise:	66.7	65.2	62.2	57.4	66.0	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	74	160	344
CNEL:	37	80	172	370

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Monroe St.
Road Segment: n/o Avenue 52
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	763 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.59	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.82	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.78	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	57.6	56.5	50.1	48.5	57.0	57.2
Heavy Trucks:	58.1	57.0	47.9	49.2	57.5	57.7
Vehicle Noise:	65.8	64.3	61.3	56.5	65.1	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	65	139	300
CNEL:	32	69	149	322

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	549 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.02	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.25	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.21	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.2	62.6	60.8	54.8	63.4	64.0
Medium Trucks:	57.8	56.6	50.2	48.7	57.1	57.3
Heavy Trucks:	58.2	57.1	48.0	49.3	57.6	57.8
Vehicle Noise:	65.9	64.4	61.4	56.6	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	55	119	257
CNEL:	28	59	128	276

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	428 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.10	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.33	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.29	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.5	59.7	53.7	62.3	62.9
Medium Trucks:	56.7	55.5	49.1	47.6	56.0	56.3
Heavy Trucks:	57.1	56.0	46.9	48.2	56.6	56.7
Vehicle Noise:	64.8	63.4	60.3	55.5	64.1	64.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	101	217
CNEL:	23	50	108	234

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	409 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.29	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.53	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	56.5	55.3	48.9	47.4	55.8	56.1
Heavy Trucks:	56.9	55.8	46.8	48.0	56.4	56.5
Vehicle Noise:	64.6	63.2	60.1	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	98	211
CNEL:	23	49	105	227

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	270 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.10	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-25.34	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-29.29	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.1	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	54.7	53.5	47.1	45.6	54.0	54.3
Heavy Trucks:	55.1	54.0	44.9	46.2	54.6	54.7
Vehicle Noise:	62.8	61.3	58.3	53.5	62.1	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	80	172

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,246 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.45	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.69	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.65	0.20	-1.20	-5.39	0.000	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	66.1	64.4	58.3	67.0	67.6
Medium Trucks:	61.3	60.1	53.8	52.2	60.7	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.2	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	96	206	443
CNEL:	48	103	221	476

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,060 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.15	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.39	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.35	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.7	57.6	66.2	66.9
Medium Trucks:	60.6	59.4	53.1	51.5	60.0	60.2
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.7	67.3	64.2	59.5	68.0	68.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	86	185	398
CNEL:	43	92	199	428

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	884 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.95	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.18	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.14	-1.33	-1.20	-5.31	0.000	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	63.1	61.4	55.3	63.9	64.5
Medium Trucks:	58.3	57.1	50.7	49.2	57.6	57.9
Heavy Trucks:	58.7	57.6	48.6	49.8	58.2	58.3
Vehicle Noise:	66.4	65.0	61.9	57.1	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	330
CNEL:	36	76	165	355

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	772 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.53	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.77	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.73	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.2	64.9	65.5
Medium Trucks:	59.2	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	59.7	58.5	49.5	50.8	59.1	59.2
Vehicle Noise:	67.4	65.9	62.9	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	150	322
CNEL:	35	75	161	346

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	884 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.95	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.18	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.14	0.20	-1.20	-5.39	0.000	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	64.7	62.9	56.8	65.5	66.1
Medium Trucks:	59.8	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.5	58.7	67.2	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	76	164	353
CNEL:	38	82	176	379

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	521 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.48	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.44	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.9	62.4	60.6	54.5	63.2	63.8
Medium Trucks:	57.5	56.3	50.0	48.4	56.9	57.1
Heavy Trucks:	57.9	56.8	47.8	49.1	57.4	57.5
Vehicle Noise:	65.6	64.2	61.2	56.4	64.9	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	53	115	248
CNEL:	27	57	124	266

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	214 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.11	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-26.34	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-30.30	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.1	58.5	56.7	50.7	59.3	59.9
Medium Trucks:	53.7	52.5	46.1	44.6	53.0	53.3
Heavy Trucks:	54.1	53.0	43.9	45.2	53.5	53.7
Vehicle Noise:	61.8	60.3	57.3	52.5	61.1	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	64	137
CNEL:	15	32	68	147

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	205 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-8.84	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-26.08	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-30.04	0.46	-1.20	-5.42	0.000	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	57.3	55.5	49.4	58.1	58.7
Medium Trucks:	52.6	51.4	45.1	43.5	52.0	52.2
Heavy Trucks:	53.5	52.4	43.3	44.6	52.9	53.1
Vehicle Noise:	60.7	59.3	56.1	51.4	60.0	60.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	24	51	110
CNEL:	12	25	55	118

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Avenue 58
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	381 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.14	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-23.38	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-27.33	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.6	60.0	58.2	52.2	60.8	61.4
Medium Trucks:	55.3	54.1	47.8	46.2	54.7	54.9
Heavy Trucks:	56.2	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	63.4	62.0	58.8	54.1	62.7	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	17	36	77	166
CNEL:	18	38	83	178

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Avenue 58
Road Segment: w/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	251 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.41	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.65	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.60	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.7	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	53.3	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	53.7	52.6	43.6	44.8	53.2	53.3
Vehicle Noise:	61.4	60.0	56.9	52.1	60.7	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	66	141
CNEL:	15	33	70	152

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Avenue 58
Road Segment: e/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	186 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.71	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-26.95	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-30.91	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.4	56.8	55.1	49.0	57.6	58.2
Medium Trucks:	52.0	50.8	44.4	42.9	51.3	51.6
Heavy Trucks:	52.4	51.3	42.3	43.5	51.9	52.0
Vehicle Noise:	60.1	58.7	55.6	50.8	59.4	59.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	12	25	54	116
CNEL:	12	27	58	124

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P
Road Name: Avenue 60
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	121 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-10.62	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-27.85	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-31.81	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.3	54.7	52.9	46.9	55.5	56.1
Medium Trucks:	50.3	49.1	42.7	41.2	49.6	49.9
Heavy Trucks:	51.6	50.5	41.5	42.7	51.1	51.2
Vehicle Noise:	58.3	56.9	53.6	49.1	57.6	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	6	13	28	59
CNEL:	6	14	30	64

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	419 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.73	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.97	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.93	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.0	60.4	58.6	52.6	61.2	61.8
Medium Trucks:	55.7	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	56.6	55.5	46.4	47.7	56.0	56.2
Vehicle Noise:	63.8	62.4	59.2	54.5	63.1	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	38	82	177
CNEL:	19	41	88	189

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E+P | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	177 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.94	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-27.17	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-31.13	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.8	56.2	54.5	48.4	57.0	57.7
Medium Trucks:	51.4	50.2	43.8	42.3	50.8	51.0
Heavy Trucks:	51.8	50.7	41.7	42.9	51.3	51.4
Vehicle Noise:	59.5	58.1	55.0	50.3	58.8	59.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	25	53	115
CNEL:	12	27	57	123

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,623 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.36	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.87	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.83	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	64.8	63.6	57.3	55.7	64.2	64.4
Heavy Trucks:	64.8	63.7	54.7	55.9	64.3	64.4
Vehicle Noise:	73.0	71.5	68.6	63.7	72.3	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	91	195	421	906
CNEL:	97	210	452	975

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,804 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.26	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.50	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.45	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	63.2	62.0	55.6	54.1	62.5	62.8
Heavy Trucks:	63.2	62.1	53.1	54.3	62.7	62.8
Vehicle Noise:	71.4	69.9	67.0	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	71	152	328	706
CNEL:	76	164	353	760

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Jefferson St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,516 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.02	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-18.25	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-22.21	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.4	65.7	59.6	68.2	68.8
Medium Trucks:	62.4	61.2	54.9	53.3	61.8	62.0
Heavy Trucks:	62.5	61.4	52.3	53.6	61.9	62.1
Vehicle Noise:	70.6	69.2	66.2	61.3	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	292	629
CNEL:	68	146	314	676

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Avenue 50

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	837 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.18	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.42	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.38	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.4	62.7	56.6	65.2	65.8
Medium Trucks:	59.6	58.4	52.0	50.5	58.9	59.2
Heavy Trucks:	60.0	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.7	66.3	63.2	58.4	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	158	340
CNEL:	37	79	170	365

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Avenue 52

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,051 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	60.6	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.7	67.3	64.2	59.4	68.0	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	396
CNEL:	43	92	197	425

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	698 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.97	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.21	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.17	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.6	61.9	55.8	64.4	65.0
Medium Trucks:	58.8	57.6	51.2	49.7	58.2	58.4
Heavy Trucks:	59.2	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.9	65.5	62.4	57.6	66.2	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	65	140	301
CNEL:	32	70	150	324

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Airport Bl.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,414 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.91	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.14	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.10	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.7	64.9	58.9	67.5	68.1
Medium Trucks:	61.9	60.7	54.3	52.8	61.2	61.5
Heavy Trucks:	62.3	61.2	52.1	53.4	61.7	61.9
Vehicle Noise:	70.0	68.5	65.5	60.7	69.3	69.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	104	224	482
CNEL:	52	112	240	518

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	995 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.43	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.67	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.62	0.20	-1.20	-5.39	0.000	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	65.2	63.4	57.4	66.0	66.6
Medium Trucks:	60.3	59.1	52.8	51.2	59.7	59.9
Heavy Trucks:	60.8	59.7	50.6	51.9	60.2	60.3
Vehicle Noise:	68.5	67.0	64.0	59.2	67.7	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	382
CNEL:	41	88	190	410

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Madison St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.19	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.43	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.38	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	56.3	55.1	48.7	47.2	55.6	55.9
Heavy Trucks:	57.1	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.3	62.9	59.8	55.1	63.6	64.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	41	89	192
CNEL:	21	44	96	206

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	949 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.64	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.88	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.83	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.0	63.4	61.7	55.6	64.2	64.8
Medium Trucks:	58.6	57.4	51.0	49.5	58.0	58.2
Heavy Trucks:	59.0	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	66.7	65.3	62.2	57.5	66.0	66.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	347
CNEL:	37	80	173	372

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Avenue 52

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	902 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.09	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.05	-1.33	-1.20	-5.31	0.000	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	63.2	61.5	55.4	64.0	64.6
Medium Trucks:	58.4	57.2	50.8	49.3	57.7	58.0
Heavy Trucks:	58.8	57.7	48.7	49.9	58.3	58.4
Vehicle Noise:	66.5	65.1	62.0	57.2	65.8	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	72	156	335
CNEL:	36	78	167	360

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	828 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.23	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.47	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.42	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	59.5	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	60.0	58.9	49.8	51.1	59.4	59.5
Vehicle Noise:	67.7	66.2	63.2	58.4	66.9	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	157	338
CNEL:	36	78	168	363

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Airport Bl.

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	707 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.92	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.15	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.11	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.7	61.9	55.9	64.5	65.1
Medium Trucks:	58.9	57.7	51.3	49.8	58.2	58.4
Heavy Trucks:	59.3	58.2	49.1	50.4	58.7	58.9
Vehicle Noise:	67.0	65.5	62.5	57.7	66.3	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	65	141	304
CNEL:	33	70	152	326

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Avenue 58

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	567 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.87	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.11	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.06	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.7	61.0	54.9	63.5	64.1
Medium Trucks:	57.9	56.7	50.3	48.8	57.3	57.5
Heavy Trucks:	58.3	57.2	48.2	49.4	57.8	57.9
Vehicle Noise:	66.0	64.6	61.5	56.8	65.3	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	57	122	262
CNEL:	28	61	131	282

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Monroe St.
Road Segment: n/o Avenue 60

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	484 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.56	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.80	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.76	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	62.0	60.3	54.2	62.8	63.4
Medium Trucks:	57.2	56.0	49.7	48.1	56.6	56.8
Heavy Trucks:	57.6	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	65.3	63.9	60.8	56.1	64.6	65.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	110	236
CNEL:	25	55	118	253

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 50
Road Segment: w/o Jefferson St.

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,209 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.58	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.82	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.78	0.20	-1.20	-5.39	0.000	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	66.0	64.3	58.2	66.8	67.4
Medium Trucks:	61.2	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	61.6	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	69.3	67.9	64.8	60.0	68.6	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	94	202	435
CNEL:	47	101	217	467

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 50
Road Segment: w/o Madison St.

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,358 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.27	0.20	-1.20	-5.39	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 50
Road Segment: e/o Monroe St.

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,107 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.97	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.21	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.16	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.3	64.9	65.5
Medium Trucks:	59.3	58.1	51.7	50.2	58.6	58.9
Heavy Trucks:	59.7	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	67.4	66.0	62.9	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	192	413

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 52
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,042 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.23	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.47	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.43	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.5	66.2	66.8
Medium Trucks:	60.5	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.0	59.9	50.8	52.1	60.4	60.5
Vehicle Noise:	68.7	67.2	64.2	59.4	67.9	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	85	183	393
CNEL:	42	91	196	423

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 54
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,190 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.65	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.89	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.85	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	66.0	64.2	58.1	66.8	67.4
Medium Trucks:	61.1	59.9	53.6	52.0	60.5	60.7
Heavy Trucks:	61.5	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	69.2	67.8	64.7	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	200	430
CNEL:	46	100	214	462

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 54
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	716 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.10	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.7	62.0	55.9	64.5	65.1
Medium Trucks:	58.9	57.7	51.4	49.8	58.3	58.5
Heavy Trucks:	59.3	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.0	65.6	62.5	57.8	66.3	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	66	142	306
CNEL:	33	71	153	329

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Airport Bl.
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	372 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.70	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.94	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.90	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.9	59.1	53.1	61.7	62.3
Medium Trucks:	56.1	54.9	48.5	47.0	55.4	55.7
Heavy Trucks:	56.5	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	64.2	62.7	59.7	54.9	63.5	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	92	198
CNEL:	21	46	99	213

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	2,800 vehicles	Autos:	15
Peak Hour Percentage:	9.30%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	260 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	45 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	51.0 feet		
Centerline Dist. to Observer:	51.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-7.79	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-25.03	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-28.99	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	53.7	52.5	46.1	44.6	53.0	53.3
Heavy Trucks:	54.5	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.7	60.3	57.2	52.5	61.0	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	60	129
CNEL:	14	30	64	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	3,800 vehicles	Autos:	15
Peak Hour Percentage:	9.30%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	353 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	45 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	51.0 feet		
Centerline Dist. to Observer:	51.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.47	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-23.71	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-27.66	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	55.0	53.8	47.4	45.9	54.4	54.6
Heavy Trucks:	55.8	54.7	45.7	47.0	55.3	55.4
Vehicle Noise:	63.1	61.6	58.5	53.8	62.4	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	73	158
CNEL:	17	36	79	169

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	3,800 vehicles	Autos:	15
Peak Hour Percentage:	9.30%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	353 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	50 mph		
Near/Far Lane Distance:	36 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	59.0 feet		
Centerline Dist. to Observer:	59.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.93	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.16	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.12	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	59.6	57.8	51.8	60.4	61.0
Medium Trucks:	54.8	53.6	47.2	45.7	54.1	54.4
Heavy Trucks:	55.2	54.1	45.0	46.3	54.6	54.8
Vehicle Noise:	62.9	61.5	58.4	53.6	62.2	62.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	38	82	177
CNEL:	19	41	88	191

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	2,600 vehicles	Autos:	15
Peak Hour Percentage:	9.30%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	242 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	50 mph		
Near/Far Lane Distance:	36 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	59.0 feet		
Centerline Dist. to Observer:	59.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.57	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.81	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.77	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.5	58.0	56.2	50.1	58.8	59.4
Medium Trucks:	53.1	51.9	45.6	44.0	52.5	52.7
Heavy Trucks:	53.5	52.4	43.4	44.6	53.0	53.1
Vehicle Noise:	61.2	59.8	56.8	52.0	60.5	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	64	138
CNEL:	15	32	69	148

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 60
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	56 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-13.97	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-31.21	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-35.17	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	52.9	51.3	49.6	43.5	52.1	52.7
Medium Trucks:	46.9	45.7	39.4	37.8	46.3	46.5
Heavy Trucks:	48.2	47.1	38.1	39.3	47.7	47.8
Vehicle Noise:	54.9	53.5	50.2	45.7	54.2	54.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	8	16	36
CNEL:	4	8	18	38

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 60
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	558 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.48	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.72	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.68	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.6	59.9	53.8	62.4	63.0
Medium Trucks:	57.0	55.8	49.4	47.9	56.3	56.6
Heavy Trucks:	57.8	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	65.1	63.6	60.5	55.8	64.3	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	99	214
CNEL:	23	49	107	229

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	233 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.74	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-25.98	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.94	-1.23	-1.20	-5.31	0.000	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	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	52.6	51.4	45.0	43.5	52.0	52.2
Heavy Trucks:	53.0	51.9	42.9	44.1	52.5	52.6
Vehicle Noise:	60.7	59.3	56.2	51.5	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	64	138
CNEL:	15	32	69	148

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Jefferson St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,669 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.44	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.80	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.75	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.9	68.1	62.1	70.7	71.3
Medium Trucks:	64.9	63.7	57.3	55.8	64.2	64.5
Heavy Trucks:	64.9	63.8	54.8	56.0	64.4	64.5
Vehicle Noise:	73.1	71.6	68.7	63.8	72.3	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	92	197	425	917
CNEL:	99	212	458	986

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Jefferson St.
Road Segment: n/o Avenue 52
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,869 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.11	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.34	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.30	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.3	66.6	60.5	69.2	69.8
Medium Trucks:	63.3	62.1	55.8	54.2	62.7	62.9
Heavy Trucks:	63.4	62.3	53.2	54.5	62.8	63.0
Vehicle Noise:	71.5	70.1	67.1	62.2	70.8	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	156	336	723
CNEL:	78	168	361	778

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Jefferson St.
Road Segment: n/o Avenue 54
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,600 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.78	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-18.02	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.98	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.3	67.7	65.9	59.9	68.5	69.1
Medium Trucks:	62.7	61.5	55.1	53.6	62.0	62.3
Heavy Trucks:	62.7	61.6	52.6	53.8	62.2	62.3
Vehicle Noise:	70.8	69.4	66.4	61.6	70.1	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	302	652
CNEL:	70	151	325	701

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Madison St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	884 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.95	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.18	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.14	0.20	-1.20	-5.39	0.000	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	64.7	62.9	56.8	65.5	66.1
Medium Trucks:	59.8	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.5	58.7	67.2	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	76	164	353
CNEL:	38	82	176	379

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Madison St.
Road Segment: n/o Avenue 52
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,125 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.90	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.13	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.09	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.7	63.9	57.9	66.5	67.1
Medium Trucks:	60.9	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	61.3	60.2	51.1	52.4	60.8	60.9
Vehicle Noise:	69.0	67.6	64.5	59.7	68.3	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	414
CNEL:	45	96	207	445

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	818 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.28	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.52	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.47	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.9	64.3	62.6	56.5	65.1	65.7
Medium Trucks:	59.5	58.3	51.9	50.4	58.9	59.1
Heavy Trucks:	59.9	58.8	49.8	51.0	59.4	59.5
Vehicle Noise:	67.6	66.2	63.1	58.3	66.9	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	72	156	335
CNEL:	36	78	167	360

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,646 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.48	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.44	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.4	65.6	59.5	68.2	68.8
Medium Trucks:	62.5	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	62.9	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.6	69.2	66.2	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	534
CNEL:	57	124	266	573

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,274 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.36	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.59	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.55	0.20	-1.20	-5.39	0.000	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	66.2	64.5	58.4	67.0	67.7
Medium Trucks:	61.4	60.2	53.9	52.3	60.8	61.0
Heavy Trucks:	61.8	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.5	68.1	65.0	60.3	68.8	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	97	209	450
CNEL:	48	104	224	483

