APPENDIX 9

Noise Analysis



Airport Gateway Specific Plan

NOISE IMPACT ANALYSIS CITIES OF SAN BERNARDINO AND HIGHLAND

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13635-05 Noise Study



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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
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L _{eq}	Equivalent continuous (average) sound level
L _{max}	Maximum level measured over the time interval
L _{min}	Minimum level measured over the time interval
mph	Miles per hour
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Airport Gateway 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 potential noise impacts and the necessary noise mitigation measures, if any, for Airport Gateway Specific Plan development ("Project"). The Project area covers approximately 679.2 acres with parcels in both the City of Highland and the City of San Bernardino. At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown, and therefore, this noise study includes a conservative analysis of the proposed Project uses. This study has been prepared to satisfy applicable Cities of San Bernardino and Highland standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

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

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS



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1 INTRODUCTION

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

1.1 SITE LOCATION

The Airport Gateway Specific Plan Project is located immediately north of the San Bernardino International Airport (SBIA) west. The Specific Plan area is bounded generally by 6th Street and Highland Creek on the north, 3rd Street and the SBIA on the south, State Route 210 (SR-210) on the east, and Tippecanoe Avenue on the west as shown on Exhibit 1-A. North of the Specific Plan area (on the north side of 6th Street) is bordered by a mix of low- and medium-density residential uses and vacant parcels, as well as several public facilities including Indian Springs High School, Cypress Elementary School, Highland Community Park and the Highland Branch Library.

1.2 PROJECT DESCRIPTION

The Project area covers approximately 679.2 acres. The Specific Plan area includes parcels in both the City of Highland (485 acres) and the City of San Bernardino (194.2 acres). The Specific Plan area is depicted on Exhibit 1-B.

The existing uses within the Specific Plan area include single-family and multi-family residential, small-lot commercial, educational facilities, and industrial uses. Vacant parcels make up approximately 209 acres of the Specific Plan area. The AGSP would replace the existing uses within the Specific Plan area with approximately 9.2 million square feet of Industrial Mixed Uses, consisting of industrial warehouse, high-cube logistics warehouse, tech business park, and a small amount of commercial/retail/hotel uses. Development of the Specific Plan area will be accomplished over time, as market conditions allow, and as developers are successful in assembling individual parcels into parcels large enough for the allowed uses.

The on-site Project-related operations are expected to include a combination of noise source activities that will likely include: loading dock activity, delivery van activity, roof-top air conditioning units, parking lot vehicle activity, and trash enclosure activity. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project will operate 24-hours daily for seven days per week.





EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140		
NEAR JET ENGINE		130	INTOLERABLE OR	
		120	DEAFENING	HEARING LOSS
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100		
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	CLEED
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30		
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT	
	BROADCAST/RECORDING STUDIO	10		NO EFFECT
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

EXHIBIT 2-A: TYPICAL NOISE LEVELS

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

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

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the 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 Cities of San Bernardino and Highland relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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



2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearest residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (4)

2.3.5 REFLECTION

Field studies conducted by the FHWA have shown that the reflection from barriers and buildings does not substantially increase noise levels. (4) If all the noise striking a structure was reflected back to a given receiving point, the increase would be theoretically limited to 3 dBA. Further, not all the acoustical energy is reflected back to same point. Some of the energy would go over the structure, some is reflected to points other than the given receiving point, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by intervening structures and/or obstacles (e.g., the noise source itself). Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify



reflective increases in traffic noise have not shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear.

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. (4)

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. (5)

2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (6) 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. (6) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (4)





2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (7), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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



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



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

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

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

3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (8) 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 GREEN BUILDING STANDARDS CODE

The State of California's Green Building Standards Code (CALGreen) contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (9) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level of 50 dBA L_{eq} in occupied areas during any hour of operation (Section 5.507.4.2).