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	577 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.34	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.58	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.54	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.4	61.8	60.0	53.9	62.6	63.2
Medium Trucks:	57.1	55.9	49.6	48.0	56.5	56.7
Heavy Trucks:	58.0	56.9	47.8	49.1	57.4	57.6
Vehicle Noise:	65.2	63.8	60.6	55.9	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	101	219
CNEL:	23	51	109	235

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	995 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.43	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.67	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.62	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.6	61.9	55.8	64.4	65.1
Medium Trucks:	58.8	57.6	51.3	49.7	58.2	58.4
Heavy Trucks:	59.2	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.9	65.5	62.4	57.7	66.2	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	358
CNEL:	38	83	178	384

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	967 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.55	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.79	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.75	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	58.7	57.5	51.1	49.6	58.0	58.3
Heavy Trucks:	59.1	58.0	49.0	50.2	58.6	58.7
Vehicle Noise:	66.8	65.4	62.3	57.5	66.1	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	76	163	351
CNEL:	38	81	175	377

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	902 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.09	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	63.0	56.9	65.5	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.5	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	357
CNEL:	38	83	178	384

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	772 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.53	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.77	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.73	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.2	64.9	65.5
Medium Trucks:	59.2	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	59.7	58.5	49.5	50.8	59.1	59.2
Vehicle Noise:	67.4	65.9	62.9	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	150	322
CNEL:	35	75	161	346

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Monroe St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.21	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.45	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.41	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.0	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	58.6	57.4	51.0	49.5	57.9	58.2
Heavy Trucks:	59.0	57.9	48.8	50.1	58.4	58.6
Vehicle Noise:	66.7	65.2	62.2	57.4	66.0	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	63	135	290
CNEL:	31	67	145	312

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Monroe St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	502 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.40	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-22.64	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-26.59	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.8	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	57.4	56.2	49.8	48.3	56.7	57.0
Heavy Trucks:	57.8	56.7	47.6	48.9	57.3	57.4
Vehicle Noise:	65.5	64.0	61.0	56.2	64.8	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	52	112	242
CNEL:	26	56	121	260

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 50
Road Segment: w/o Jefferson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,256 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.42	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.66	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.61	0.20	-1.20	-5.39	0.000	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	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	61.3	60.2	53.8	52.2	60.7	60.9
Heavy Trucks:	61.8	60.7	51.6	52.9	61.2	61.4
Vehicle Noise:	69.5	68.0	65.0	60.2	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	207	446
CNEL:	48	103	222	479

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 50
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,376 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.02	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.26	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.22	0.20	-1.20	-5.39	0.000	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	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	61.7	60.6	54.2	52.6	61.1	61.3
Heavy Trucks:	62.2	61.1	52.0	53.3	61.6	61.8
Vehicle Noise:	69.9	68.4	65.4	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	102	220	474
CNEL:	51	110	236	509

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 50
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,125 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.90	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.13	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.09	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	64.2	62.4	56.4	65.0	65.6
Medium Trucks:	59.3	58.1	51.8	50.2	58.7	58.9
Heavy Trucks:	59.8	58.7	49.6	50.9	59.2	59.3
Vehicle Noise:	67.5	66.0	63.0	58.2	66.7	67.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	180	388
CNEL:	42	90	194	417

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 52
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,079 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.27	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.5	63.8	57.7	66.3	66.9
Medium Trucks:	60.7	59.5	53.1	51.6	60.1	60.3
Heavy Trucks:	61.1	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	68.8	67.4	64.3	59.5	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	87	187	403
CNEL:	43	93	201	433

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 54
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,274 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.36	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.59	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.55	0.20	-1.20	-5.39	0.000	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	66.2	64.5	58.4	67.0	67.7
Medium Trucks:	61.4	60.2	53.9	52.3	60.8	61.0
Heavy Trucks:	61.8	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.5	68.1	65.0	60.3	68.8	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	97	209	450
CNEL:	48	104	224	483

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 54
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	744 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.69	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.93	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.89	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	59.1	57.9	51.5	50.0	58.4	58.7
Heavy Trucks:	59.5	58.4	49.4	50.6	59.0	59.1
Vehicle Noise:	67.2	65.8	62.7	57.9	66.5	66.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	68	146	314
CNEL:	34	73	157	338

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	400 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.39	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.63	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.58	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	61.2	59.4	53.4	62.0	62.6
Medium Trucks:	56.4	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	56.8	55.7	46.7	47.9	56.3	56.4
Vehicle Noise:	64.5	63.1	60.0	55.2	63.8	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	96	208
CNEL:	22	48	104	223

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	316 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.95	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-24.19	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-28.15	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.7	59.2	57.4	51.3	60.0	60.6
Medium Trucks:	54.5	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.4	54.3	45.2	46.5	54.8	55.0
Vehicle Noise:	62.6	61.2	58.0	53.3	61.9	62.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	68	146
CNEL:	16	34	73	157

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	521 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.78	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.02	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.98	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.3	59.6	53.5	62.1	62.7
Medium Trucks:	56.7	55.5	49.1	47.6	56.0	56.3
Heavy Trucks:	57.5	56.4	47.4	48.6	57.0	57.1
Vehicle Noise:	64.8	63.3	60.2	55.5	64.0	64.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	44	95	204
CNEL:	22	47	102	219

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	437 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.00	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-23.24	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.20	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.5	58.8	52.7	61.3	61.9
Medium Trucks:	55.7	54.5	48.1	46.6	55.1	55.3
Heavy Trucks:	56.1	55.0	46.0	47.2	55.6	55.7
Vehicle Noise:	63.8	62.4	59.3	54.5	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	44	95	204
CNEL:	22	47	102	220

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 58
Road Segment: e/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	298 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.67	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.91	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.87	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.4	58.9	57.1	51.0	59.7	60.3
Medium Trucks:	54.0	52.8	46.5	44.9	53.4	53.6
Heavy Trucks:	54.4	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	62.1	60.7	57.7	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	73	158
CNEL:	17	37	79	170

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 60
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	167 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-9.20	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-26.44	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-30.40	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.7	56.1	54.3	48.3	56.9	57.5
Medium Trucks:	51.7	50.5	44.1	42.6	51.1	51.3
Heavy Trucks:	53.0	51.9	42.9	44.1	52.5	52.6
Vehicle Noise:	59.7	58.3	55.0	50.5	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	16	34	74
CNEL:	8	17	37	79

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 60
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	679 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.63	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.87	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.83	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	57.8	56.6	50.3	48.7	57.2	57.4
Heavy Trucks:	58.7	57.6	48.5	49.8	58.1	58.3
Vehicle Noise:	65.9	64.5	61.3	56.6	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	53	113	244
CNEL:	26	56	121	262

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	298 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.67	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-24.91	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.87	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.1	58.5	56.7	50.7	59.3	59.9
Medium Trucks:	53.7	52.5	46.1	44.6	53.0	53.3
Heavy Trucks:	54.1	53.0	43.9	45.2	53.5	53.7
Vehicle Noise:	61.8	60.4	57.3	52.5	61.1	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	75	163
CNEL:	17	38	81	175

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,976 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.91	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.32	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.28	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.0	70.4	68.6	62.5	71.2	71.8
Medium Trucks:	65.4	64.2	57.8	56.3	64.7	65.0
Heavy Trucks:	65.4	64.3	55.2	56.5	64.9	65.0
Vehicle Noise:	73.5	72.1	69.1	64.3	72.8	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	212	458	986
CNEL:	106	228	492	1,060

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,130 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.46	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.78	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.73	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	63.9	62.7	56.3	54.8	63.3	63.5
Heavy Trucks:	63.9	62.8	53.8	55.0	63.4	63.5
Vehicle Noise:	72.1	70.6	67.7	62.8	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	366	789
CNEL:	85	183	394	848

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,711 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.49	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.73	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.68	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	68.0	66.2	60.1	68.8	69.4
Medium Trucks:	63.0	61.8	55.4	53.9	62.3	62.5
Heavy Trucks:	63.0	61.9	52.8	54.1	62.5	62.6
Vehicle Noise:	71.1	69.7	66.7	61.9	70.4	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	68	147	316	682
CNEL:	73	158	340	733

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	763 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.59	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.82	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.78	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.6	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	59.2	58.0	51.6	50.1	58.5	58.8
Heavy Trucks:	59.6	58.5	49.5	50.7	59.1	59.2
Vehicle Noise:	67.3	65.9	62.8	58.0	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	148	320
CNEL:	34	74	159	343

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	874 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.99	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.23	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.19	0.20	-1.20	-5.39	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	59.8	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.4	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	350
CNEL:	38	81	175	376

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	698 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.97	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.21	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.17	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.6	61.9	55.8	64.4	65.0
Medium Trucks:	58.8	57.6	51.2	49.7	58.2	58.4
Heavy Trucks:	59.2	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.9	65.5	62.4	57.6	66.2	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	65	140	301
CNEL:	32	70	150	324

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,283 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.56	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.52	0.20	-1.20	-5.39	0.000	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	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	61.4	60.3	53.9	52.3	60.8	61.0
Heavy Trucks:	61.9	60.8	51.7	53.0	61.3	61.5
Vehicle Noise:	69.6	68.1	65.1	60.3	68.8	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	97	210	452
CNEL:	49	105	225	486

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,051 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	60.6	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.7	67.3	64.2	59.4	68.0	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	396
CNEL:	43	92	197	425

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	437 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.55	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.78	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.74	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.6	58.8	52.7	61.4	62.0
Medium Trucks:	55.9	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	56.8	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.0	62.6	59.4	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	84	182
CNEL:	19	42	91	195

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,190 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.65	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.89	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.85	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.4	62.7	56.6	65.2	65.8
Medium Trucks:	59.6	58.4	52.0	50.5	58.9	59.2
Heavy Trucks:	60.0	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.7	66.3	63.2	58.4	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	87	187	403
CNEL:	43	93	201	433

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	995 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.43	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.67	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.62	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.6	61.9	55.8	64.4	65.1
Medium Trucks:	58.8	57.6	51.3	49.7	58.2	58.4
Heavy Trucks:	59.2	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.9	65.5	62.4	57.7	66.2	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	358
CNEL:	38	83	178	384

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	791 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.43	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.67	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.62	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	64.2	62.4	56.4	65.0	65.6
Medium Trucks:	59.3	58.1	51.8	50.2	58.7	58.9
Heavy Trucks:	59.8	58.7	49.6	50.9	59.2	59.3
Vehicle Noise:	67.5	66.0	63.0	58.2	66.7	67.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	152	327
CNEL:	35	76	163	352

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	632 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.40	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.64	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.59	0.20	-1.20	-5.39	0.000	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	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	58.4	57.2	50.8	49.3	57.7	58.0
Heavy Trucks:	58.8	57.7	48.6	49.9	58.3	58.4
Vehicle Noise:	66.5	65.1	62.0	57.2	65.8	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	61	131	282
CNEL:	30	65	141	303

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	623 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.46	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.70	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.66	0.20	-1.20	-5.39	0.000	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	63.1	61.4	55.3	63.9	64.5
Medium Trucks:	58.3	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	58.7	57.6	48.6	49.8	58.2	58.3
Vehicle Noise:	66.4	65.0	61.9	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	130	279
CNEL:	30	65	139	300

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	595 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.66	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.90	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.86	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.5	62.9	61.2	55.1	63.7	64.3
Medium Trucks:	58.1	56.9	50.6	49.0	57.5	57.7
Heavy Trucks:	58.5	57.4	48.4	49.6	58.0	58.1
Vehicle Noise:	66.2	64.8	61.7	57.0	65.5	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	126	271
CNEL:	29	63	135	291

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,553 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.50	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.73	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.69	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	62.3	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	62.7	61.6	52.5	53.8	62.2	62.3
Vehicle Noise:	70.4	69.0	65.9	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	111	238	514
CNEL:	55	119	256	552

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,358 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.27	0.20	-1.20	-5.39	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,032 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.27	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.51	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.46	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	59.0	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.4	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	67.1	65.7	62.6	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	79	170	367
CNEL:	39	85	183	394

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,070 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.12	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.36	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.31	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.5	63.7	57.7	66.3	66.9
Medium Trucks:	60.7	59.5	53.1	51.6	60.0	60.2
Heavy Trucks:	61.1	60.0	50.9	52.2	60.5	60.7
Vehicle Noise:	68.8	67.3	64.3	59.5	68.1	68.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	86	186	400
CNEL:	43	93	200	430

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,014 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.35	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.59	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.54	0.20	-1.20	-5.39	0.000	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	65.3	63.5	57.4	66.1	66.7
Medium Trucks:	60.4	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.5	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	83	179	386
CNEL:	42	89	193	415

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	605 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.59	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.83	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.79	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.6	63.0	61.2	55.2	63.8	64.4
Medium Trucks:	58.2	57.0	50.6	49.1	57.5	57.8
Heavy Trucks:	58.6	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	66.3	64.9	61.8	57.0	65.6	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	59	127	274
CNEL:	29	63	137	294

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	270 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.10	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-25.34	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-29.29	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.1	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	54.7	53.5	47.1	45.6	54.0	54.3
Heavy Trucks:	55.1	54.0	44.9	46.2	54.6	54.7
Vehicle Noise:	62.8	61.3	58.3	53.5	62.1	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	80	172

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	446 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.45	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.69	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.65	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.2	60.7	58.9	52.8	61.5	62.1
Medium Trucks:	56.0	54.8	48.5	46.9	55.4	55.6
Heavy Trucks:	56.9	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	64.1	62.7	59.5	54.8	63.4	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	86	184
CNEL:	20	43	92	198

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	446 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.45	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.69	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.65	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.2	60.7	58.9	52.8	61.5	62.1
Medium Trucks:	56.0	54.8	48.5	46.9	55.4	55.6
Heavy Trucks:	56.9	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	64.1	62.7	59.5	54.8	63.4	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	86	184
CNEL:	20	43	92	198

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	251 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.41	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.65	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.60	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.7	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	53.3	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	53.7	52.6	43.6	44.8	53.2	53.3
Vehicle Noise:	61.4	60.0	56.9	52.1	60.7	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	66	141
CNEL:	15	33	70	152

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	195 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.50	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-26.74	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-30.70	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.6	57.0	55.3	49.2	57.8	58.4
Medium Trucks:	52.2	51.0	44.6	43.1	51.6	51.8
Heavy Trucks:	52.6	51.5	42.5	43.7	52.1	52.2
Vehicle Noise:	60.3	58.9	55.8	51.0	59.6	60.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	12	26	55	119
CNEL:	13	28	60	128

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	65 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-13.30	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-30.54	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-34.50	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.6	52.0	50.2	44.2	52.8	53.4
Medium Trucks:	47.6	46.4	40.0	38.5	47.0	47.2
Heavy Trucks:	48.9	47.8	38.8	40.0	48.4	48.5
Vehicle Noise:	55.6	54.2	50.9	46.4	54.9	55.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	8	18	39
CNEL:	4	9	20	42

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	437 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.55	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.78	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.74	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.6	58.8	52.7	61.4	62.0
Medium Trucks:	55.9	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	56.8	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.0	62.6	59.4	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	84	182
CNEL:	19	42	91	195

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	409 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.29	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-23.53	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.48	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.5	59.9	58.1	52.1	60.7	61.3
Medium Trucks:	55.0	53.9	47.5	45.9	54.4	54.6
Heavy Trucks:	55.5	54.4	45.3	46.6	54.9	55.1
Vehicle Noise:	63.2	61.7	58.7	53.9	62.5	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	93	201
CNEL:	22	47	100	216

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,985 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.93	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.31	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.27	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.0	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	65.4	64.2	57.8	56.3	64.7	65.0
Heavy Trucks:	65.4	64.3	55.3	56.5	64.9	65.0
Vehicle Noise:	73.5	72.1	69.1	64.3	72.8	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	213	458	988
CNEL:	106	229	493	1,063

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,139 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.48	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.76	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.71	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.9	67.2	61.1	69.7	70.3
Medium Trucks:	63.9	62.7	56.4	54.8	63.3	63.5
Heavy Trucks:	64.0	62.9	53.8	55.1	63.4	63.5
Vehicle Noise:	72.1	70.7	67.7	62.8	71.4	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	367	791
CNEL:	85	183	395	851

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,730 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.44	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.68	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.64	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	63.0	61.8	55.4	53.9	62.4	62.6
Heavy Trucks:	63.0	61.9	52.9	54.1	62.5	62.6
Vehicle Noise:	71.2	69.7	66.8	61.9	70.5	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	148	319	687
CNEL:	74	159	343	739

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	772 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.53	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.77	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.73	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.2	64.9	65.5
Medium Trucks:	59.2	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	59.7	58.5	49.5	50.8	59.1	59.2
Vehicle Noise:	67.4	65.9	62.9	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	150	322
CNEL:	35	75	161	346

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	884 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.95	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.18	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.14	0.20	-1.20	-5.39	0.000	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	64.7	62.9	56.8	65.5	66.1
Medium Trucks:	59.8	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.5	58.7	67.2	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	76	164	353
CNEL:	38	82	176	379

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	725 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.80	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.04	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.00	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	59.0	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.4	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	67.1	65.6	62.6	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	67	143	309
CNEL:	33	72	154	332

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,339 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.14	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.38	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.33	0.20	-1.20	-5.39	0.000	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	66.5	64.7	58.6	67.3	67.9
Medium Trucks:	61.6	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	62.0	60.9	51.9	53.2	61.5	61.6
Vehicle Noise:	69.7	68.3	65.3	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	100	216	465
CNEL:	50	108	232	500

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,125 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.90	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.13	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.09	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.7	63.9	57.9	66.5	67.1
Medium Trucks:	60.9	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	61.3	60.2	51.1	52.4	60.8	60.9
Vehicle Noise:	69.0	67.6	64.5	59.7	68.3	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	414
CNEL:	45	96	207	445

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	465 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.28	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.51	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.47	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.4	60.8	59.1	53.0	61.6	62.2
Medium Trucks:	56.2	55.0	48.6	47.1	55.6	55.8
Heavy Trucks:	57.0	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.3	62.8	59.7	55.0	63.5	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	41	88	189
CNEL:	20	44	94	203

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.62	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.86	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.81	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.5	62.7	56.6	65.3	65.9
Medium Trucks:	59.6	58.4	52.1	50.5	59.0	59.2
Heavy Trucks:	60.0	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.7	66.3	63.3	58.5	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	87	188	405
CNEL:	44	94	202	435

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,004 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.39	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.63	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.58	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.7	61.9	55.9	64.5	65.1
Medium Trucks:	58.8	57.7	51.3	49.7	58.2	58.4
Heavy Trucks:	59.3	58.2	49.1	50.4	58.7	58.9
Vehicle Noise:	67.0	65.5	62.5	57.7	66.3	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	78	167	360
CNEL:	39	83	180	387

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	800 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.38	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.62	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.57	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	64.2	62.5	56.4	65.0	65.6
Medium Trucks:	59.4	58.2	51.8	50.3	58.8	59.0
Heavy Trucks:	59.8	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	67.5	66.1	63.0	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	330
CNEL:	35	76	165	354

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	642 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.34	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.57	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.53	0.20	-1.20	-5.39	0.000	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	63.3	61.5	55.4	64.1	64.7
Medium Trucks:	58.4	57.2	50.9	49.3	57.8	58.0
Heavy Trucks:	58.9	57.7	48.7	50.0	58.3	58.4
Vehicle Noise:	66.6	65.1	62.1	57.3	65.8	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	61	132	285
CNEL:	31	66	142	306