3.3 CITY OF SAN BERNARDINO GENERAL PLAN NOISE ELEMENT

The City of San Bernardino General Plan Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community. (10) The Noise Element provides policy guidance which addresses the generation, mitigation, avoidance, and the control of excessive noise. To protect the City of San Bernardino residents from excessive noise levels, the Noise Element contains the following three goals:

- 14.1 Ensure that residents are protected from excessive noise through careful land planning.
- 14.2 Encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations, and railroad movements.
- 14.3 Protect residents from the negative effects of "spill over" or nuisance noise.

The noise policies specified in the Noise Element provide the guidelines necessary to satisfy these goals. To ensure that residents are not exposed to excessive noise levels (Goal 14.1), Policies 14.1.1 to 14.1.4 indicate that sensitive land uses such as housing, health care facilities, schools, libraries, and religious facilities should not experience exterior noise levels greater than 65 dBA LDN for exterior areas and 45 dBA LDN for interior areas. As discussed in Section 2.2 the more conservative CNEL descriptor is used in this analysis, and therefore, the exterior noise level criteria of 65 dBA CNEL and interior noise level criteria of 45 dBA CNEL shall apply to sensitive land uses. Policies 14.2.1 to 14.2.19 outline the transportation-related guidelines and mitigation strategies the City uses to satisfy Goal 14.2. To protect residents from sources of operational and construction noise (Goal 14.3), the Noise Element includes Policies 14.3.1 to 14.3.8 to adopt a Noise Ordinance and ensure noise issues between land uses are reduced. (10)

3.3.1 LAND USE COMPATIBILITY

The noise criteria identified in the City of San Bernardino Noise Element (Figure N-1) 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 Exposure* guidelines indicate that industrial land uses, such as the Project, are considered *normally acceptable* with noise levels below 75 dBA CNEL and *conditionally acceptable* with noise levels of less than 80 dBA CNEL.

3.3.2 TRANSPORTATION NOISE STANDARDS

To encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations and railroad movements (Goal 14.2), Table N-3 of the City of San Bernardino General Plan Noise Element, shown on Exhibit 3-B, identifies a maximum allowable exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments. While the City specifically identifies an exterior noise level limit for noise-sensitive residential land uses such as hotels, hospitals, schools, and parks, the City of San Bernardino does not maintain exterior noise standards for non-noise sensitive land uses such as manufacturing, warehousing, wholesale and utilities.



COMMUNITY NOISE EXPOSURE LEVEL Ldn or CNEL, dBA

		55	60	65	70	75	80
Residential-Low Density		_	_				
Single Family, Duplex, Mobile Homes			- T	1		_	
Residential-Multiple Family	1		_	_		_	
			1	4		_	
Transient Lodging-Motels, Hotels		-		_			
				- Î			_
						1	
Schools, Libraries, Churches, Hospitals,		-	_				
Nursing Homes							_
						T	
Auditoriums, Concert Halls, Amphitheaters		-					
					T	7	1
Sports Arena, Outdoor Spectator Sports	1	-			-	-	
					-	-	
Playgrounds, Neighborhood Parks		-	_		_		
							_
Golf Courses, Riding Stables, Water Recreati	ion,	-					
Cemeteries						T	
Office Buildings, Businesses, Commercial,		1				_	
and Professional							
T. J							
Agriculture		1		and the second s			
				1			
Legend:		÷				•	
Normally Acceptable: Specified land use is satisfactory based upon New construction or development	opment should be	Ne	v construction or	ceptable: development should	generally	Clearly U New construct	nacceptable: tion or development should
uce assumption that any buildings involved are 'undertaken only after a det of normal conventional construction, without the noise reduction require any special noise insulation frequirements.	tailed analysis of ments is made and atures included in	be doc red	ascouraged. If ne s proceed, a detail action requirement	w construction or e led analysis of the r is must be made wi	evelopment oise th needed	generally not costs to make acceptable we	be undertaken. Construction the indoor environment ould be prohibitive and the
the design. Conventional of with closed windows and f source: California Office of Noise Control systems or air conditioning.	construction, but fresh air supply a will normally	noi Ou	se insulation featu idoor areas must b	res included in the e shielded.	design.	outdoor envir	onment would not be usable

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

Source: City of San Bernardino General Plan Noise Element, Figure N-1.

LAND USE CATEGORY

	CNEL (dBA)		
Categories	Uses	Interior ¹	Exterior ²
Residential	Single and multi-family, duplex	45 ³	65
	Mobile homes		65 ⁴
	Hotel, motel, transient housing	45	
	Commercial retail, bank, restaurant	55	
	Office building, research and	50	
	development, professional offices		
	Amphitheater, concert hall, auditorium,	45	
Commercial	movie theater		
	Gymnasium (Multipurpose)	50	
	Sports Club	55	
	Manufacturing, warehousing, wholesale,	65	
	utilities		
	Movie Theaters	45	
Institutional/	Hospital, school classrooms/playgrounds	45	65
Public	Church, library	45	
Open Space	Parks		65

EXHIBIT 3-B: INTERIOR AND EXTERIOR NOISE STANDARDS

¹ Indoor environment excluding: bathrooms, kitchens, toilets, closets, and corridors

² Outdoor environment limited to:

- Private yard of single-family dwellings
- Multi-family private patios or balconies accessed from within the dwelling (Balconies 6 feet deep or less are exempt)
- Mobile home parks
- Park picnic areas
- School playgrounds
- Hospital patios

³ Noise level requirement with closed windows, mechanical ventilation or other means of natural ventilation shall be provided as per Chapter 12, Section 1205 of the Uniform Building Code.

⁴ Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

Source: City of San Bernardino General Plan Noise Element, Table N-3.



3.4 OPERATIONAL NOISE STANDARDS

To describe the potential Project-related operational noise level contributions, this analysis presents the appropriate operational noise standards for both the Cities of San Bernardino and Highland.

3.4.1 CITY OF SAN BERNARDINO

To analyze noise impacts originating from a designated fixed location or private property such as the AGSP, operational source noise is typically evaluated against standards established under a City's Municipal Code. While the City of San Bernardino maintains several policies in the Municipal Code Noise Control Ordinance to control the negative effects of nuisance noise, it does not identify specific exterior noise level limits. However, the policies in the Municipal Code Development Code, Chapter 19.20, *Property Development Standards* contain the exterior and interior noise level standards for residential land uses. Therefore, the stationary noise sources such as loading dock activity, delivery van activity, roof-top air conditioning units, parking lot vehicle activity, and trash enclosure activity originating from a designated fixed location or private property such as AGSP Development Site, are evaluated against the policies adopted in the City's Development Code. (11)

The Project operational noise impacts are governed by the City of San Bernardino Municipal Code, Section 8.54. Section 8.54.060 states when: *such noises are an accompaniment and effect of a lawful business, commercial or industrial enterprise carried on in an area zoned for that purpose*...these activities shall be exempt (Section 8.54.060(B)). (12) However, due to the Project's close proximity to residential land uses, located north of the Development Site boundary, Development Code, Section 19.20.030.15(A), limits the operational stationary-source noise from Airport Gateway Specific Plan Project to an exterior noise level of 65 dBA L_{eq} for residential land use. (11) The City of San Bernardino Municipal Code noise standards are shown on Table 3-1 and included in Appendix 3.1.

3.4.2 CITY OF HIGHLAND

The currently adopted City of Highland Municipal Code does not identify any quantifiable exterior noise level standards for non-transportation (stationary) noise sources. The 24-hour Community Noise Equivalent Levels (CNEL) outlined in Tables 7.1 and 7.2 in the City of Highland General Plan Noise Element do not reflect the currently adopted Municipal Code Noise Criteria. Therefore, this analysis relies on the City of San Bernardino Development Code noise standards to assess the noise impacts for receivers located within the City of Highland. The currently adopted City of Highland Municipal is included in Appendix 3.2 and the City of Highland General Plan Noise Element is included in Appendix 3.3.