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	642 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.34	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.57	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.53	0.20	-1.20	-5.39	0.000	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	63.3	61.5	55.4	64.1	64.7
Medium Trucks:	58.4	57.2	50.9	49.3	57.8	58.0
Heavy Trucks:	58.9	57.7	48.7	50.0	58.3	58.4
Vehicle Noise:	66.6	65.1	62.1	57.3	65.8	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	61	132	285
CNEL:	31	66	142	306

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	595 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.66	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.90	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.86	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.5	62.9	61.2	55.1	63.7	64.3
Medium Trucks:	58.1	56.9	50.6	49.0	57.5	57.7
Heavy Trucks:	58.5	57.4	48.4	49.6	58.0	58.1
Vehicle Noise:	66.2	64.8	61.7	57.0	65.5	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	126	271
CNEL:	29	63	135	291

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,562 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.47	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.71	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.66	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	67.1	65.4	59.3	67.9	68.5
Medium Trucks:	62.3	61.1	54.7	53.2	61.7	61.9
Heavy Trucks:	62.7	61.6	52.6	53.8	62.2	62.3
Vehicle Noise:	70.4	69.0	65.9	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	239	516
CNEL:	55	119	257	554

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,358 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.27	0.20	-1.20	-5.39	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,032 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.27	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.51	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.46	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	59.0	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.4	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	67.1	65.7	62.6	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	79	170	367
CNEL:	39	85	183	394

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,079 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.27	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.5	63.8	57.7	66.3	66.9
Medium Trucks:	60.7	59.5	53.1	51.6	60.1	60.3
Heavy Trucks:	61.1	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	68.8	67.4	64.3	59.5	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	87	187	403
CNEL:	43	93	201	433

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,032 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.27	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.51	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.46	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.3	63.6	57.5	66.1	66.7
Medium Trucks:	60.5	59.3	52.9	51.4	59.9	60.1
Heavy Trucks:	60.9	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	68.6	67.2	64.1	59.4	67.9	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	182	391
CNEL:	42	91	195	420

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	614 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.53	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.77	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.72	0.20	-1.20	-5.39	0.000	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	63.1	61.3	55.3	63.9	64.5
Medium Trucks:	58.2	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	58.7	57.6	48.5	49.8	58.1	58.2
Vehicle Noise:	66.4	64.9	61.9	57.1	65.6	66.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	128	277
CNEL:	30	64	138	297

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	279 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.95	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-25.19	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-29.15	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	59.6	57.9	51.8	60.5	61.1
Medium Trucks:	54.8	53.6	47.3	45.7	54.2	54.4
Heavy Trucks:	55.2	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	62.9	61.5	58.4	53.7	62.2	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	76	163
CNEL:	18	38	82	176

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.19	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.43	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.38	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	56.3	55.1	48.7	47.2	55.6	55.9
Heavy Trucks:	57.1	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.3	62.9	59.8	55.1	63.6	64.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	41	89	192
CNEL:	21	44	96	206

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	493 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.02	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.26	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.22	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.7	61.1	59.3	53.3	61.9	62.5
Medium Trucks:	56.4	55.3	48.9	47.3	55.8	56.0
Heavy Trucks:	57.3	56.2	47.2	48.4	56.8	56.9
Vehicle Noise:	64.5	63.1	59.9	55.3	63.8	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	42	91	197
CNEL:	21	46	98	211

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	270 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.10	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.34	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.29	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.0	58.4	56.7	50.6	59.2	59.8
Medium Trucks:	53.6	52.4	46.0	44.5	53.0	53.2
Heavy Trucks:	54.0	52.9	43.9	45.1	53.5	53.6
Vehicle Noise:	61.7	60.3	57.2	52.4	61.0	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	69	148
CNEL:	16	34	74	159

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	214 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-9.11	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-26.34	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-30.30	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.0	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	52.6	51.4	45.0	43.5	51.9	52.2
Heavy Trucks:	53.0	51.9	42.9	44.1	52.5	52.6
Vehicle Noise:	60.7	59.3	56.2	51.4	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	27	59	127
CNEL:	14	29	63	136

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	84 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-12.21	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-29.45	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-33.41	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.7	53.1	51.3	45.3	53.9	54.5
Medium Trucks:	48.7	47.5	41.1	39.6	48.0	48.3
Heavy Trucks:	50.0	48.9	39.9	41.1	49.5	49.6
Vehicle Noise:	56.7	55.3	52.0	47.5	56.0	56.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	10	22	47
CNEL:	5	11	23	50

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | *Project Name:* The Wave-Coral Mountain
Road Name: Avenue 60 | *Job Number:* 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.19	0.43	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-22.43	0.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-26.38	0.46	-1.20	*-5.42*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	56.3	55.1	48.7	47.2	55.6	55.9
Heavy Trucks:	57.1	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.3	62.9	59.8	55.1	63.6	64.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	41	89	192
CNEL:	21	44	96	206

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP21 | *Project Name:* The Wave-Coral Mountain
Road Name: Avenue 60 | *Job Number:* 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	428 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-6.10	-1.24	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	81.00	-23.33	-1.22	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-27.29	-1.23	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.7	60.1	58.3	52.3	60.9	61.5
Medium Trucks:	55.2	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	55.7	54.6	45.5	46.8	55.1	55.3
Vehicle Noise:	63.4	61.9	58.9	54.1	62.6	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	21	45	96	207
CNEL:	22	48	103	222

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | *Project Name:* The Wave-Coral Mountain
Road Name: Jefferson St. | *Job Number:* 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,143 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.15	-0.54	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-15.09	-0.52	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.04	-0.52	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.6	68.8	62.8	71.4	72.0
Medium Trucks:	65.6	64.4	58.0	56.5	65.0	65.2
Heavy Trucks:	65.6	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	73.8	72.3	69.4	64.5	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	102	220	475	1,022
CNEL:	110	237	510	1,100

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | *Project Name:* The Wave-Coral Mountain
Road Name: Jefferson St. | *Job Number:* 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,232 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.66	-0.54	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-16.57	-0.52	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.53	-0.52	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	69.1	67.4	61.3	69.9	70.5
Medium Trucks:	64.1	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	64.1	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	72.3	70.8	67.9	63.0	71.6	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	81	175	378	814
CNEL:	88	189	406	875

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,841 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.17	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.41	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.37	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.3	66.5	60.5	69.1	69.7
Medium Trucks:	63.3	62.1	55.7	54.2	62.6	62.9
Heavy Trucks:	63.3	62.2	53.2	54.4	62.8	62.9
Vehicle Noise:	71.5	70.0	67.0	62.2	70.7	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	154	332	716
CNEL:	77	166	357	770

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	846 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.13	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.37	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.33	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.7	56.6	65.3	65.9
Medium Trucks:	59.6	58.4	52.1	50.5	59.0	59.2
Heavy Trucks:	60.1	58.9	49.9	51.2	59.5	59.6
Vehicle Noise:	67.8	66.3	63.3	58.5	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	74	159	343
CNEL:	37	79	171	368

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,014 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.35	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.59	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.54	0.20	-1.20	-5.39	0.000	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	65.3	63.5	57.4	66.1	66.7
Medium Trucks:	60.4	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.5	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	83	179	386
CNEL:	42	89	193	415

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	800 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.38	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.62	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.57	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	64.2	62.5	56.4	65.0	65.6
Medium Trucks:	59.4	58.2	51.8	50.3	58.8	59.0
Heavy Trucks:	59.8	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	67.5	66.1	63.0	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	330
CNEL:	35	76	165	354

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,423 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.88	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.12	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.07	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.7	65.0	58.9	67.5	68.1
Medium Trucks:	61.9	60.7	54.3	52.8	61.3	61.5
Heavy Trucks:	62.3	61.2	52.2	53.4	61.8	61.9
Vehicle Noise:	70.0	68.6	65.5	60.7	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	104	225	484
CNEL:	52	112	242	520

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,144 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.82	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.06	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.02	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.4	65.8	64.0	58.0	66.6	67.2
Medium Trucks:	60.9	59.8	53.4	51.8	60.3	60.5
Heavy Trucks:	61.4	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	69.1	67.6	64.6	59.8	68.3	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	194	419
CNEL:	45	97	209	450

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	502 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.94	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.18	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.14	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	61.2	59.4	53.3	62.0	62.6
Medium Trucks:	56.5	55.3	49.0	47.4	55.9	56.1
Heavy Trucks:	57.4	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	64.6	63.2	60.0	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	93	199
CNEL:	21	46	99	214

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,228 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.52	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.76	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.71	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.6	62.8	56.7	65.4	66.0
Medium Trucks:	59.7	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.4	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	191	412
CNEL:	44	95	205	442

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,088 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.04	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.28	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.24	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.6	64.0	62.3	56.2	64.8	65.4
Medium Trucks:	59.2	58.0	51.6	50.1	58.6	58.8
Heavy Trucks:	59.6	58.5	49.5	50.7	59.1	59.2
Vehicle Noise:	67.3	65.9	62.8	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	176	380
CNEL:	41	88	189	408

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	958 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.60	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.83	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.79	0.20	-1.20	-5.39	0.000	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	65.0	63.2	57.2	65.8	66.4
Medium Trucks:	60.2	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	60.6	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.3	66.9	63.8	59.0	67.6	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	80	173	372
CNEL:	40	86	186	400

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	856 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.09	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.28	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.7	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	74	160	345
CNEL:	37	80	172	371

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	837 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.18	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.42	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.38	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.4	62.7	56.6	65.2	65.8
Medium Trucks:	59.6	58.4	52.0	50.5	58.9	59.2
Heavy Trucks:	60.0	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.7	66.3	63.2	58.4	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	158	340
CNEL:	37	79	170	365

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	856 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.09	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.28	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.7	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	74	160	345
CNEL:	37	80	172	371

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,562 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.47	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.71	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.66	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	67.1	65.4	59.3	67.9	68.5
Medium Trucks:	62.3	61.1	54.7	53.2	61.7	61.9
Heavy Trucks:	62.7	61.6	52.6	53.8	62.2	62.3
Vehicle Noise:	70.4	69.0	65.9	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	239	516
CNEL:	55	119	257	554

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,460 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.76	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.00	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.96	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.8	65.1	59.0	67.6	68.2
Medium Trucks:	62.0	60.8	54.4	52.9	61.4	61.6
Heavy Trucks:	62.4	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.1	68.7	65.6	60.9	69.4	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	229	493
CNEL:	53	114	246	529

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,107 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.97	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.21	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.16	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.3	64.9	65.5
Medium Trucks:	59.3	58.1	51.7	50.2	58.6	58.9
Heavy Trucks:	59.7	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	67.4	66.0	62.9	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	192	413

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,153 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.79	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.03	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.98	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.4	65.8	64.0	58.0	66.6	67.2
Medium Trucks:	61.0	59.8	53.4	51.9	60.3	60.6
Heavy Trucks:	61.4	60.3	51.3	52.5	60.9	61.0
Vehicle Noise:	69.1	67.7	64.6	59.8	68.4	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	195	421
CNEL:	45	97	210	452

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	716 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.10	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.7	62.0	55.9	64.5	65.1
Medium Trucks:	58.9	57.7	51.4	49.8	58.3	58.5
Heavy Trucks:	59.3	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.0	65.6	62.5	57.8	66.3	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	66	142	306
CNEL:	33	71	153	329

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	326 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.28	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-24.52	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-28.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	60.3	58.6	52.5	61.1	61.7
Medium Trucks:	55.5	54.3	47.9	46.4	54.8	55.1
Heavy Trucks:	55.9	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	63.6	62.2	59.1	54.3	62.9	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	84	181
CNEL:	19	42	90	195

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	465 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.28	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.51	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.47	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.4	60.8	59.1	53.0	61.6	62.2
Medium Trucks:	56.2	55.0	48.6	47.1	55.6	55.8
Heavy Trucks:	57.0	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.3	62.8	59.7	55.0	63.5	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	41	88	189
CNEL:	20	44	94	203

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	484 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.11	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.34	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.30	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	61.0	59.2	53.2	61.8	62.4
Medium Trucks:	56.4	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	57.2	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.4	63.0	59.9	55.2	63.7	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	42	90	194
CNEL:	21	45	97	209

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	335 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.16	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.40	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.35	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.0	59.4	57.6	51.5	60.2	60.8
Medium Trucks:	54.5	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.0	53.8	44.8	46.1	54.4	54.5
Vehicle Noise:	62.7	61.2	58.2	53.4	61.9	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	17	37	79	171
CNEL:	18	40	85	184

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	233 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.74	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.98	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.94	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.8	56.0	50.0	58.6	59.2
Medium Trucks:	52.9	51.8	45.4	43.8	52.3	52.5
Heavy Trucks:	53.4	52.3	43.2	44.5	52.8	53.0
Vehicle Noise:	61.1	59.6	56.6	51.8	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	29	62	134
CNEL:	14	31	67	144

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	74 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-12.72	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-29.96	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-33.92	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.2	52.6	50.8	44.8	53.4	54.0
Medium Trucks:	48.2	47.0	40.6	39.1	47.5	47.8
Heavy Trucks:	49.5	48.4	39.3	40.6	48.9	49.1
Vehicle Noise:	56.2	54.8	51.5	46.9	55.5	55.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	9	20	43
CNEL:	5	10	21	46

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	502 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.94	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.18	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.14	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	61.2	59.4	53.3	62.0	62.6
Medium Trucks:	56.5	55.3	49.0	47.4	55.9	56.1
Heavy Trucks:	57.4	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	64.6	63.2	60.0	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	93	199
CNEL:	21	46	99	214

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	446 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.91	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-23.15	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.11	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	60.3	58.5	52.4	61.1	61.7
Medium Trucks:	55.4	54.2	47.9	46.3	54.8	55.0
Heavy Trucks:	55.8	54.7	45.7	47.0	55.3	55.4
Vehicle Noise:	63.6	62.1	59.1	54.3	62.8	63.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	99	213
CNEL:	23	49	106	229

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,153 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.16	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.07	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.03	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.2	70.6	68.9	62.8	71.4	72.0
Medium Trucks:	65.6	64.4	58.1	56.5	65.0	65.2
Heavy Trucks:	65.6	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	73.8	72.3	69.4	64.5	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	102	221	475	1,024
CNEL:	110	237	511	1,102

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,241 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.68	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.56	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.51	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	69.1	67.4	61.3	69.9	70.5
Medium Trucks:	64.1	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	64.2	63.1	54.0	55.3	63.6	63.7
Vehicle Noise:	72.3	70.9	67.9	63.0	71.6	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	82	176	379	816
CNEL:	88	189	407	878

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,860 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.13	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.37	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.32	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	63.3	62.1	55.8	54.2	62.7	62.9
Heavy Trucks:	63.4	62.2	53.2	54.5	62.8	62.9
Vehicle Noise:	71.5	70.0	67.1	62.2	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	334	721
CNEL:	78	167	360	775

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	856 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.09	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.28	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.7	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	74	160	345
CNEL:	37	80	172	371

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,023 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.31	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.55	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.50	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	60.5	59.3	52.9	51.4	59.8	60.1
Heavy Trucks:	60.9	59.8	50.7	52.0	60.3	60.5
Vehicle Noise:	68.6	67.1	64.1	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	180	389
CNEL:	42	90	194	418

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	828 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.23	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.47	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.42	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.0	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	59.5	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	60.0	58.9	49.8	51.1	59.4	59.5
Vehicle Noise:	67.7	66.2	63.2	58.4	66.9	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	157	338
CNEL:	36	78	168	363

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,488 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.68	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.92	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.88	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.9	65.2	59.1	67.7	68.3
Medium Trucks:	62.1	60.9	54.5	53.0	61.4	61.7
Heavy Trucks:	62.5	61.4	52.4	53.6	62.0	62.1
Vehicle Noise:	70.2	68.8	65.7	60.9	69.5	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	232	499
CNEL:	54	116	249	536

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.68	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.63	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.87	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.83	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.5	59.7	53.7	62.3	62.9
Medium Trucks:	56.8	55.6	49.3	47.7	56.2	56.4
Heavy Trucks:	57.7	56.6	47.5	48.8	57.1	57.3
Vehicle Noise:	64.9	63.5	60.3	55.7	64.2	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	97	209
CNEL:	22	48	104	224

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.72	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.68	-1.33	-1.20	-5.31	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	59.7	58.6	52.2	50.6	59.1	59.3
Heavy Trucks:	60.2	59.1	50.0	51.3	59.6	59.8
Vehicle Noise:	67.9	66.4	63.4	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	414
CNEL:	44	96	206	444

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,097 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.00	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.24	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.20	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.3	64.9	65.5
Medium Trucks:	59.2	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	59.6	58.5	49.5	50.8	59.1	59.2
Vehicle Noise:	67.4	65.9	62.9	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	382
CNEL:	41	88	190	410

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	967 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.55	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.79	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.75	0.20	-1.20	-5.39	0.000	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	65.0	63.3	57.2	65.8	66.5
Medium Trucks:	60.2	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	60.6	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.3	66.9	63.8	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	81	174	374
CNEL:	40	87	187	402

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	865 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.04	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.28	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.23	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.6	62.8	56.7	65.4	66.0
Medium Trucks:	59.7	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.1	59.0	50.0	51.3	59.6	59.7
Vehicle Noise:	67.8	66.4	63.4	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	348
CNEL:	37	80	173	373

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	865 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.04	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.28	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.23	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.6	62.8	56.7	65.4	66.0
Medium Trucks:	59.7	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.1	59.0	50.0	51.3	59.6	59.7
Vehicle Noise:	67.8	66.4	63.4	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	348
CNEL:	37	80	173	373

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	856 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.09	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.28	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.7	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	74	160	345
CNEL:	37	80	172	371

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,572 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.44	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.68	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.64	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	67.2	65.4	59.3	68.0	68.6
Medium Trucks:	62.3	61.1	54.8	53.2	61.7	61.9
Heavy Trucks:	62.7	61.6	52.6	53.9	62.2	62.3
Vehicle Noise:	70.4	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	240	518
CNEL:	56	120	258	556

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,460 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.76	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.00	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.96	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.8	65.1	59.0	67.6	68.2
Medium Trucks:	62.0	60.8	54.4	52.9	61.4	61.6
Heavy Trucks:	62.4	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.1	68.7	65.6	60.9	69.4	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	229	493
CNEL:	53	114	246	529

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,107 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.97	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-19.21	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.16	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	64.1	62.3	56.3	64.9	65.5
Medium Trucks:	59.3	58.1	51.7	50.2	58.6	58.9
Heavy Trucks:	59.7	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	67.4	66.0	62.9	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	192	413

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,181 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.69	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.92	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.88	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.1	59.9	53.5	52.0	60.4	60.7
Heavy Trucks:	61.5	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	69.2	67.8	64.7	59.9	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	199	428
CNEL:	46	99	213	460

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	725 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.80	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-21.04	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.00	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	59.0	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.4	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	67.1	65.6	62.6	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	67	143	309
CNEL:	33	72	154	332

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	335 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.16	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-24.40	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-28.35	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.0	60.4	58.7	52.6	61.2	61.8
Medium Trucks:	55.6	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	56.0	54.9	45.9	47.1	55.5	55.6
Vehicle Noise:	63.7	62.3	59.2	54.5	63.0	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	86	185
CNEL:	20	43	92	198

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	512 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.86	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-22.10	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-26.06	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	61.2	59.5	53.4	62.0	62.7
Medium Trucks:	56.6	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.5	56.3	47.3	48.6	56.9	57.0
Vehicle Noise:	64.7	63.2	60.1	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	94	202
CNEL:	22	47	101	217