Jurisdiction	Land Use	Exterior Noise Level Standard (dBA L _{eq}) ¹
City of San Bernardino ¹	Residential	65
City of Highland	n/a	n/a

TABLE 3-1: OPERATIONAL NOISE STANDARDS

¹ City of San Bernardino Municipal Code, Section 19.20.030.15(A) (Appendix 3.1).

"n/a" = The City of Highland Municipal Code does not identify quantifiable exterior noise level standards for non-transportation noise sources (stationary).

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Project, noise from construction activities are typically limited to the hours of operation established under a jurisdiction's Municipal Code. Section 8.54.070 the City of San Bernardino Municipal Code, provided in Appendix 3.1, indicates that construction activity is restricted to the hours within 7:00 a.m. and 8:00 p.m. However, neither the General Plan Noise Elements or Municipal Codes for the Cities of San Bernardino and Highland establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or permanent increase in ambient noise levels*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use. (7 p. 179)

3.6 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (7)

To analyze vibration impacts originating from the operation and construction of the AGSP, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the Cities of San Bernardino and Highland do not identify specific vibration level limits and instead this analysis relies on the Caltrans *Transportation and Construction Vibration Guidance Manual*, (13 p. 38) Table 19 and 20,



vibration damage and annoyance criteria are used in this noise study to assess potential temporary construction-related impacts at adjacent receiver locations.

3.6.1 BUILDING DAMAGE:

While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration. The construction vibration damage potential criteria include consideration of the building conditions. (3 p. 182) Table 3-2 describes the maximum acceptable transient and continuous vibration building damage potential levels by structure type and condition.

Structure and Condition	Maximum Transient Vibration Levels PPV (in/sec)	Maximum Continuous Vibration Levels PPV (in/sec)
Extremely fragile historic buildings	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

TABLE 3-2: BUILDING DAMAGE VIBRATION CRITERIA

Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.

Most of the buildings near the Project site can be described as new residential structures with a maximum acceptable transient building damage vibration threshold of 1.0 PPV (in/sec).

3.6.2 HUMAN ANNOYANCE

For sensitive residential receiver locations, potential annoyance due to construction-related vibration levels is evaluated based on the Caltrans annoyance potential criteria. Table 3-3 describes the maximum acceptable criteria used to describe the transient and continuous sources of vibration. To describe the human annoyance due to construction vibration levels, this analysis relies on the *barely perceptible* maximum transient vibration threshold of 0.04 PPV (in/sec).

TABLE 3-3:	HUMAN ANNOYANCE VIBRATION CRITERIA

Human Response	Maximum Transient Vibration Levels PPV (in/sec)	Maximum Continuous Vibration Levels PPV (in/sec)
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 20, p. 38.



3.7 SAN BERNARDINO INTERNATIONAL AIRPORT (SBIA)

The Airport Gateway Specific Plan is located immediately north of the San Bernardino International Airport (SBIA). This places the Project Site within the SBIA Influence Area. The SBIA was initially built as Norton Air Force Base by the United States Air Force (USAF). Under the Base Realignment and Closure Act of 1990, Norton Air Force base was closed and disposed of by the USAF for a civilian aviation reuse in 1994 and transferred to the San Bernardino International Airport Authority (SBIAA). The SBIAA operates the facility as a public-use general aviation airport that accommodates aircraft ranging from piston-powered propeller aircraft to multi-engine jet aircraft including large air cargo aircraft. (14) The latest aircraft noise contour boundaries for the SBIA were published by the SBIAA on July 2, 2019 as part of the Eastgate Air Cargo Facility Final Environmental Assessment. (14) Figure 4-6 of the Final Environmental Assessment describes the future 2024 Proposed Project CNEL Contours for the SBIA. The future SBIA noise level contours boundaries representing approximately 87,500 annual aircraft operations are shown on Exhibit 3-C.

As shown on Exhibit 3-C the Project industrial land uses are generally located within the 60 to 65 dBA CNEL noise level contours of the SBIA. Therefore, the Project land use is considered *normally acceptable* according to the Cities of San Bernardino and Highland *Land Use Compatibility for Community Noise Exposure* as shown on Exhibit 3-A and must reduce the interior noise levels to 50 dBA L_{eq} to satisfy State of California Green Building Standards (Section 5.507.4.2) previously described in Section 3.2.

Standard building construction practices required under the State of California Green Building Standards Code (CALGreen) typically provide up to 25 dBA of attenuation. With respect to noise generated by the SBIA facilities and activities, application of standard CALGreen construction practices would yield acceptable Project interior noise levels of approximately 45 dBA L_{eq}. In addition, the Project does not propose or require facilities or actions that would contribute to or exacerbate noise generated by SBIA. Therefore, the Project would not be adversely affected by SBIA noise, nor would the Project contribute to or result in adverse airport noise impacts.





EXHIBIT 3-C: SAN BERNARDINO INTERNATIONAL AIRPORT (SBIA) NOISE CONTOURS

Development Site Boundary 360 dBA CNEL 365 dBA CNEL 370 dBA CNEL 375 dBA CNEL

Source: Figure 4-6 of the Eastgate Air Cargo Facility Final Environmental Assessment published by the SBIAA on July 2, 2019.



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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 Cities of San Bernardino and Highland General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial temporary or permanent for use under Guideline A. CEQA Appendix G Guideline C applies to the nearest public and private airports, if any, and the Project's land use compatibility.

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

As previously indicated in Section 3.6, the SBIA noise contour boundaries are presented on Exhibit 3-C of this report show that the Project is considered *normally acceptable* land use since it is located within the 60 to 65 dBA CNEL dBA CNEL noise level contour boundary and must reduce interior noise levels to 50 dBA L_{eq}. Standard building construction practices required under the State of California Green Building Standards Code (CALGreen) typically provide up to 25 dBA CNEL of attenuation. As such, application of standard CALGreen construction practices would yield acceptable Project interior noise levels of approximately 45 dBA L_{eq}. Since the Project would not be adversely affected by SBIA noise, nor would the Project contribute to or result in adverse airport noise impacts, potential airport noise impacts affecting the Project are therefore not further analyzed.

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 nearest 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 level increase represents a significant adverse environmental impact. In effect, *there is no single noise increase that renders the noise impact significant.* (15) 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. Since neither the Cities of San Bernardino and Highland General Plan Noise Element or Municipal Code identify any noise level increase thresholds, the substantial noise level increase criteria are derived from the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual.*

To describe the amount to which a given noise level increase (stationary or mobile) is considered acceptable, the FTA criteria is used to evaluate the incremental noise level increase and establishes a method for comparing future project noise with existing ambient conditions under CEQA Significance Threshold A. The amount to which a given noise level increase is considered acceptable is reduced based on existing ambient noise conditions. In effect, the amount to which a given noise level increase is considered acceptable is reduced based on existing ambient noise conditions. Table 4-1 below provides a summary of the allowable criteria used to identify potentially significant incremental noise level increases for off-site and operational noise source activity.

Without Project Noise Level	Potential Significant Impact (dBA CNEL)
< 55 dBA	5 dBA or more
55 - 60 dBA	3 dBA or more
60 - 65 dBA	2 dBA or more
> 65 dBA	1 dBA or more

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ADLC 4-1:	SIGNIFICANCE	OF NOISE	LEVELI	INCREASES

FTA Transit Noise and Vibration Impact Assessment Manual, 2018 (Table 4-6).