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.63	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.87	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.83	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.5	59.7	53.7	62.3	62.9
Medium Trucks:	56.8	55.6	49.3	47.7	56.2	56.4
Heavy Trucks:	57.7	56.6	47.5	48.8	57.1	57.3
Vehicle Noise:	64.9	63.5	60.3	55.7	64.2	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	97	209
CNEL:	22	48	104	224

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	353 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.93	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.16	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.12	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	59.6	57.8	51.8	60.4	61.0
Medium Trucks:	54.8	53.6	47.2	45.7	54.1	54.4
Heavy Trucks:	55.2	54.1	45.0	46.3	54.6	54.8
Vehicle Noise:	62.9	61.5	58.4	53.6	62.2	62.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	38	82	177
CNEL:	19	41	88	191

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	251 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-8.41	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-25.65	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-29.60	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.7	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	53.3	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	53.7	52.6	43.6	44.8	53.2	53.3
Vehicle Noise:	61.4	60.0	56.9	52.1	60.7	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	66	141
CNEL:	15	33	70	152

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	93 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.75	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-28.99	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-32.95	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.1	53.5	51.8	45.7	54.4	55.0
Medium Trucks:	49.1	47.9	41.6	40.0	48.5	48.7
Heavy Trucks:	50.5	49.4	40.3	41.6	49.9	50.0
Vehicle Noise:	57.2	55.7	52.5	47.9	56.4	56.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	23	50
CNEL:	5	12	25	53

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	549 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.56	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.80	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.75	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.6	59.8	53.7	62.4	63.0
Medium Trucks:	56.9	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	57.8	56.7	47.6	48.9	57.2	57.3
Vehicle Noise:	65.0	63.6	60.4	55.7	64.3	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	98	212
CNEL:	23	49	105	227

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP23 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.65	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-22.89	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-26.84	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.5	58.8	52.7	61.3	61.9
Medium Trucks:	55.7	54.5	48.1	46.6	55.1	55.3
Heavy Trucks:	56.1	55.0	46.0	47.2	55.6	55.7
Vehicle Noise:	63.8	62.4	59.3	54.5	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	48	103	222
CNEL:	24	51	111	238

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,395 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.49	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-14.75	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.71	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.9	69.2	63.1	71.7	72.3
Medium Trucks:	65.9	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	66.0	64.9	55.8	57.1	65.4	65.6
Vehicle Noise:	74.1	72.7	69.7	64.8	73.4	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	108	232	499	1,076
CNEL:	116	249	537	1,158

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,399 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.98	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.26	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.22	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.4	67.7	61.6	70.2	70.8
Medium Trucks:	64.4	63.2	56.9	55.3	63.8	64.0
Heavy Trucks:	64.5	63.4	54.3	55.6	63.9	64.0
Vehicle Noise:	72.6	71.2	68.2	63.3	71.9	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	184	396	854
CNEL:	92	198	426	919

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,018 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.23	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.01	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.97	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	63.7	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	63.7	62.6	53.6	54.8	63.2	63.3
Vehicle Noise:	71.8	70.4	67.4	62.6	71.1	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	353	761
CNEL:	82	176	380	818

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,004 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.39	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.63	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.58	0.20	-1.20	-5.39	0.000	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	65.2	63.4	57.4	66.0	66.6
Medium Trucks:	60.4	59.2	52.8	51.3	59.7	60.0
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.5	67.1	64.0	59.2	67.8	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	191	413

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.68	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	967 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.55	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.79	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.75	0.20	-1.20	-5.39	0.000	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	65.0	63.3	57.2	65.8	66.5
Medium Trucks:	60.2	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	60.6	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.3	66.9	63.8	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	81	174	374
CNEL:	40	87	187	402

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,693 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.12	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.36	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.32	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	62.6	61.5	55.1	53.5	62.0	62.2
Heavy Trucks:	63.1	62.0	52.9	54.2	62.5	62.7
Vehicle Noise:	70.8	69.3	66.3	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	252	544
CNEL:	58	126	271	584

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.17	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.41	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.36	0.20	-1.20	-5.39	0.000	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	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	61.6	60.4	54.0	52.5	61.0	61.2
Heavy Trucks:	62.0	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.7	68.3	65.2	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	100	215	463
CNEL:	50	107	231	497

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	614 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.07	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.31	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.26	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	62.0	60.3	54.2	62.8	63.4
Medium Trucks:	57.4	56.2	49.8	48.3	56.8	57.0
Heavy Trucks:	58.2	57.1	48.1	49.4	57.7	57.8
Vehicle Noise:	65.5	64.0	60.9	56.2	64.8	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	49	106	228
CNEL:	24	53	113	245

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,283 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.56	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.52	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.8	63.0	56.9	65.6	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.6	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	197	424
CNEL:	46	98	211	455

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,218 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.55	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.79	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.75	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.8	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	190	409
CNEL:	44	95	204	440

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.62	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.86	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.81	0.20	-1.20	-5.39	0.000	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	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.2	60.0	53.6	52.1	60.5	60.7
Heavy Trucks:	61.6	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	69.3	67.8	64.8	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	201	432
CNEL:	46	100	216	464

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,116 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.93	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.17	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.13	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.7	63.9	57.8	66.5	67.1
Medium Trucks:	60.8	59.6	53.3	51.7	60.2	60.4
Heavy Trucks:	61.3	60.1	51.1	52.4	60.7	60.8
Vehicle Noise:	69.0	67.5	64.5	59.7	68.2	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	191	412
CNEL:	44	95	205	443

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,581 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.42	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.66	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.61	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.3	61.2	54.8	53.3	61.7	61.9
Heavy Trucks:	62.8	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	70.5	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	520
CNEL:	56	120	259	558

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,618 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.32	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.56	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.51	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.8	62.0
Heavy Trucks:	62.9	61.8	52.7	54.0	62.3	62.5
Vehicle Noise:	70.6	69.1	66.1	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	245	528
CNEL:	57	122	263	567

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.72	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.68	-1.33	-1.20	-5.31	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	59.7	58.6	52.2	50.6	59.1	59.3
Heavy Trucks:	60.2	59.1	50.0	51.3	59.6	59.8
Vehicle Noise:	67.9	66.4	63.4	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	414
CNEL:	44	96	206	444

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,321 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.20	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.44	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.40	0.20	-1.20	-5.39	0.000	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	66.4	64.6	58.6	67.2	67.8
Medium Trucks:	61.6	60.4	54.0	52.5	60.9	61.2
Heavy Trucks:	62.0	60.9	51.8	53.1	61.4	61.6
Vehicle Noise:	69.7	68.2	65.2	60.4	69.0	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	214	461
CNEL:	50	107	230	495

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,367 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.05	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.29	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.24	0.20	-1.20	-5.39	0.000	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	66.6	64.8	58.7	67.4	68.0
Medium Trucks:	61.7	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.4	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	102	219	472
CNEL:	51	109	235	507

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	865 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.04	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.28	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.23	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.6	62.8	56.7	65.4	66.0
Medium Trucks:	59.7	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.1	59.0	50.0	51.3	59.6	59.7
Vehicle Noise:	67.8	66.4	63.4	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	348
CNEL:	37	80	173	373

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	409 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.29	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.53	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	56.5	55.3	48.9	47.4	55.8	56.1
Heavy Trucks:	56.9	55.8	46.8	48.0	56.4	56.5
Vehicle Noise:	64.6	63.2	60.1	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	98	211
CNEL:	23	49	105	227

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.71	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.95	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.90	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.0	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	56.8	55.6	49.2	47.7	56.1	56.4
Heavy Trucks:	57.6	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	64.8	63.4	60.2	55.6	64.1	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	96	207
CNEL:	22	48	103	222

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	549 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.56	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.80	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.75	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.6	59.8	53.7	62.4	63.0
Medium Trucks:	56.9	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	57.8	56.7	47.6	48.9	57.2	57.3
Vehicle Noise:	65.0	63.6	60.4	55.7	64.3	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	98	212
CNEL:	23	49	105	227

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	456 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.82	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-23.06	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.02	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.3	60.7	58.9	52.9	61.5	62.1
Medium Trucks:	55.9	54.7	48.3	46.8	55.2	55.5
Heavy Trucks:	56.3	55.2	46.1	47.4	55.8	55.9
Vehicle Noise:	64.0	62.6	59.5	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	98	210
CNEL:	23	49	105	226

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	307 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.54	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.78	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.73	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	54.2	53.0	46.6	45.1	53.5	53.7
Heavy Trucks:	54.6	53.5	44.4	45.7	54.0	54.2
Vehicle Noise:	62.3	60.8	57.8	53.0	61.6	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	75	161
CNEL:	17	37	81	173

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	102 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.34	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-28.58	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-32.53	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.5	54.0	52.2	46.1	54.8	55.4
Medium Trucks:	49.6	48.4	42.0	40.5	48.9	49.1
Heavy Trucks:	50.9	49.8	40.7	42.0	50.3	50.5
Vehicle Noise:	57.6	56.2	52.9	48.3	56.9	57.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	25	53
CNEL:	6	12	26	57

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	642 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.88	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.12	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.07	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.8	62.2	60.5	54.4	63.0	63.6
Medium Trucks:	57.6	56.4	50.0	48.5	57.0	57.2
Heavy Trucks:	58.4	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	65.7	64.2	61.1	56.4	64.9	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	51	109	235
CNEL:	25	54	117	252

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.17	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-22.40	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-26.36	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	61.0	59.2	53.2	61.8	62.4
Medium Trucks:	56.2	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	56.6	55.5	46.5	47.7	56.1	56.2
Vehicle Noise:	64.3	62.9	59.8	55.0	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	111	239
CNEL:	26	55	119	257

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,441 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.54	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-14.69	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.65	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.6	71.0	69.2	63.2	71.8	72.4
Medium Trucks:	66.0	64.8	58.4	56.9	65.3	65.6
Heavy Trucks:	66.0	64.9	55.9	57.1	65.5	65.6
Vehicle Noise:	74.2	72.7	69.8	64.9	73.4	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	109	234	504	1,086
CNEL:	117	252	542	1,168

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,465 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.09	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.14	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.10	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.1	69.5	67.8	61.7	70.4	71.0
Medium Trucks:	64.5	63.3	57.0	55.4	63.9	64.1
Heavy Trucks:	64.6	63.5	54.4	55.7	64.0	64.2
Vehicle Noise:	72.7	71.3	68.3	63.4	72.0	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	87	187	403	869
CNEL:	94	201	434	935

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,093 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.38	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.85	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.81	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	63.8	62.6	56.3	54.7	63.2	63.4
Heavy Trucks:	63.9	62.8	53.7	55.0	63.3	63.5
Vehicle Noise:	72.0	70.6	67.6	62.7	71.3	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	362	779
CNEL:	84	181	389	838

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,051 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	60.6	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.7	67.3	64.2	59.4	68.0	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	396
CNEL:	43	92	197	425

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,302 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.26	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.50	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.46	0.20	-1.20	-5.39	0.000	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	66.3	64.6	58.5	67.1	67.7
Medium Trucks:	61.5	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	61.9	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	69.6	68.2	65.1	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	98	212	457
CNEL:	49	106	228	490

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,088 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.04	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.28	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.24	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.6	63.8	57.7	66.4	67.0
Medium Trucks:	60.7	59.5	53.2	51.6	60.1	60.3
Heavy Trucks:	61.1	60.0	51.0	52.3	60.6	60.7
Vehicle Noise:	68.8	67.4	64.4	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	87	188	405
CNEL:	44	94	202	435

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,925 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.44	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.80	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-20.76	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	68.0	66.3	60.2	68.8	69.4
Medium Trucks:	63.2	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	63.6	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	71.3	69.9	66.8	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	275	593
CNEL:	64	137	295	637

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,618 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.32	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.56	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.51	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.8	62.0
Heavy Trucks:	62.9	61.8	52.7	54.0	62.3	62.5
Vehicle Noise:	70.6	69.1	66.1	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	245	528
CNEL:	57	122	263	567

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	707 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.46	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.70	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.65	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.2	62.7	60.9	54.8	63.5	64.1
Medium Trucks:	58.0	56.8	50.5	48.9	57.4	57.6
Heavy Trucks:	58.9	57.8	48.7	50.0	58.3	58.4
Vehicle Noise:	66.1	64.7	61.5	56.8	65.4	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	54	116	250
CNEL:	27	58	125	269

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.17	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.41	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.36	-1.33	-1.20	-5.31	0.000	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	64.9	63.1	57.1	65.7	66.3
Medium Trucks:	60.1	58.9	52.5	51.0	59.4	59.7
Heavy Trucks:	60.5	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	68.2	66.8	63.7	58.9	67.5	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	94	201	434
CNEL:	47	100	216	466

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,283 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.56	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.52	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.8	63.0	56.9	65.6	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.6	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	197	424
CNEL:	46	98	211	455

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,265 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.39	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.63	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.58	0.20	-1.20	-5.39	0.000	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	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	61.4	60.2	53.8	52.3	60.7	61.0
Heavy Trucks:	61.8	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.5	68.1	65.0	60.2	68.8	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	208	448
CNEL:	48	104	223	481

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.68	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,218 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.55	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.79	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.75	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.2	66.9	67.5
Medium Trucks:	61.2	60.0	53.7	52.1	60.6	60.8
Heavy Trucks:	61.6	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	69.3	67.9	64.9	60.1	68.6	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	94	203	437
CNEL:	47	101	218	469

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,190 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.65	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.89	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.85	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	66.0	64.2	58.1	66.8	67.4
Medium Trucks:	61.1	59.9	53.6	52.0	60.5	60.7
Heavy Trucks:	61.5	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	69.2	67.8	64.7	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	200	430
CNEL:	46	100	214	462

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,628 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.29	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.53	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.49	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.8	62.1
Heavy Trucks:	62.9	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	70.6	69.2	66.1	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	246	530
CNEL:	57	123	264	569

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,637 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.27	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.51	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.46	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.6	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.9	62.1
Heavy Trucks:	62.9	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	70.6	69.2	66.1	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	247	532
CNEL:	57	123	265	571

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,256 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.42	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.66	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.61	-1.33	-1.20	-5.31	0.000	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	64.7	62.9	56.8	65.5	66.1
Medium Trucks:	59.8	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	60.2	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	67.9	66.5	63.5	58.7	67.2	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	194	418
CNEL:	45	97	208	449

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,358 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.27	0.20	-1.20	-5.39	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,442 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.82	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.06	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.01	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	61.9	60.8	54.4	52.8	61.3	61.5
Heavy Trucks:	62.4	61.3	52.2	53.5	61.8	62.0
Vehicle Noise:	70.1	68.6	65.6	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	227	489
CNEL:	52	113	244	525

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	902 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.09	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	63.0	56.9	65.5	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.5	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	357
CNEL:	38	83	178	384

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	446 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.91	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.15	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.11	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.7	59.9	53.9	62.5	63.1
Medium Trucks:	56.9	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	57.3	56.2	47.1	48.4	56.7	56.9
Vehicle Noise:	65.0	63.5	60.5	55.7	64.3	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	48	104	224
CNEL:	24	52	112	240

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	577 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.34	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.58	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.54	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.4	61.8	60.0	53.9	62.6	63.2
Medium Trucks:	57.1	55.9	49.6	48.0	56.5	56.7
Heavy Trucks:	58.0	56.9	47.8	49.1	57.4	57.6
Vehicle Noise:	65.2	63.8	60.6	55.9	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	101	219
CNEL:	23	51	109	235

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	725 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.35	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.58	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.54	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.8	61.0	54.9	63.6	64.2
Medium Trucks:	58.1	56.9	50.6	49.0	57.5	57.7
Heavy Trucks:	59.0	57.9	48.8	50.1	58.4	58.6
Vehicle Noise:	66.2	64.8	61.6	56.9	65.5	65.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	55	118	255
CNEL:	27	59	127	273

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.17	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-22.40	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-26.36	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.4	59.6	53.5	62.2	62.8
Medium Trucks:	56.5	55.3	49.0	47.4	55.9	56.1
Heavy Trucks:	56.9	55.8	46.8	48.1	56.4	56.5
Vehicle Noise:	64.6	63.2	60.2	55.4	63.9	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	108	232
CNEL:	25	54	116	250

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	363 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.81	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.05	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.01	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.7	58.0	51.9	60.5	61.1
Medium Trucks:	54.9	53.7	47.3	45.8	54.2	54.5
Heavy Trucks:	55.3	54.2	45.2	46.4	54.8	54.9
Vehicle Noise:	63.0	61.6	58.5	53.7	62.3	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	84	180
CNEL:	19	42	90	194

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	214 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-8.14	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-25.38	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-29.33	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.8	57.2	55.4	49.3	58.0	58.6
Medium Trucks:	52.8	51.6	45.2	43.7	52.1	52.3
Heavy Trucks:	54.1	53.0	43.9	45.2	53.5	53.7
Vehicle Noise:	60.8	59.4	56.1	51.5	60.1	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	40	87
CNEL:	9	20	43	93

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	763 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.13	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.37	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.32	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.6	63.0	61.2	55.2	63.8	64.4
Medium Trucks:	58.3	57.2	50.8	49.2	57.7	57.9
Heavy Trucks:	59.2	58.1	49.0	50.3	58.7	58.8
Vehicle Noise:	66.4	65.0	61.8	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	57	122	263
CNEL:	28	61	131	283

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EACP26 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	595 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.66	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-21.90	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-25.86	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.5	59.8	53.7	62.3	62.9
Medium Trucks:	56.7	55.5	49.1	47.6	56.0	56.3
Heavy Trucks:	57.1	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.8	63.4	60.3	55.5	64.1	64.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	56	120	258
CNEL:	28	60	129	277

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,395 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.49	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-14.75	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.71	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.9	69.2	63.1	71.7	72.3
Medium Trucks:	65.9	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	66.0	64.9	55.8	57.1	65.4	65.6
Vehicle Noise:	74.1	72.7	69.7	64.8	73.4	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	108	232	499	1,076
CNEL:	116	249	537	1,158

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,399 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.98	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.26	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.22	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.4	67.7	61.6	70.2	70.8
Medium Trucks:	64.4	63.2	56.9	55.3	63.8	64.0
Heavy Trucks:	64.5	63.4	54.3	55.6	63.9	64.0
Vehicle Noise:	72.6	71.2	68.2	63.3	71.9	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	184	396	854
CNEL:	92	198	426	919

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Jefferson St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,018 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.23	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-17.01	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.97	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	63.7	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	63.7	62.6	53.6	54.8	63.2	63.3
Vehicle Noise:	71.8	70.4	67.4	62.6	71.1	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	353	761
CNEL:	82	176	380	818

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 50

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,004 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.39	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.63	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.58	0.20	-1.20	-5.39	0.000	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	65.2	63.4	57.4	66.0	66.6
Medium Trucks:	60.4	59.2	52.8	51.3	59.7	60.0
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.5	67.1	64.0	59.2	67.8	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	191	413

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 52

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.68	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	967 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.55	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.79	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.75	0.20	-1.20	-5.39	0.000	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	65.0	63.3	57.2	65.8	66.5
Medium Trucks:	60.2	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	60.6	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.3	66.9	63.8	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	81	174	374
CNEL:	40	87	187	402

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Airport Bl.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,693 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.12	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.36	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.32	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	62.6	61.5	55.1	53.5	62.0	62.2
Heavy Trucks:	63.1	62.0	52.9	54.2	62.5	62.7
Vehicle Noise:	70.8	69.3	66.3	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	252	544
CNEL:	58	126	271	584

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.17	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.41	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.36	0.20	-1.20	-5.39	0.000	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	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	61.6	60.4	54.0	52.5	61.0	61.2
Heavy Trucks:	62.0	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.7	68.3	65.2	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	100	215	463
CNEL:	50	107	231	497

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	614 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.07	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.31	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.26	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	62.0	60.3	54.2	62.8	63.4
Medium Trucks:	57.4	56.2	49.8	48.3	56.8	57.0
Heavy Trucks:	58.2	57.1	48.1	49.4	57.7	57.8
Vehicle Noise:	65.5	64.0	60.9	56.2	64.8	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	49	106	228
CNEL:	24	53	113	245

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,283 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.56	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.52	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.8	63.0	56.9	65.6	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.6	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	197	424
CNEL:	46	98	211	455

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,218 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.55	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.79	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.75	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.5	62.8	56.7	65.3	65.9
Medium Trucks:	59.7	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.1	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	67.8	66.4	63.3	58.5	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	190	409
CNEL:	44	95	204	440

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.62	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.86	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.81	0.20	-1.20	-5.39	0.000	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	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.2	60.0	53.6	52.1	60.5	60.7
Heavy Trucks:	61.6	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	69.3	67.8	64.8	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	201	432
CNEL:	46	100	216	464

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,116 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.93	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.17	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.13	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.7	63.9	57.8	66.5	67.1
Medium Trucks:	60.8	59.6	53.3	51.7	60.2	60.4
Heavy Trucks:	61.3	60.1	51.1	52.4	60.7	60.8
Vehicle Noise:	69.0	67.5	64.5	59.7	68.2	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	191	412
CNEL:	44	95	205	443

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,172 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.96	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.91	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.5	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	61.0	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	61.5	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	69.2	67.7	64.7	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	198	426
CNEL:	46	99	212	457

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 50
Road Segment: w/o Jefferson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,581 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.42	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.66	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.61	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.3	61.2	54.8	53.3	61.7	61.9
Heavy Trucks:	62.8	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	70.5	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	520
CNEL:	56	120	259	558

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 50
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,618 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.32	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.56	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.51	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.8	62.0
Heavy Trucks:	62.9	61.8	52.7	54.0	62.3	62.5
Vehicle Noise:	70.6	69.1	66.1	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	245	528
CNEL:	57	122	263	567

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 50
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.72	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.68	-1.33	-1.20	-5.31	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	59.7	58.6	52.2	50.6	59.1	59.3
Heavy Trucks:	60.2	59.1	50.0	51.3	59.6	59.8
Vehicle Noise:	67.9	66.4	63.4	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	414
CNEL:	44	96	206	444

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 52
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,321 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.20	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.44	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.40	0.20	-1.20	-5.39	0.000	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	66.4	64.6	58.6	67.2	67.8
Medium Trucks:	61.6	60.4	54.0	52.5	60.9	61.2
Heavy Trucks:	62.0	60.9	51.8	53.1	61.4	61.6
Vehicle Noise:	69.7	68.2	65.2	60.4	69.0	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	214	461
CNEL:	50	107	230	495

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 54
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,367 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.05	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.29	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.24	0.20	-1.20	-5.39	0.000	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	66.6	64.8	58.7	67.4	68.0
Medium Trucks:	61.7	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.4	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	102	219	472
CNEL:	51	109	235	507

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 54
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	865 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.04	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.28	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.23	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.6	62.8	56.7	65.4	66.0
Medium Trucks:	59.7	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.1	59.0	50.0	51.3	59.6	59.7
Vehicle Noise:	67.8	66.4	63.4	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	348
CNEL:	37	80	173	373

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Airport Bl.
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	409 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.29	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.53	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	56.5	55.3	48.9	47.4	55.8	56.1
Heavy Trucks:	56.9	55.8	46.8	48.0	56.4	56.5
Vehicle Noise:	64.6	63.2	60.1	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	98	211
CNEL:	23	49	105	227

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 58
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.71	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.95	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.90	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.0	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	56.8	55.6	49.2	47.7	56.1	56.4
Heavy Trucks:	57.6	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	64.8	63.4	60.2	55.6	64.1	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	96	207
CNEL:	22	48	103	222

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 58
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	549 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.56	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.80	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.75	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.6	59.8	53.7	62.4	63.0
Medium Trucks:	56.9	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	57.8	56.7	47.6	48.9	57.2	57.3
Vehicle Noise:	65.0	63.6	60.4	55.7	64.3	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	98	212
CNEL:	23	49	105	227

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 58
Road Segment: w/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	456 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.82	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-23.06	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.02	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.3	60.7	58.9	52.9	61.5	62.1
Medium Trucks:	55.9	54.7	48.3	46.8	55.2	55.5
Heavy Trucks:	56.3	55.2	46.1	47.4	55.8	55.9
Vehicle Noise:	64.0	62.6	59.5	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	98	210
CNEL:	23	49	105	226

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 58
Road Segment: e/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	307 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.54	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-24.78	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-28.73	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	54.2	53.0	46.6	45.1	53.5	53.7
Heavy Trucks:	54.6	53.5	44.4	45.7	54.0	54.2
Vehicle Noise:	62.3	60.8	57.8	53.0	61.6	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	75	161
CNEL:	17	37	81	173

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 60
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	102 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.34	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-28.58	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-32.53	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.5	54.0	52.2	46.1	54.8	55.4
Medium Trucks:	49.6	48.4	42.0	40.5	48.9	49.1
Heavy Trucks:	50.9	49.8	40.7	42.0	50.3	50.5
Vehicle Noise:	57.6	56.2	52.9	48.3	56.9	57.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	25	53
CNEL:	6	12	26	57

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 60
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	642 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.88	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.12	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.07	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.8	62.2	60.5	54.4	63.0	63.6
Medium Trucks:	57.6	56.4	50.0	48.5	57.0	57.2
Heavy Trucks:	58.4	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	65.7	64.2	61.1	56.4	64.9	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	51	109	235
CNEL:	25	54	117	252

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC26SE
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	530 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.17	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-22.40	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-26.36	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	61.0	59.2	53.2	61.8	62.4
Medium Trucks:	56.2	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	56.6	55.5	46.5	47.7	56.1	56.2
Vehicle Noise:	64.3	62.9	59.8	55.0	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	111	239
CNEL:	26	55	119	257

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Jefferson St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,441 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.54	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-14.69	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.65	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.6	71.0	69.2	63.2	71.8	72.4
Medium Trucks:	66.0	64.8	58.4	56.9	65.3	65.6
Heavy Trucks:	66.0	64.9	55.9	57.1	65.5	65.6
Vehicle Noise:	74.2	72.7	69.8	64.9	73.4	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	109	234	504	1,086
CNEL:	117	252	542	1,168

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Jefferson St.
Road Segment: n/o Avenue 52

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,465 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.09	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.14	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.10	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.1	69.5	67.8	61.7	70.4	71.0
Medium Trucks:	64.5	63.3	57.0	55.4	63.9	64.1
Heavy Trucks:	64.6	63.5	54.4	55.7	64.0	64.2
Vehicle Noise:	72.7	71.3	68.3	63.4	72.0	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	87	187	403	869
CNEL:	94	201	434	935

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Jefferson St.
Road Segment: n/o Avenue 54

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,102 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.40	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-16.83	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.79	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.9	67.1	61.0	69.7	70.3
Medium Trucks:	63.8	62.7	56.3	54.7	63.2	63.4
Heavy Trucks:	63.9	62.8	53.7	55.0	63.3	63.5
Vehicle Noise:	72.0	70.6	67.6	62.7	71.3	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	363	782
CNEL:	84	181	390	841

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 50

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,051 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	60.6	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.7	67.3	64.2	59.4	68.0	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	396
CNEL:	43	92	197	425

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 52

Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,302 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.26	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.50	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.46	0.20	-1.20	-5.39	0.000	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	66.3	64.6	58.5	67.1	67.7
Medium Trucks:	61.5	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	61.9	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	69.6	68.2	65.1	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	98	212	457
CNEL:	49	106	228	490

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 54
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,097 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.00	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-19.24	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.20	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.6	63.8	57.8	66.4	67.0
Medium Trucks:	60.8	59.6	53.2	51.7	60.1	60.4
Heavy Trucks:	61.2	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	68.9	67.4	64.4	59.6	68.2	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	189	407
CNEL:	44	94	203	438

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Airport Bl.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,953 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.50	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.74	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-20.70	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	68.1	66.3	60.3	68.9	69.5
Medium Trucks:	63.3	62.1	55.7	54.2	62.6	62.9
Heavy Trucks:	63.7	62.6	53.5	54.8	63.1	63.3
Vehicle Noise:	71.4	69.9	66.9	62.1	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	129	278	598
CNEL:	64	138	298	643

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,674 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.17	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.41	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.37	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.4	65.7	59.6	68.2	68.8
Medium Trucks:	62.6	61.4	55.0	53.5	62.0	62.2
Heavy Trucks:	63.0	61.9	52.9	54.1	62.5	62.6
Vehicle Noise:	70.7	69.3	66.2	61.4	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	116	251	540
CNEL:	58	125	269	580

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Madison St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	735 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.29	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.53	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.48	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.4	62.8	61.1	55.0	63.6	64.2
Medium Trucks:	58.2	57.0	50.6	49.1	57.5	57.8
Heavy Trucks:	59.0	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	66.2	64.8	61.7	57.0	65.5	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	55	119	257
CNEL:	28	59	128	276

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 50
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.17	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.41	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.36	-1.33	-1.20	-5.31	0.000	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	64.9	63.1	57.1	65.7	66.3
Medium Trucks:	60.1	58.9	52.5	51.0	59.4	59.7
Heavy Trucks:	60.5	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	68.2	66.8	63.7	58.9	67.5	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	94	201	434
CNEL:	47	100	216	466

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 52
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,283 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.56	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.52	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.8	63.0	56.9	65.6	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.6	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	197	424
CNEL:	46	98	211	455

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 54
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,265 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.39	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.63	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.58	0.20	-1.20	-5.39	0.000	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	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	61.4	60.2	53.8	52.3	60.7	61.0
Heavy Trucks:	61.8	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.5	68.1	65.0	60.2	68.8	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	208	448
CNEL:	48	104	223	481

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Airport Bl.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,237 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.49	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.72	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.68	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	61.7	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.4	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 58
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,228 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.52	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.76	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.71	0.20	-1.20	-5.39	0.000	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	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	61.3	60.1	53.7	52.2	60.6	60.8
Heavy Trucks:	61.7	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	69.4	67.9	64.9	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	204	439
CNEL:	47	102	219	472

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Monroe St.
Road Segment: n/o Avenue 60
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.62	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.86	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.81	0.20	-1.20	-5.39	0.000	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	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.2	60.0	53.6	52.1	60.5	60.7
Heavy Trucks:	61.6	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	69.3	67.8	64.8	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	201	432
CNEL:	46	100	216	464

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 50
Road Segment: w/o Jefferson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,628 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.29	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.53	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.49	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.5	61.3	54.9	53.4	61.8	62.1
Heavy Trucks:	62.9	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	70.6	69.2	66.1	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	246	530
CNEL:	57	123	264	569

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 50
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,646 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.48	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.44	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.4	65.6	59.5	68.2	68.8
Medium Trucks:	62.5	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	62.9	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.6	69.2	66.2	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	534
CNEL:	57	124	266	573

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 50
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,265 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.39	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.63	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.58	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	59.8	58.7	52.3	50.7	59.2	59.4
Heavy Trucks:	60.3	59.2	50.1	51.4	59.7	59.9
Vehicle Noise:	68.0	66.5	63.5	58.7	67.3	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	195	420
CNEL:	45	97	209	451

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 52
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,358 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.32	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-22.27	0.20	-1.20	-5.39	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 54
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,451 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.79	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-18.03	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.99	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	62.0	60.8	54.4	52.9	61.3	61.6
Heavy Trucks:	62.4	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.1	68.7	65.6	60.8	69.4	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	228	491
CNEL:	53	114	245	527

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 54
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	902 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-20.09	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-24.05	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	63.0	56.9	65.5	66.2
Medium Trucks:	59.9	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	60.3	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.0	66.6	63.5	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	357
CNEL:	38	83	178	384

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Airport Bl.
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	446 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.91	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-23.15	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-27.11	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.7	59.9	53.9	62.5	63.1
Medium Trucks:	56.9	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	57.3	56.2	47.1	48.4	56.7	56.9
Vehicle Noise:	65.0	63.5	60.5	55.7	64.3	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	48	104	224
CNEL:	24	52	112	240

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 58
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	623 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.01	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-21.24	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-25.20	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	57.5	56.3	49.9	48.4	56.8	57.1
Heavy Trucks:	58.3	57.2	48.2	49.4	57.8	57.9
Vehicle Noise:	65.5	64.1	61.0	56.3	64.8	65.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	107	230
CNEL:	25	53	115	247

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 58
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	763 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.13	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.37	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.32	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.6	63.0	61.2	55.2	63.8	64.4
Medium Trucks:	58.3	57.2	50.8	49.2	57.7	57.9
Heavy Trucks:	59.2	58.1	49.0	50.3	58.7	58.8
Vehicle Noise:	66.4	65.0	61.8	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	57	122	263
CNEL:	28	61	131	283

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 58
Road Segment: w/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.09	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-22.33	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-26.28	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.0	61.4	59.7	53.6	62.2	62.8
Medium Trucks:	56.6	55.4	49.0	47.5	56.0	56.2
Heavy Trucks:	57.0	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.7	63.3	60.2	55.5	64.0	64.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	109	235
CNEL:	25	54	117	253

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 58
Road Segment: e/o Jackson St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	372 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.70	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-23.94	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-27.90	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.8	58.1	52.0	60.6	61.2
Medium Trucks:	55.0	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	55.4	54.3	45.3	46.5	54.9	55.0
Vehicle Noise:	63.1	61.7	58.6	53.8	62.4	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	85	184
CNEL:	20	42	92	197

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 60
Road Segment: w/o Madison St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	214 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-8.14	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-25.38	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-29.33	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.8	57.2	55.4	49.3	58.0	58.6
Medium Trucks:	52.8	51.6	45.2	43.7	52.1	52.3
Heavy Trucks:	54.1	53.0	43.9	45.2	53.5	53.7
Vehicle Noise:	60.8	59.4	56.1	51.5	60.1	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	40	87
CNEL:	9	20	43	93

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 60
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	791 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.97	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-20.21	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-24.17	0.46	-1.20	-5.42	0.000	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	63.1	61.4	55.3	63.9	64.5
Medium Trucks:	58.5	57.3	50.9	49.4	57.9	58.1
Heavy Trucks:	59.3	58.2	49.2	50.5	58.8	58.9
Vehicle Noise:	66.6	65.1	62.0	57.3	65.9	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	125	270
CNEL:	29	62	134	289

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC26SE
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	614 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.53	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-21.77	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-25.72	-1.23	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.7	59.9	53.8	62.5	63.1
Medium Trucks:	56.8	55.6	49.3	47.7	56.2	56.4
Heavy Trucks:	57.2	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.9	63.5	60.4	55.7	64.2	64.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	57	122	263
CNEL:	28	61	131	283

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	4,790 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.98	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-13.26	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-17.21	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.0	72.4	70.7	64.6	73.2	73.8
Medium Trucks:	67.4	66.2	59.9	58.3	66.8	67.0
Heavy Trucks:	67.5	66.4	57.3	58.6	66.9	67.0
Vehicle Noise:	75.6	74.2	71.2	66.3	74.9	75.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	135	292	628	1,354
CNEL:	146	314	676	1,456

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,190 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.22	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.02	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.98	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.7	68.9	62.8	71.5	72.1
Medium Trucks:	65.7	64.5	58.1	56.6	65.0	65.3
Heavy Trucks:	65.7	64.6	55.6	56.8	65.2	65.3
Vehicle Noise:	73.8	72.4	69.4	64.6	73.1	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	103	222	479	1,032
CNEL:	111	239	515	1,111

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,995 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.94	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.30	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.25	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.0	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	65.4	64.2	57.8	56.3	64.7	65.0
Heavy Trucks:	65.4	64.3	55.3	56.5	64.9	65.0
Vehicle Noise:	73.6	72.1	69.2	64.3	72.8	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	213	459	990
CNEL:	106	229	494	1,065

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,093 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.80	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.44	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-20.40	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.0	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	63.6	62.4	56.0	54.5	62.9	63.2
Heavy Trucks:	64.0	62.9	53.8	55.1	63.4	63.6
Vehicle Noise:	71.7	70.2	67.2	62.4	71.0	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	291	626
CNEL:	67	145	312	673

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,004 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.37	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.87	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.83	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	70.0	68.2	62.1	70.8	71.4
Medium Trucks:	65.1	63.9	57.6	56.0	64.5	64.7
Heavy Trucks:	65.6	64.4	55.4	56.7	65.0	65.1
Vehicle Noise:	73.3	71.8	68.8	64.0	72.5	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	172	370	797
CNEL:	86	185	398	856

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,204 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.02	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.21	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-20.17	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.2	68.6	66.9	60.8	69.4	70.0
Medium Trucks:	63.8	62.6	56.2	54.7	63.2	63.4
Heavy Trucks:	64.2	63.1	54.1	55.3	63.7	63.8
Vehicle Noise:	71.9	70.5	67.4	62.6	71.2	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	649
CNEL:	70	150	323	697

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,953 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.56	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-13.68	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.63	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.7	71.2	69.4	63.3	72.0	72.6
Medium Trucks:	66.3	65.1	58.8	57.2	65.7	65.9
Heavy Trucks:	66.7	65.6	56.6	57.9	66.2	66.3
Vehicle Noise:	74.4	73.0	70.0	65.2	73.7	74.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	96	206	444	957
CNEL:	103	222	477	1,028

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,883 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.05	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.00	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.8	68.0	62.0	70.6	71.2
Medium Trucks:	65.0	63.8	57.4	55.9	64.3	64.6
Heavy Trucks:	65.4	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	73.1	71.6	68.6	63.8	72.4	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	167	360	776
CNEL:	83	180	387	833

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,767 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.52	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-16.72	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-20.67	0.46	-1.20	-5.42	0.000	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	66.6	64.9	58.8	67.4	68.0
Medium Trucks:	62.0	60.8	54.4	52.9	61.4	61.6
Heavy Trucks:	62.8	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	70.1	68.6	65.5	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	214	461
CNEL:	49	107	230	495

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,100 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,404 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.93	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.17	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.13	-1.33	-1.20	-5.31	0.000	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	65.1	63.4	57.3	65.9	66.5
Medium Trucks:	60.3	59.1	52.7	51.2	59.7	59.9
Heavy Trucks:	60.7	59.6	50.6	51.8	60.2	60.3
Vehicle Noise:	68.4	67.0	63.9	59.2	67.7	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	97	209	450
CNEL:	48	104	224	484

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,795 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.13	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-17.11	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.06	-1.33	-1.20	-5.31	0.000	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	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	61.4	60.2	53.8	52.3	60.7	61.0
Heavy Trucks:	61.8	60.7	51.6	52.9	61.2	61.4
Vehicle Noise:	69.5	68.1	65.0	60.2	68.8	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	246	530
CNEL:	57	123	264	570

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,911 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.23	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.01	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.96	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	65.0	63.8	57.4	55.9	64.4	64.6
Heavy Trucks:	65.4	64.3	55.3	56.5	64.9	65.0
Vehicle Noise:	73.1	71.7	68.6	63.9	72.4	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	362	781
CNEL:	84	181	389	839

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,190 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.63	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.61	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.56	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.8	70.2	68.5	62.4	71.0	71.6
Medium Trucks:	65.4	64.2	57.8	56.3	64.8	65.0
Heavy Trucks:	65.8	64.7	55.7	56.9	65.3	65.4
Vehicle Noise:	73.5	72.1	69.0	64.3	72.8	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	83	179	385	830
CNEL:	89	192	414	891

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,316 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.00	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.96	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	64.0	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	64.4	63.3	54.3	55.5	63.9	64.0
Vehicle Noise:	72.1	70.7	67.6	62.9	71.4	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	311	670
CNEL:	72	155	334	720

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,492 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.56	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.68	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.64	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	69.2	67.4	61.3	70.0	70.6
Medium Trucks:	64.3	63.1	56.8	55.2	63.7	63.9
Heavy Trucks:	64.7	63.6	54.6	55.9	64.2	64.3
Vehicle Noise:	72.4	71.0	68.0	63.2	71.7	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	70	152	327	704
CNEL:	76	163	351	756

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,600 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.37	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.61	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.56	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	67.2	65.5	59.4	68.0	68.6
Medium Trucks:	62.4	61.2	54.8	53.3	61.8	62.0
Heavy Trucks:	62.8	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	70.5	69.1	66.0	61.3	69.8	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	113	243	524
CNEL:	56	121	261	563

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,585 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.52	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.3	67.6	61.5	70.1	70.7
Medium Trucks:	64.5	63.3	56.9	55.4	63.8	64.1
Heavy Trucks:	64.9	63.8	54.8	56.0	64.4	64.5
Vehicle Noise:	72.6	71.2	68.1	63.3	71.9	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	335	721
CNEL:	77	167	360	775

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,934 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.46	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-16.78	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-20.74	-1.33	-1.20	-5.31	0.000	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	66.5	64.8	58.7	67.3	67.9
Medium Trucks:	61.7	60.5	54.1	52.6	61.1	61.3
Heavy Trucks:	62.1	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	69.8	68.4	65.3	60.5	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	120	259	557
CNEL:	60	129	278	599

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,390 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.38	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.86	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.82	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	64.1	63.0	56.6	55.0	63.5	63.7
Heavy Trucks:	64.6	63.5	54.4	55.7	64.0	64.2
Vehicle Noise:	72.3	70.8	67.8	63.0	71.5	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	68	147	318	685
CNEL:	74	158	341	735

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,809 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.08	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.16	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.12	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.3	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	64.8	63.7	57.3	55.7	64.2	64.4
Heavy Trucks:	65.3	64.2	55.1	56.4	64.7	64.9
Vehicle Noise:	73.0	71.5	68.5	63.7	72.2	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	354	762
CNEL:	82	176	380	819

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,646 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.48	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.44	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.4	65.6	59.5	68.2	68.8
Medium Trucks:	62.5	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	62.9	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.6	69.2	66.2	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	534
CNEL:	57	124	266	573

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,553 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.50	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.73	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.69	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	62.3	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	62.7	61.6	52.5	53.8	62.2	62.3
Vehicle Noise:	70.4	69.0	65.9	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	111	238	514
CNEL:	55	119	256	552

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,900 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,107 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.51	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-18.75	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-22.70	0.46	-1.20	-5.42	0.000	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	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	60.0	58.8	52.4	50.9	59.3	59.6
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.0	66.6	63.4	58.8	67.3	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	157	338
CNEL:	36	78	168	362

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,135 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.40	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-18.64	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-22.60	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	60.1	58.9	52.5	51.0	59.4	59.7
Heavy Trucks:	60.9	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	68.1	66.7	63.6	58.9	67.4	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	74	159	343
CNEL:	37	79	171	368

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,200 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,693 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.12	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-17.36	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.32	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.0	66.4	64.6	58.6	67.2	67.8
Medium Trucks:	61.6	60.4	54.0	52.5	60.9	61.2
Heavy Trucks:	62.0	60.9	51.8	53.1	61.5	61.6
Vehicle Noise:	69.7	68.3	65.2	60.4	69.0	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	109	234	504
CNEL:	54	117	251	541

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,400 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	874 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.99	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-20.23	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.19	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	58.7	57.5	51.1	49.6	58.1	58.3
Heavy Trucks:	59.1	58.0	49.0	50.2	58.6	58.7
Vehicle Noise:	66.8	65.4	62.3	57.6	66.1	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	70	151	324
CNEL:	35	75	162	349

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,800 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,934 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.43	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-15.81	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-19.77	1.61	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.7	65.0	58.9	67.5	68.1
Medium Trucks:	62.3	61.1	54.8	53.2	61.7	61.9
Heavy Trucks:	63.6	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	70.3	68.9	65.6	61.1	69.6	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	81	175	378
CNEL:	40	87	188	404

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,111 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.29	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-15.94	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-19.90	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.4	65.6	59.6	68.2	68.8
Medium Trucks:	62.8	61.6	55.2	53.7	62.1	62.4
Heavy Trucks:	63.6	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	70.8	69.4	66.3	61.6	70.1	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	519
CNEL:	56	120	259	557

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,330 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.17	-1.24	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.41	-1.22	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.36	-1.23	-1.20	-5.31	0.000	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	65.0	63.2	57.2	65.8	66.4
Medium Trucks:	60.2	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	60.6	59.5	50.4	51.7	60.0	60.2
Vehicle Noise:	68.3	66.9	63.8	59.0	67.6	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	44	95	205	441
CNEL:	47	102	220	474

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	4,836 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	4.02	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-13.22	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-17.17	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.1	72.5	70.7	64.7	73.3	73.9
Medium Trucks:	67.5	66.3	59.9	58.4	66.8	67.1
Heavy Trucks:	67.5	66.4	57.4	58.6	67.0	67.1
Vehicle Noise:	75.6	74.2	71.2	66.4	74.9	75.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	136	294	632	1,362
CNEL:	147	316	680	1,466

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,255 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.30	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-14.94	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.89	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.8	69.0	62.9	71.6	72.2
Medium Trucks:	65.7	64.6	58.2	56.6	65.1	65.3
Heavy Trucks:	65.8	64.7	55.6	56.9	65.2	65.4
Vehicle Noise:	73.9	72.5	69.5	64.6	73.2	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	105	225	486	1,046
CNEL:	113	243	522	1,126

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Jefferson St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,069 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	71 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	53.486
Medium Trucks:	53.320
Heavy Trucks:	53.337

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.05	-0.54	-1.20	-4.70	0.000	0.000
Medium Trucks:	82.40	-15.19	-0.52	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.15	-0.52	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.1	70.5	68.7	62.7	71.3	71.9
Medium Trucks:	65.5	64.3	57.9	56.4	64.9	65.1
Heavy Trucks:	65.5	64.4	55.4	56.6	65.0	65.1
Vehicle Noise:	73.7	72.2	69.3	64.4	72.9	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	101	217	467	1,006
CNEL:	108	233	502	1,082

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,139 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.89	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-16.34	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-20.30	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.1	68.5	66.7	60.7	69.3	69.9
Medium Trucks:	63.7	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	64.1	63.0	53.9	55.2	63.5	63.7
Vehicle Noise:	71.8	70.3	67.3	62.5	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	295	636
CNEL:	68	147	317	683

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,069 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.46	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.78	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.73	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	70.1	68.3	62.2	70.9	71.5
Medium Trucks:	65.2	64.0	57.7	56.1	64.6	64.8
Heavy Trucks:	65.6	64.5	55.5	56.8	65.1	65.2
Vehicle Noise:	73.3	71.9	68.9	64.1	72.6	73.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	174	375	809
CNEL:	87	187	403	869

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,325 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.26	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.98	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.94	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.9	67.1	61.0	69.7	70.3
Medium Trucks:	64.0	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	64.4	63.3	54.3	55.6	63.9	64.0
Vehicle Noise:	72.1	70.7	67.7	62.9	71.4	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	145	312	672
CNEL:	72	156	335	722

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	4,185 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.81	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-13.43	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.39	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.0	71.4	69.6	63.6	72.2	72.8
Medium Trucks:	66.6	65.4	59.0	57.5	65.9	66.2
Heavy Trucks:	67.0	65.9	56.9	58.1	66.5	66.6
Vehicle Noise:	74.7	73.3	70.2	65.4	74.0	74.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	214	462	994
CNEL:	107	230	496	1,068

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,162 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.59	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.65	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.60	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.8	70.2	68.4	62.4	71.0	71.6
Medium Trucks:	65.4	64.2	57.8	56.3	64.7	65.0
Heavy Trucks:	65.8	64.7	55.6	56.9	65.2	65.4
Vehicle Noise:	73.5	72.0	69.0	64.2	72.8	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	82	178	383	825
CNEL:	89	191	411	886

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Madison St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,860 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.74	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-16.49	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-20.45	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.9	65.1	59.0	67.7	68.3
Medium Trucks:	62.2	61.0	54.7	53.1	61.6	61.8
Heavy Trucks:	63.1	62.0	52.9	54.2	62.5	62.7
Vehicle Noise:	70.3	68.9	65.7	61.0	69.6	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	103	222	477
CNEL:	51	110	238	512

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 50

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,600 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,451 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.79	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-18.03	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.99	-1.33	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	60.4	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	60.9	59.8	50.7	52.0	60.3	60.5
Vehicle Noise:	68.6	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	214	460
CNEL:	49	106	229	494

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 52

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,860 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.29	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-16.95	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-20.91	-1.33	-1.20	-5.31	0.000	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	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	61.5	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	61.9	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	69.6	68.2	65.2	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	252	543
CNEL:	58	126	271	583

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 54

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,976 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.33	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.91	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.87	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.9	68.2	62.1	70.7	71.3
Medium Trucks:	65.1	63.9	57.5	56.0	64.5	64.7
Heavy Trucks:	65.5	64.4	55.4	56.6	65.0	65.1
Vehicle Noise:	73.2	71.8	68.7	63.9	72.5	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	171	368	792
CNEL:	85	183	395	851

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Airport Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	3,255 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.72	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-14.52	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.48	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.9	70.3	68.6	62.5	71.1	71.7
Medium Trucks:	65.5	64.3	57.9	56.4	64.8	65.1
Heavy Trucks:	65.9	64.8	55.8	57.0	65.4	65.5
Vehicle Noise:	73.6	72.2	69.1	64.3	72.9	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	84	181	390	841
CNEL:	90	195	419	904

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 58

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,418 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.43	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.81	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.77	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	69.0	67.3	61.2	69.8	70.4
Medium Trucks:	64.2	63.0	56.6	55.1	63.6	63.8
Heavy Trucks:	64.6	63.5	54.5	55.7	64.1	64.2
Vehicle Noise:	72.3	70.9	67.8	63.0	71.6	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	320	690
CNEL:	74	160	344	741

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Monroe St. | Job Number: 12642
Road Segment: n/o Avenue 60

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,511 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.59	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.65	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.60	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.8	69.2	67.4	61.4	70.0	70.6
Medium Trucks:	64.4	63.2	56.8	55.3	63.7	64.0
Heavy Trucks:	64.8	63.7	54.6	55.9	64.2	64.4
Vehicle Noise:	72.5	71.0	68.0	63.2	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	71	152	328	707
CNEL:	76	164	353	760

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Jefferson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,646 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.24	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.48	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.44	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.4	65.6	59.5	68.2	68.8
Medium Trucks:	62.5	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	62.9	61.8	52.8	54.1	62.4	62.5
Vehicle Noise:	70.6	69.2	66.2	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	534
CNEL:	57	124	266	573

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,604 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.75	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.49	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.45	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.3	67.6	61.5	70.2	70.8
Medium Trucks:	64.5	63.3	57.0	55.4	63.9	64.1
Heavy Trucks:	64.9	63.8	54.8	56.0	64.4	64.5
Vehicle Noise:	72.6	71.2	68.1	63.4	71.9	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	156	336	725
CNEL:	78	168	361	779

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 50 | Job Number: 12642
Road Segment: e/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,953 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	43 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	60.488
Medium Trucks:	60.341
Heavy Trucks:	60.355

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.50	-1.34	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-16.74	-1.33	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-20.70	-1.33	-1.20	-5.31	0.000	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	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	61.7	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.2	61.0	52.0	53.3	61.6	61.7
Vehicle Noise:	69.9	68.4	65.4	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	121	260	561
CNEL:	60	130	280	602

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 52 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,418 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.43	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.81	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.77	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	69.0	67.3	61.2	69.8	70.4
Medium Trucks:	64.2	63.0	56.6	55.1	63.6	63.8
Heavy Trucks:	64.6	63.5	54.5	55.7	64.1	64.2
Vehicle Noise:	72.3	70.9	67.8	63.0	71.6	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	320	690
CNEL:	74	160	344	741

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,883 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.19	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-15.05	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-19.00	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.8	68.0	62.0	70.6	71.2
Medium Trucks:	65.0	63.8	57.4	55.9	64.3	64.6
Heavy Trucks:	65.4	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	73.1	71.6	68.6	63.8	72.4	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	167	360	776
CNEL:	83	180	387	833

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 54 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,674 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.17	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.41	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.37	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.4	65.7	59.6	68.2	68.8
Medium Trucks:	62.6	61.4	55.0	53.5	62.0	62.2
Heavy Trucks:	63.0	61.9	52.9	54.1	62.5	62.6
Vehicle Noise:	70.7	69.3	66.2	61.4	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	116	251	540
CNEL:	58	125	269	580

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Airport Bl. | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,581 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	51 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	54.0 feet
Centerline Dist. to Observer:	54.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.862
Medium Trucks:	47.677
Heavy Trucks:	47.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.42	0.18	-1.20	-4.67	0.000	0.000
Medium Trucks:	81.00	-17.66	0.21	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-21.61	0.20	-1.20	-5.39	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.3	61.2	54.8	53.3	61.7	61.9
Heavy Trucks:	62.8	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	70.5	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	520
CNEL:	56	120	259	558

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,163 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.30	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-18.54	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-22.49	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.8	63.0	57.0	65.6	66.2
Medium Trucks:	60.2	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	61.0	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.2	66.8	63.7	59.0	67.5	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	349
CNEL:	37	81	174	374

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Monroe St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,302 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.80	0.43	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-18.04	0.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-22.00	0.46	-1.20	-5.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	60.7	59.5	53.1	51.6	60.0	60.3
Heavy Trucks:	61.5	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	68.7	67.3	64.2	59.5	68.0	68.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	81	175	376
CNEL:	40	87	187	404

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: w/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,767 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.06	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-17.17	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.13	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	61.8	60.6	54.2	52.7	61.1	61.3
Heavy Trucks:	62.2	61.1	52.0	53.3	61.6	61.8
Vehicle Noise:	69.9	68.4	65.4	60.6	69.2	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	519
CNEL:	56	120	259	557

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 58 | Job Number: 12642
Road Segment: e/o Jackson St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	56.409
Medium Trucks:	56.252
Heavy Trucks:	56.268

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.72	-0.89	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-19.96	-0.87	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.92	-0.87	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.8	62.0	56.0	64.6	65.2
Medium Trucks:	59.0	57.8	51.4	49.9	58.3	58.6
Heavy Trucks:	59.4	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	67.1	65.7	62.6	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	157	338
CNEL:	36	78	169	363

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40 | Project Name: The Wave-Coral Mountain
Road Name: Avenue 60 | Job Number: 12642
Road Segment: w/o Madison St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,046 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	23 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.636
Medium Trucks:	38.406
Heavy Trucks:	38.429

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.67	1.58	-1.20	-4.59	0.000	0.000
Medium Trucks:	77.72	-15.57	1.62	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-19.52	1.61	-1.20	-5.56	0.000	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	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	62.6	61.4	55.0	53.5	61.9	62.2
Heavy Trucks:	63.9	62.8	53.7	55.0	63.3	63.5
Vehicle Noise:	70.6	69.2	65.9	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	182	392
CNEL:	42	90	195	420

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40
Road Name: Avenue 60
Road Segment: w/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	2,232 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	51.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.041
Medium Trucks:	45.848
Heavy Trucks:	45.867

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.54	0.43	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-15.70	0.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-19.66	0.46	-1.20	*-5.42*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.2	67.6	65.9	59.8	68.4	69.1
Medium Trucks:	63.0	61.8	55.5	53.9	62.4	62.6
Heavy Trucks:	63.9	62.7	53.7	55.0	63.3	63.4
Vehicle Noise:	71.1	69.6	66.5	61.8	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	54	116	250	539
CNEL:	58	125	268	578

Wednesday, March 25, 2020

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: GPP40
Road Name: Avenue 60
Road Segment: e/o Monroe St.
Project Name: The Wave-Coral Mountain
Job Number: 12642

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,000 vehicles
Peak Hour Percentage:	9.30%
Peak Hour Volume:	1,395 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 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 MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	59.540
Medium Trucks:	59.391
Heavy Trucks:	59.406

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.96	-1.24	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	81.00	-18.20	-1.22	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-22.16	-1.23	-1.20	*-5.31*	0.000	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	65.2	63.5	57.4	66.0	66.6
Medium Trucks:	60.4	59.2	52.8	51.3	59.7	60.0
Heavy Trucks:	60.8	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.5	67.1	64.0	59.2	67.8	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	98	211	455
CNEL:	49	105	227	489

Wednesday, March 25, 2020

APPENDIX 8.1:

ON-SITE TRAFFIC NOISE LEVEL CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard No Wall
Road Name: Avenue 58
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	61.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	56.919
Medium Trucks:	56.763
Heavy Trucks:	56.778

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-0.98	-0.95	-1.20	*-0.95*	0.000	0.000
Medium Trucks:	77.62	-18.22	-0.93	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-22.18	-0.93	-1.20	*-1.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.2	64.3	62.5	56.5	65.1	65.7
Medium Trucks:	57.3	55.8	49.4	47.9	56.3	56.6
Heavy Trucks:	57.8	56.4	47.4	48.6	57.0	57.1
Vehicle Noise:	67.3	65.5	62.9	57.6	66.2	66.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.2	64.3	62.5	56.5	65.1	65.7
Medium Trucks:	57.3	55.8	49.4	47.9	56.3	56.6
Heavy Trucks:	57.8	56.4	47.4	48.6	57.0	57.1
Vehicle Noise:	67.3	65.5	62.9	57.6	66.2	66.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard No Wall
Road Name: Madison Street
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	61.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	56.919
Medium Trucks:	56.763
Heavy Trucks:	56.778

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	1.06	-0.95	-1.20	*-0.95*	0.000	0.000
Medium Trucks:	77.62	-16.18	-0.93	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-20.13	-0.93	-1.20	*-1.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	59.3	57.8	51.4	49.9	58.4	58.6
Heavy Trucks:	59.9	58.5	49.4	50.7	59.0	59.1
Vehicle Noise:	69.3	67.5	64.9	59.7	68.2	68.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	59.3	57.8	51.4	49.9	58.4	58.6
Heavy Trucks:	59.9	58.5	49.4	50.7	59.0	59.1
Vehicle Noise:	69.3	67.5	64.9	59.7	68.2	68.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
Road Name: Avenue 58
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	61.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	56.210
Medium Trucks:	55.968
Heavy Trucks:	55.862

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-0.98	-0.87	-1.20	*0.19*	-6.720	-9.720
Medium Trucks:	77.62	-18.22	-0.84	-1.20	*0.12*	-6.160	-9.160
Heavy Trucks:	82.14	-22.18	-0.83	-1.20	*0.01*	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	57.4	55.9	49.5	48.0	56.4	56.6
Heavy Trucks:	57.9	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	67.3	65.5	63.0	57.7	66.3	66.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.6	54.7	52.9	46.9	55.5	56.1
Medium Trucks:	48.2	46.7	40.3	38.8	47.3	47.5
Heavy Trucks:	49.8	48.4	39.4	40.6	49.0	49.1
Vehicle Noise:	57.9	56.1	53.3	48.3	56.9	57.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
Road Name: Madison Street
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	61.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	56.210
Medium Trucks:	55.968
Heavy Trucks:	55.862

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	1.06	-0.87	-1.20	*0.19*	-6.720	-9.720
Medium Trucks:	77.62	-16.18	-0.84	-1.20	*0.12*	-6.160	-9.160
Heavy Trucks:	82.14	-20.13	-0.83	-1.20	*0.01*	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	59.4	57.9	51.5	50.0	58.5	58.7
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	69.4	67.6	65.0	59.8	68.3	68.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.6	56.7	55.0	48.9	57.5	58.1
Medium Trucks:	50.2	48.7	42.4	40.8	49.3	49.5
Heavy Trucks:	51.9	50.5	41.4	42.7	51.0	51.2
Vehicle Noise:	59.9	58.2	55.4	50.3	58.9	59.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
Road Name: Avenue 58
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	71.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	66.185
Medium Trucks:	65.943
Heavy Trucks:	65.837

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	-0.98	-1.93	-1.20	0.20	-6.800	-9.800
Medium Trucks:	77.62	-18.22	-1.91	-1.20	0.11	-6.080	-9.080
Heavy Trucks:	82.14	-22.18	-1.90	-1.20	0.00	-4.900	-7.900

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.3	61.6	55.5	64.1	64.7
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	56.9	55.4	46.4	47.7	56.0	56.1
Vehicle Noise:	66.3	64.5	61.9	56.7	65.2	65.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.4	53.5	51.8	45.7	54.3	54.9
Medium Trucks:	47.2	45.7	39.3	37.8	46.3	46.5
Heavy Trucks:	49.0	47.5	38.5	39.8	48.1	48.2
Vehicle Noise:	56.8	55.0	52.2	47.2	55.8	56.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
Road Name: Madison Street
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	71.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	66.185
Medium Trucks:	65.943
Heavy Trucks:	65.837

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.06	-1.93	-1.20	0.20	-6.800	-9.800
Medium Trucks:	77.62	-16.18	-1.91	-1.20	0.11	-6.080	-9.080
Heavy Trucks:	82.14	-20.13	-1.90	-1.20	0.00	-4.900	-7.900

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	58.3	56.8	50.5	48.9	57.4	57.6
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	68.3	66.5	63.9	58.7	67.3	67.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.5	55.6	53.8	47.8	56.4	57.0
Medium Trucks:	49.3	47.7	41.4	39.8	48.3	48.5
Heavy Trucks:	51.0	49.6	40.6	41.8	50.2	50.3
Vehicle Noise:	58.9	57.1	54.2	49.3	57.8	58.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: Avenue 58
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	71.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	68.780
Medium Trucks:	68.350
Heavy Trucks:	67.607

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	-0.98	-2.18	-1.20	-0.51	0.000	0.000
Medium Trucks:	77.62	-18.22	-2.14	-1.20	-0.70	0.000	0.000
Heavy Trucks:	82.14	-22.18	-2.07	-1.20	-1.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.0	63.1	61.3	55.3	63.9	64.5
Medium Trucks:	56.1	54.6	48.2	46.6	55.1	55.3
Heavy Trucks:	56.7	55.3	46.2	47.5	55.8	56.0
Vehicle Noise:	66.0	64.2	61.6	56.4	65.0	65.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.0	63.1	61.3	55.3	63.9	64.5
Medium Trucks:	56.1	54.6	48.2	46.6	55.1	55.3
Heavy Trucks:	56.7	55.3	46.2	47.5	55.8	56.0
Vehicle Noise:	66.0	64.2	61.6	56.4	65.0	65.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: Madison Street
Lot No: Planning Area VIII-LDR
Project Name: The Wave
Job Number: 12462
Analyst: B. Lawson

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	45 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	1.0
Centerline Dist. to Barrier:	51.0 feet
Centerline Dist. to Observer:	71.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	68.780
Medium Trucks:	68.350
Heavy Trucks:	67.607

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.06	-2.18	-1.20	-0.51	0.000	0.000
Medium Trucks:	77.62	-16.18	-2.14	-1.20	-0.70	0.000	0.000
Heavy Trucks:	82.14	-20.13	-2.07	-1.20	-1.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.1	63.4	57.3	65.9	66.5
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4
Heavy Trucks:	58.7	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	68.1	66.3	63.7	58.5	67.0	67.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.1	63.4	57.3	65.9	66.5
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4
Heavy Trucks:	58.7	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	68.1	66.3	63.7	58.5	67.0	67.5

APPENDIX 10.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS

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CadnaA Noise Prediction Model: 12642_7.cna
Date: 22.04.20
Analyst: B. Lawson

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)
RECEIVERS		R1	46.6	40.8	48.3	65.0	50.0	0.0				5.00	a	6559701.83	2172082.13	5.00
RECEIVERS		R2	46.5	44.8	51.3	65.0	50.0	0.0				5.00	a	6561160.17	2172103.84	5.00
RECEIVERS		R3	43.8	41.5	48.1	65.0	50.0	0.0				5.00	a	6561607.22	2172116.86	5.00
RECEIVERS		R4	43.0	39.9	46.7	65.0	50.0	0.0				5.00	a	6561919.72	2171422.41	5.00
RECEIVERS		R5	42.1	36.7	44.1	65.0	50.0	0.0				5.00	a	6561963.81	2170753.38	5.00
RECEIVERS		R6	52.2	30.6	49.4	65.0	50.0	0.0				5.00	a	6561014.44	2167755.55	5.00
RECEIVERS		R7	46.0	27.9	43.5	65.0	50.0	0.0				5.00	a	6560134.29	2166770.74	5.00
RECEIVERS		R8	47.0	22.2	44.1	65.0	50.0	0.0				5.00	a	6559827.00	2166505.11	5.00
RECEIVERS		R9	41.5	22.5	38.9	65.0	50.0	0.0				5.00	a	6556013.28	2170127.57	5.00
RECEIVERS		R10	39.8	30.4	39.5	65.0	50.0	0.0				5.00	a	6557185.16	2172188.76	5.00
PRJRECEIVERS		P1	58.5	31.4	55.6	65.0	50.0	0.0				5.00	a	6558248.54	2169368.52	5.00
PRJRECEIVERS		P2	55.4	33.6	52.6	65.0	50.0	0.0				5.00	a	6560358.05	2168812.35	5.00
PRJRECEIVERS		P3	61.2	29.6	58.2	65.0	50.0	0.0				5.00	a	6558335.40	2168327.62	5.00
PRJRECEIVERS		P4	53.9	22.3	50.9	65.0	50.0	0.0				5.00	a	6559349.69	2167313.33	5.00
PRJRECEIVERS		P5	55.0	31.8	52.2	65.0	50.0	0.0				5.00	a	6560520.02	2168225.59	5.00
PRJRECEIVERS		P6	54.1	35.0	51.4	65.0	50.0	0.0				5.00	a	6559481.73	2169654.00	5.00
PRJRECEIVERS		P7	51.8	36.6	49.7	65.0	50.0	0.0				5.00	a	6560454.00	2169587.98	5.00
PRJRECEIVERS		P8	53.7	52.0	58.6	65.0	50.0	0.0				5.00	a	6560808.11	2171442.51	5.00
PRJRECEIVERS		P9	62.4	31.5	59.4	65.0	50.0	0.0				5.00	a	6558690.22	2168964.96	5.00
PRJRECEIVERS		P10	64.5	30.4	61.6	65.0	50.0	0.0				5.00	a	6559589.56	2167959.31	5.00

Area Source(s)

ID	Result. PWL			Result. PWL''			Lw / Li		Operating Time			Moving Pt. Src			Height
	Day	Evening	Night	Day	Evening	Night	Type	Value	Day	Special	Night	Number			
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
WAVE	112.3	112.3	112.3	63.3	63.3	63.3	Lw"	63.3	900.00	0.00	0.00				5
POOL	103.3	103.3	103.3	57.8	57.8	57.8	Lw"	57.8	900.00	0.00	0.00				5
GAME	84.3	84.3	84.3	43.4	43.4	43.4	Lw"	43.4	900.00	0.00	0.00				5
COMMERCIAL	99.6	99.6	99.6	54.8	54.8	54.8	Lw"	54.8	900.00	0.00	540.00				5

Name	Height			Coordinates			
	Begin		End	x	y	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	5.00	a		6558236.55	2169133.37	5.00	0.00
				6558251.42	2169142.54	5.00	0.00
				6558267.31	2169149.78	5.00	0.00
				6558283.98	2169154.98	5.00	0.00
				6558301.16	2169158.06	5.00	0.00
				6558318.60	2169158.98	5.00	0.00
				6558336.02	2169157.71	5.00	0.00
				6558353.14	2169154.28	5.00	0.00
				6558369.70	2169148.74	5.00	0.00
				6558385.44	2169141.18	5.00	0.00
				6558400.12	2169131.72	5.00	0.00
				6558435.14	2169103.86	5.00	0.00
				6558468.72	2169074.26	5.00	0.00
				6558500.75	2169043.00	5.00	0.00
				6558531.16	2169010.15	5.00	0.00
				6558559.87	2168975.82	5.00	0.00
				6558586.81	2168940.07	5.00	0.00
				6558611.51	2168895.01	5.00	0.00
				6558634.64	2168849.11	5.00	0.00
				6558656.15	2168802.43	5.00	0.00
				6558676.02	2168755.03	5.00	0.00
				6558680.23	2168738.82	5.00	0.00
				6558686.60	2168723.34	5.00	0.00
				6558695.01	2168708.86	5.00	0.00
				6558705.32	2168695.66	5.00	0.00
				6558717.33	2168683.99	5.00	0.00
				6558897.00	2168509.30	5.00	0.00
				6559075.57	2168333.49	5.00	0.00
				6559253.04	2168156.56	5.00	0.00
				6559429.40	2167978.53	5.00	0.00
				6559452.47	2167962.10	5.00	0.00
				6559476.93	2167947.83	5.00	0.00
				6559502.58	2167935.84	5.00	0.00
				6559529.22	2167926.22	5.00	0.00
				6559556.61	2167919.05	5.00	0.00
				6559583.34	2167909.42	5.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6559609.25	2167897.75	5.00	0.00
					6559634.18	2167884.12	5.00	0.00
					6559657.98	2167868.61	5.00	0.00
					6559680.52	2167851.31	5.00	0.00
					6559714.17	2167825.86	5.00	0.00
					6559746.60	2167798.87	5.00	0.00
					6559777.72	2167770.39	5.00	0.00
					6559807.49	2167740.49	5.00	0.00
					6559835.82	2167709.23	5.00	0.00
					6559850.27	2167695.76	5.00	0.00
					6559863.14	2167680.78	5.00	0.00
					6559874.29	2167664.48	5.00	0.00
					6559883.58	2167647.06	5.00	0.00
					6559890.90	2167628.71	5.00	0.00
					6559896.15	2167609.68	5.00	0.00
					6559899.29	2167590.18	5.00	0.00
					6559900.26	2167570.45	5.00	0.00
					6559897.10	2167551.51	5.00	0.00
					6559892.16	2167532.96	5.00	0.00
					6559885.50	2167514.95	5.00	0.00
					6559877.15	2167497.66	5.00	0.00
					6559867.21	2167481.24	5.00	0.00
					6559799.89	2167417.19	5.00	0.00
					6559731.74	2167354.02	5.00	0.00
					6559710.33	2167328.19	5.00	0.00
					6559687.16	2167303.92	5.00	0.00
					6559662.35	2167281.33	5.00	0.00
					6559117.12	2167821.00	5.00	0.00
					6558573.02	2168361.80	5.00	0.00
					6558030.04	2168903.73	5.00	0.00
AREASOURCE	5.00	a			6560031.78	2168962.36	5.00	0.00
					6560181.94	2168783.47	5.00	0.00
					6560029.61	2168652.28	5.00	0.00
					6559914.14	2168522.71	5.00	0.00
					6559575.47	2168140.72	5.00	0.00
					6559551.37	2168137.40	5.00	0.00
					6559493.20	2167947.91	5.00	0.00
					6559453.95	2167969.83	5.00	0.00
					6559409.39	2168010.75	5.00	0.00
					6558982.88	2168435.44	5.00	0.00
					6559100.09	2168547.96	5.00	0.00
					6559287.09	2168386.72	5.00	0.00
					6559482.36	2168622.99	5.00	0.00
					6559599.72	2168519.46	5.00	0.00
					6559843.67	2168794.31	5.00	0.00
AREASOURCE	5.00	a			6558439.55	2169176.11	5.00	0.00
					6558437.01	2169554.16	5.00	0.00
					6558495.37	2169546.54	5.00	0.00
					6558551.19	2169559.23	5.00	0.00
					6558749.09	2169412.07	5.00	0.00
					6558749.09	2169351.18	5.00	0.00
					6558764.32	2169280.14	5.00	0.00
					6558794.76	2169216.70	5.00	0.00
					6558596.86	2169011.19	5.00	0.00
AREASOURCE	5.00	a			6560600.13	2171905.47	5.00	0.00
					6561327.49	2171892.11	5.00	0.00
					6561350.10	2171875.67	5.00	0.00
					6561362.42	2171617.81	5.00	0.00
					6561376.81	2171481.17	5.00	0.00
					6561395.30	2171370.22	5.00	0.00
					6561237.09	2171332.21	5.00	0.00
					6561169.28	2171311.66	5.00	0.00
					6561164.15	2171339.40	5.00	0.00
					6560600.13	2171698.97	5.00	0.00

Barrier(s)

Name	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)
BARRIERS		BARRIERS00001						6.00	a		6556068.34	2169655.74	6.00	0.00
											6556072.25	2169787.25	6.00	0.00
											6556087.88	2170034.64	6.00	0.00
											6556095.69	2170198.70	6.00	0.00
											6556095.69	2170295.06	6.00	0.00
											6556056.63	2170382.30	6.00	0.00
											6555961.57	2170490.37	6.00	0.00

Name	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)
											6555886.05	2170543.76	6.00	0.00
BARRIERS		BARRIERS00002						6.00	a		6557284.27	2172169.91	6.00	0.00
											6557254.76	2172131.72	6.00	0.00
											6557208.75	2172123.04	6.00	0.00
											6557131.50	2172067.48	6.00	0.00
											6557060.31	2172050.99	6.00	0.00
											6556932.71	2172050.99	6.00	0.00
											6556792.95	2172051.86	6.00	0.00
											6556711.36	2172079.64	6.00	0.00
BARRIERS		BARRIERS00003						6.00	a		6557153.20	2172059.67	6.00	0.00
											6557222.64	2172046.65	6.00	0.00
											6557325.94	2172044.91	6.00	0.00
											6557427.50	2172050.12	6.00	0.00
BARRIERS		BARRIERS00004						6.00	a		6561351.48	2172027.86	6.00	0.00
											6561102.87	2172020.92	6.00	0.00
											6561104.95	2172050.09	6.00	0.00
											6560961.89	2172050.78	6.00	0.00
											6560757.73	2172048.00	6.00	0.00
BARRIERS		BARRIERS00005						6.00	a		6561761.78	2172032.47	6.00	0.00
											6561668.72	2172044.27	6.00	0.00
											6561565.95	2172042.88	6.00	0.00
											6561527.75	2172067.19	6.00	0.00
											6561507.61	2172141.49	6.00	0.00
											6561504.14	2172241.49	6.00	0.00
											6561506.92	2172305.38	6.00	0.00
BARRIERS		BARRIERS00006						6.00	a		6562036.78	2171815.10	6.00	0.00
											6562077.75	2171758.85	6.00	0.00
											6561990.25	2171672.05	6.00	0.00
											6561978.45	2171678.30	6.00	0.00
											6561885.39	2171597.74	6.00	0.00
											6561777.06	2171550.52	6.00	0.00
											6561777.75	2171540.80	6.00	0.00
											6561698.58	2171485.24	6.00	0.00
											6561619.42	2171384.55	6.00	0.00
											6561618.03	2171366.49	6.00	0.00
											6561622.89	2171360.94	6.00	0.00
											6561606.92	2171297.74	6.00	0.00
BARRIERS		BARRIERS00007						6.00	a		6561650.93	2171132.10	6.00	0.00
											6561698.67	2171027.94	6.00	0.00
											6561730.14	2170950.90	6.00	0.00
											6561778.97	2170829.37	6.00	0.00
											6561832.14	2170754.50	6.00	0.00
											6561854.92	2170726.29	6.00	0.00
											6561861.43	2170734.97	6.00	0.00
											6561913.52	2170592.82	6.00	0.00
											6561937.39	2170571.12	6.00	0.00
											6561958.00	2170535.32	6.00	0.00
BARRIERS		BARRIERS00008						6.00	a		6561606.92	2171297.74	6.00	0.00
											6561606.67	2171224.32	6.00	0.00
											6561616.63	2171169.23	6.00	0.00
											6561631.23	2171167.24	6.00	0.00
											6561650.93	2171132.10	6.00	0.00
BARRIERS		BARRIERS00009						6.00	a		6560093.69	2166604.65	6.00	0.00
											6560092.73	2166983.08	6.00	0.00

Ground Absorption(s)

Name	M.	ID	G	Coordinates	
				x	y
				(ft)	(ft)
GROUND		0	1.0	6558802.37	2167864.72
				6558996.92	2167822.26
				6559662.48	2167250.25
				6559909.37	2167450.59
				6560022.45	2167364.58
				6560089.35	2167366.17
				6560082.98	2166545.88
				6559426.75	2166545.88
				6558818.29	2166794.36

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APPENDIX 11.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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13103

CadnaA Noise Prediction Model: 12642_ConstructionP1.cna
Date: 22.04.20
Analyst: B. Lawson

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)
RECEIVERS		R1	65.6	65.6	72.3	85.0	0.0	0.0				5.00	a	6559701.83	2172082.13	5.00
RECEIVERS		R2	65.8	65.8	72.4	85.0	0.0	0.0				5.00	a	6561160.17	2172103.84	5.00
RECEIVERS		R3	63.0	63.0	69.7	85.0	0.0	0.0				5.00	a	6561607.22	2172116.86	5.00
RECEIVERS		R4	62.3	62.3	69.0	85.0	0.0	0.0				5.00	a	6561919.72	2171422.41	5.00
RECEIVERS		R5	61.6	61.6	68.3	85.0	0.0	0.0				5.00	a	6561963.81	2170753.38	5.00
RECEIVERS		R6	71.3	71.3	78.0	85.0	0.0	0.0				5.00	a	6561014.44	2167755.55	5.00
RECEIVERS		R7	72.5	72.5	79.1	85.0	0.0	0.0				5.00	a	6560134.29	2166770.74	5.00
RECEIVERS		R8	76.5	76.5	83.2	85.0	0.0	0.0				5.00	a	6559827.00	2166505.11	5.00
RECEIVERS		R9	58.7	58.7	65.4	85.0	0.0	0.0				5.00	a	6556013.28	2170127.57	5.00
RECEIVERS		R10	58.0	58.0	64.6	85.0	0.0	0.0				5.00	a	6557185.16	2172188.76	5.00

Area Source(s)

ID	Result. PWL			Result. PWL''			Lw / Li		Operating Time			Moving Pt. Src			Height
	Day	Evening	Night	Day	Evening	Night	Type	Value	Day	Special	Night	Number			
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
ABSORPTION00001	132.1	132.1	132.1	75.3	75.3	75.3	Lw''	75.3							8
ABSORPTION00002	120.2	120.2	120.2	75.3	75.3	75.3	Lw''	75.3							8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
ABSORPTION	8.00	a			6557934.33	2168936.33	8.00	0.00
					6558256.13	2169202.16	8.00	0.00
					6558429.62	2169196.57	8.00	0.00
					6558438.01	2169563.14	8.00	0.00
					6558555.54	2169563.14	8.00	0.00
					6558745.82	2169409.23	8.00	0.00
					6558785.00	2169484.79	8.00	0.00
					6558880.14	2169568.73	8.00	0.00
					6558936.10	2169599.52	8.00	0.00
					6559056.43	2169599.52	8.00	0.00
					6559702.83	2169543.55	8.00	0.00
					6559800.77	2169487.59	8.00	0.00
					6559823.15	2169423.23	8.00	0.00
					6559828.75	2169344.87	8.00	0.00
					6559825.95	2169269.32	8.00	0.00
					6559851.13	2169202.16	8.00	0.00
					6559915.49	2169115.42	8.00	0.00
					6560150.55	2169302.90	8.00	0.00
					6560200.92	2169370.06	8.00	0.00
					6560248.49	2169336.48	8.00	0.00
					6560878.10	2169328.08	8.00	0.00
					6560880.89	2168919.54	8.00	0.00
					6560879.41	2168899.56	8.00	0.00
					6560875.68	2168879.87	8.00	0.00
					6560869.76	2168860.73	8.00	0.00
					6560861.71	2168842.39	8.00	0.00
					6560851.64	2168825.07	8.00	0.00
					6560839.68	2168809.00	8.00	0.00
					6560825.98	2168794.38	8.00	0.00
					6560810.71	2168781.40	8.00	0.00
					6560794.08	2168770.22	8.00	0.00
					6560776.30	2168761.00	8.00	0.00
					6560757.58	2168753.84	8.00	0.00
					6560738.18	2168748.84	8.00	0.00
					6560547.90	2168751.64	8.00	0.00
					6560447.16	2168734.85	8.00	0.00
					6560312.85	2168639.71	8.00	0.00
					6560421.98	2168505.40	8.00	0.00
					6560433.99	2168479.82	8.00	0.00
					6560443.75	2168453.31	8.00	0.00
					6560451.21	2168426.06	8.00	0.00
					6560456.30	2168398.27	8.00	0.00
					6560458.99	2168370.15	8.00	0.00
					6560459.25	2168341.90	8.00	0.00
					6560457.09	2168313.73	8.00	0.00
					6560452.52	2168285.85	8.00	0.00
					6560445.57	2168258.46	8.00	0.00
					6560436.30	2168231.78	8.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6560424.78	2168205.98	8.00	0.00
					6560262.48	2168029.69	8.00	0.00
					6560237.74	2168020.87	8.00	0.00
					6560213.84	2168009.97	8.00	0.00
					6560190.95	2167997.09	8.00	0.00
					6560169.23	2167982.32	8.00	0.00
					6560148.85	2167965.76	8.00	0.00
					6560129.94	2167947.52	8.00	0.00
					6560112.65	2167927.75	8.00	0.00
					6560097.09	2167906.59	8.00	0.00
					6560083.39	2167884.18	8.00	0.00
					6560091.78	2166546.61	8.00	0.00
					6559428.60	2166546.61	8.00	0.00
					6558812.98	2166798.46	8.00	0.00
					6558790.59	2167912.16	8.00	0.00
ABSORPTION	8.00	a			6560597.19	2171907.41	8.00	0.00
					6561333.34	2171899.09	8.00	0.00
					6561352.76	2171878.74	8.00	0.00
					6561357.38	2171666.04	8.00	0.00
					6561372.18	2171550.44	8.00	0.00
					6561373.10	2171506.97	8.00	0.00
					6561396.22	2171365.48	8.00	0.00
					6561170.57	2171310.91	8.00	0.00
					6561165.02	2171342.36	8.00	0.00
					6560599.04	2171700.26	8.00	0.00

Barrier(s)

Name	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)
BARRIERS		BARRIERS00001						6.00	a		6556068.34	2169655.74	6.00	0.00
											6556072.25	2169787.25	6.00	0.00
											6556087.88	2170034.64	6.00	0.00
											6556095.69	2170198.70	6.00	0.00
											6556095.69	2170295.06	6.00	0.00
											6556056.63	2170382.30	6.00	0.00
											6555961.57	2170490.37	6.00	0.00
											6555886.05	2170543.76	6.00	0.00
BARRIERS		BARRIERS00002						6.00	a		6557284.27	2172169.91	6.00	0.00
											6557254.76	2172131.72	6.00	0.00
											6557208.75	2172123.04	6.00	0.00
											6557131.50	2172067.48	6.00	0.00
											6557060.31	2172050.99	6.00	0.00
											6556932.71	2172050.99	6.00	0.00
											6556792.95	2172051.86	6.00	0.00
											6556711.36	2172079.64	6.00	0.00
BARRIERS		BARRIERS00003						6.00	a		6557153.20	2172059.67	6.00	0.00
											6557222.64	2172046.65	6.00	0.00
											6557325.94	2172044.91	6.00	0.00
											6557427.50	2172050.12	6.00	0.00
BARRIERS		BARRIERS00004						6.00	a		6561351.48	2172027.86	6.00	0.00
											6561102.87	2172020.92	6.00	0.00
											6561104.95	2172050.09	6.00	0.00
											6560961.89	2172050.78	6.00	0.00
											6560757.73	2172048.00	6.00	0.00
BARRIERS		BARRIERS00005						6.00	a		6561761.78	2172032.47	6.00	0.00
											6561668.72	2172044.27	6.00	0.00
											6561565.95	2172042.88	6.00	0.00
											6561527.75	2172067.19	6.00	0.00
											6561507.61	2172141.49	6.00	0.00
											6561504.14	2172241.49	6.00	0.00
											6561506.92	2172305.38	6.00	0.00
BARRIERS		BARRIERS00006						6.00	a		6562036.78	2171815.10	6.00	0.00
											6562077.75	2171758.85	6.00	0.00
											6561990.25	2171672.05	6.00	0.00
											6561978.45	2171678.30	6.00	0.00
											6561885.39	2171597.74	6.00	0.00
											6561777.06	2171550.52	6.00	0.00
											6561777.75	2171540.80	6.00	0.00
											6561698.58	2171485.24	6.00	0.00
											6561619.42	2171384.55	6.00	0.00
											6561618.03	2171366.49	6.00	0.00
											6561622.89	2171360.94	6.00	0.00
											6561606.92	2171297.74	6.00	0.00
BARRIERS		BARRIERS00007						6.00	a		6561650.93	2171132.10	6.00	0.00
											6561698.67	2171027.94	6.00	0.00

Name	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)
											6561730.14	2170950.90	6.00	0.00
											6561778.97	2170829.37	6.00	0.00
											6561832.14	2170754.50	6.00	0.00
											6561854.92	2170726.29	6.00	0.00
											6561861.43	2170734.97	6.00	0.00
											6561913.52	2170592.82	6.00	0.00
											6561937.39	2170571.12	6.00	0.00
											6561958.00	2170535.32	6.00	0.00
BARRIERS		BARRIERS00008						6.00	a		6561606.92	2171297.74	6.00	0.00
											6561606.67	2171224.32	6.00	0.00
											6561616.63	2171169.23	6.00	0.00
											6561631.23	2171167.24	6.00	0.00
											6561650.93	2171132.10	6.00	0.00
BARRIERS		BARRIERS00009						6.00	a		6560093.69	2166604.65	6.00	0.00
											6560092.73	2166983.08	6.00	0.00

13103

CadnaA Noise Prediction Model: 12642_ConstructionP23.cna
Date: 22.04.20
Analyst: B. Lawson

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)
RECEIVERS		R1	74.8	74.8	81.5	85.0	0.0	0.0				5.00	a	6559701.83	2172082.13	5.00
RECEIVERS		R2	69.9	69.9	76.6	85.0	0.0	0.0				5.00	a	6561160.17	2172103.84	5.00
RECEIVERS		R3	67.9	67.9	74.6	85.0	0.0	0.0				5.00	a	6561607.22	2172116.86	5.00
RECEIVERS		R4	68.8	68.8	75.5	85.0	0.0	0.0				5.00	a	6561919.72	2171422.41	5.00
RECEIVERS		R5	70.6	70.6	77.2	85.0	0.0	0.0				5.00	a	6561963.81	2170753.38	5.00
RECEIVERS		R6	75.8	75.8	82.5	85.0	0.0	0.0				5.00	a	6561014.44	2167755.55	5.00
RECEIVERS		R7	68.6	68.6	75.3	85.0	0.0	0.0				5.00	a	6560134.29	2166770.74	5.00
RECEIVERS		R8	67.5	67.5	74.2	85.0	0.0	0.0				5.00	a	6559827.00	2166505.11	5.00
RECEIVERS		R9	63.7	63.7	70.3	85.0	0.0	0.0				5.00	a	6556013.28	2170127.57	5.00
RECEIVERS		R10	64.0	64.0	70.7	85.0	0.0	0.0				5.00	a	6557185.16	2172188.76	5.00
PRJRECEIVERS		P1	82.8	82.8	89.5	85.0	0.0	0.0				5.00	a	6558248.54	2169368.52	5.00
PRJRECEIVERS		P2	76.8	76.8	83.4	85.0	0.0	0.0				5.00	a	6560358.05	2168812.35	5.00
PRJRECEIVERS		P3	82.3	82.3	89.0	85.0	0.0	0.0				5.00	a	6558335.40	2168327.62	5.00
PRJRECEIVERS		P4	70.6	70.6	77.3	85.0	0.0	0.0				5.00	a	6559349.69	2167313.33	5.00
PRJRECEIVERS		P5	82.5	82.5	89.1	85.0	0.0	0.0				5.00	a	6560520.02	2168225.59	5.00
PRJRECEIVERS		P6	82.9	82.9	89.5	85.0	0.0	0.0				5.00	a	6559481.73	2169654.00	5.00
PRJRECEIVERS		P7	83.2	83.2	89.9	85.0	0.0	0.0				5.00	a	6560454.00	2169587.98	5.00
PRJRECEIVERS		P8	83.1	83.1	89.8	85.0	0.0	0.0				5.00	a	6560808.11	2171442.51	5.00
PRJRECEIVERS		P9	75.3	75.3	82.0	85.0	0.0	0.0				5.00	a	6558690.22	2168964.96	5.00
PRJRECEIVERS		P10	72.6	72.6	79.3	85.0	0.0	0.0				5.00	a	6559589.56	2167959.31	5.00

Area Source(s)

ID	Result. PWL			Result. PWL''			Lw / Li		Operating Time			Moving Pt. Src			Height
	Day	Evening	Night	Day	Evening	Night	Type	Value	Day	Special	Night	Number			
	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			(min)	(min)	(min)	Day	Evening	Night	(ft)
P2P3CONSTRUCTION00002	0.0	0.0	0.0	0.0	0.0	0.0	Lw''								0
P2P3CONSTRUCTION00002	135.7	135.7	135.7	75.3	75.3	75.3	Lw''	75.3							8

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
P2P3CONSTRUCTION	0.00	a			6561352.29	2171907.14	0.00	0.00
					6561351.77	2171917.28	0.00	0.00
					6561352.08	2171917.24	0.00	0.00
P2P3CONSTRUCTION	8.00	a			6561351.52	2171922.05	8.00	0.00
					6561351.77	2171917.28	8.00	0.00
					6561393.19	2171387.33	8.00	0.00
					6561448.74	2171172.05	8.00	0.00
					6561525.13	2170963.71	8.00	0.00
					6561650.13	2170692.88	8.00	0.00
					6561733.46	2170533.16	8.00	0.00
					6561851.52	2170331.77	8.00	0.00
					6561914.02	2170206.77	8.00	0.00
					6562011.24	2169949.83	8.00	0.00
					6562087.63	2169685.94	8.00	0.00
					6562122.35	2169428.99	8.00	0.00
					6562129.30	2169102.60	8.00	0.00
					6562108.46	2168838.71	8.00	0.00
					6562073.74	2168678.99	8.00	0.00
					6561983.46	2168387.33	8.00	0.00
					6561858.46	2168095.66	8.00	0.00
					6561712.63	2167845.66	8.00	0.00
					6561594.57	2167623.44	8.00	0.00
					6561518.19	2167435.94	8.00	0.00
					6561441.80	2167158.16	8.00	0.00
					6561434.85	2167887.33	8.00	0.00
					6560093.22	2167888.99	8.00	0.00
					6560083.39	2167884.18	8.00	0.00
					6560097.09	2167906.59	8.00	0.00
					6560112.65	2167927.75	8.00	0.00
					6560129.94	2167947.52	8.00	0.00
					6560148.85	2167965.76	8.00	0.00
					6560169.23	2167982.32	8.00	0.00
					6560190.95	2167997.09	8.00	0.00
					6560213.84	2168009.97	8.00	0.00
					6560237.74	2168020.87	8.00	0.00
					6560262.48	2168029.69	8.00	0.00
					6560424.78	2168205.98	8.00	0.00
					6560436.30	2168231.78	8.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6560445.57	2168258.46	8.00	0.00
					6560452.52	2168285.85	8.00	0.00
					6560457.09	2168313.73	8.00	0.00
					6560459.25	2168341.90	8.00	0.00
					6560458.99	2168370.15	8.00	0.00
					6560456.30	2168398.27	8.00	0.00
					6560451.21	2168426.06	8.00	0.00
					6560443.75	2168453.31	8.00	0.00
					6560433.99	2168479.82	8.00	0.00
					6560421.98	2168505.40	8.00	0.00
					6560312.85	2168639.71	8.00	0.00
					6560447.16	2168734.85	8.00	0.00
					6560547.90	2168751.64	8.00	0.00
					6560738.18	2168748.84	8.00	0.00
					6560757.58	2168753.84	8.00	0.00
					6560776.30	2168761.00	8.00	0.00
					6560794.08	2168770.22	8.00	0.00
					6560810.71	2168781.40	8.00	0.00
					6560825.98	2168794.38	8.00	0.00
					6560839.68	2168809.00	8.00	0.00
					6560851.64	2168825.07	8.00	0.00
					6560861.71	2168842.39	8.00	0.00
					6560869.76	2168860.73	8.00	0.00
					6560875.68	2168879.87	8.00	0.00
					6560879.41	2168899.56	8.00	0.00
					6560880.89	2168919.54	8.00	0.00
					6560878.10	2169328.08	8.00	0.00
					6560248.49	2169336.48	8.00	0.00
					6560200.92	2169370.06	8.00	0.00
					6560150.55	2169302.90	8.00	0.00
					6559915.49	2169115.42	8.00	0.00
					6559851.13	2169202.16	8.00	0.00
					6559825.95	2169269.32	8.00	0.00
					6559828.75	2169344.87	8.00	0.00
					6559823.15	2169423.23	8.00	0.00
					6559800.77	2169487.59	8.00	0.00
					6559702.83	2169543.55	8.00	0.00
					6559056.43	2169599.52	8.00	0.00
					6558936.10	2169599.52	8.00	0.00
					6558880.14	2169568.73	8.00	0.00
					6558785.00	2169484.79	8.00	0.00
					6558745.82	2169409.23	8.00	0.00
					6558555.54	2169563.14	8.00	0.00
					6558438.01	2169563.14	8.00	0.00
					6558429.62	2169196.57	8.00	0.00
					6558256.13	2169202.16	8.00	0.00
					6557934.33	2168936.33	8.00	0.00
					6558790.59	2167912.16	8.00	0.00
					6558789.02	2167901.22	8.00	0.00
					6557490.41	2167915.10	8.00	0.00
					6557455.69	2170838.71	8.00	0.00
					6559601.52	2170817.88	8.00	0.00
					6559594.57	2171928.99	8.00	0.00

Barrier(s)

Name	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)
BARRIERS		BARRIERS00001						6.00	a		6556068.34	2169655.74	6.00	0.00
											6556072.25	2169787.25	6.00	0.00
											6556087.88	2170034.64	6.00	0.00
											6556095.69	2170198.70	6.00	0.00
											6556095.69	2170295.06	6.00	0.00
											6556056.63	2170382.30	6.00	0.00
											6555961.57	2170490.37	6.00	0.00
											6555886.05	2170543.76	6.00	0.00
BARRIERS		BARRIERS00002						6.00	a		6557284.27	2172169.91	6.00	0.00
											6557254.76	2172131.72	6.00	0.00
											6557208.75	2172123.04	6.00	0.00
											6557131.50	2172067.48	6.00	0.00
											6557060.31	2172050.99	6.00	0.00
											6556932.71	2172050.99	6.00	0.00
											6556792.95	2172051.86	6.00	0.00
											6556711.36	2172079.64	6.00	0.00
BARRIERS		BARRIERS00003						6.00	a		6557153.20	2172059.67	6.00	0.00
											6557222.64	2172046.65	6.00	0.00

Name	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)
											6557325.94	2172044.91	6.00	0.00
											6557427.50	2172050.12	6.00	0.00
BARRIERS		BARRIERS00004						6.00	a		6561351.48	2172027.86	6.00	0.00
											6561102.87	2172020.92	6.00	0.00
											6561104.95	2172050.09	6.00	0.00
											6560961.89	2172050.78	6.00	0.00
											6560757.73	2172048.00	6.00	0.00
BARRIERS		BARRIERS00005						6.00	a		6561761.78	2172032.47	6.00	0.00
											6561668.72	2172044.27	6.00	0.00
											6561565.95	2172042.88	6.00	0.00
											6561527.75	2172067.19	6.00	0.00
											6561507.61	2172141.49	6.00	0.00
											6561504.14	2172241.49	6.00	0.00
											6561506.92	2172305.38	6.00	0.00
BARRIERS		BARRIERS00006						6.00	a		6562036.78	2171815.10	6.00	0.00
											6562077.75	2171758.85	6.00	0.00
											6561990.25	2171672.05	6.00	0.00
											6561978.45	2171678.30	6.00	0.00
											6561885.39	2171597.74	6.00	0.00
											6561777.06	2171550.52	6.00	0.00
											6561777.75	2171540.80	6.00	0.00
											6561698.58	2171485.24	6.00	0.00
											6561619.42	2171384.55	6.00	0.00
											6561618.03	2171366.49	6.00	0.00
											6561622.89	2171360.94	6.00	0.00
											6561606.92	2171297.74	6.00	0.00
BARRIERS		BARRIERS00007						6.00	a		6561650.93	2171132.10	6.00	0.00
											6561698.67	2171027.94	6.00	0.00
											6561730.14	2170950.90	6.00	0.00
											6561778.97	2170829.37	6.00	0.00
											6561832.14	2170754.50	6.00	0.00
											6561854.92	2170726.29	6.00	0.00
											6561861.43	2170734.97	6.00	0.00
											6561913.52	2170592.82	6.00	0.00
											6561937.39	2170571.12	6.00	0.00
											6561958.00	2170535.32	6.00	0.00
BARRIERS		BARRIERS00008						6.00	a		6561606.92	2171297.74	6.00	0.00
											6561606.67	2171224.32	6.00	0.00
											6561616.63	2171169.23	6.00	0.00
											6561631.23	2171167.24	6.00	0.00
											6561650.93	2171132.10	6.00	0.00
BARRIERS		BARRIERS00009						6.00	a		6560093.69	2166604.65	6.00	0.00
											6560092.73	2166983.08	6.00	0.00