4.3 NON-NOISE-SENSITIVE RECEIVERS

The Cities of San Bernardino and Highland General Plan Noise Element, Figure N-1, *Land Use Compatibility for Community Noise Exposure* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land use, such as office, retail and commercial use is 70 dBA CNEL and 75 dBA CNEL for industrial uses.

To determine if Project-related traffic noise level increases are significant at off-site non-noisesensitive land uses, a *barely perceptible* 3 dBA criteria is used. (4) When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a *significant impact* since the noise level criteria is already exceeded.



4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed Project. Table 4-2 shows the significance criteria summary matrix.

Analusia	Land Use	Condition(a)	Significance Criteria		
Analysis		Condition(s)	Daytime	Nighttime	
Off-Site	Noise- Sensitive ¹	If ambient is < 55 dBA CNEL	≥ 5 dBA CNEL Project increase		
		If ambient is 55 - 60 dBA CNEL	≥ 3 dBA CNEL Project increase		
		If ambient is 60 - 65 dBA CNEL	≥ 2 dBA CNEL Project increase		
		If ambient is > 65 dBA CNEL	≥ 1 dBA CNEL Project increase		
	Non-Noise-Sensitive ²	if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase		
Operational	Noise-Sensitive ¹	Exterior Noise Level Limit ³	65 dBA L _{eq}		
		If ambient is < 55 dBA L_{eq}	\geq 5 dBA L _{eq} Project increase		
		If ambient is 55 - 60 dBA L _{eq}	\geq 3 dBA L _{eq} Project increase		
		If ambient is 60 - 65 dBA L _{eq}	\geq 2 dBA L _{eq} Project increase		
		If ambient is > 65 dBA L_{eq}	\geq 1 dBA L _{eq} Project increase		
	Non-Noise-Sensitive ²	if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase		
	Noise- Sensitive	Restricted to the hours within 7:00 a.m. and 8:00 p.m. ⁴			
Construction		Noise Level Threshold ¹	80 dBA L _{eq}	n/a	
		Building Damage Vibration Threshold ⁵	1.0 PPV (in/sec)		
		Human Annoyance Vibration Threshold ⁵	0.04 PPV (in/sec)		

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

¹ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018.

² City of San Bernardino General Plan Noise Element, Figure N-1.

³ City of San Bernardino Development Code, Section 19.20.030.15(A) (Appendix 3.1).

⁴ Section 8.54.070 of the City of San Bernardino Municipal Code (Appendix 3.1).

⁵ Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Tables 19 & 20, p. 38.

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



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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at eight 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, September 9th, 2020. 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. (16)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (7)*

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. (7) 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. Appendix 5.2 provides a summary of the existing hourly ambient noise levels.

Location ¹	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL	
		Daytime	Nighttime		
L1	Located north of the Project site in Indian Springs High School at 650 N Del Rosa Drive.	57.7	54.9	62.3	
L2	Located north of the Project site on 6th Street near existing single family residential home at 7891 Bonnie Street.	64.2	59.1	67.2	
L3	Located north of the Project site on 6th Street near existing single-family residential home at 7904 Roberts Street.	60.5	57.2	64.7	
L4	Located north of the Project site on Central Avenue near the Highland Family YMCA at 7793 Central Avenue.	61.4	58.6	66.1	
L5	Located north of the Project site by the Highland Branch Library at 7863 Central Avenue.	51.9	48.4	56.0	
L6	Located northeast of the Project site on Powell Drive near existing single-family residential home at 7885 Church Avenue.	58.5	57.1	63.9	
L7	Located southwest of the Project site on Tippecanoe Avenue across from Trinity Christian Fellowship Church at 8174 Tippecanoe Avenue.	70.6	68.8	75.8	
L8	Located northwest of the Project site on 6th Street and Tippecanoe Avenue.	64.4	61.6	68.8	

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

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

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

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



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

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with surface streets. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 5-1.




EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



6 TRAFFIC NOISE PREDICTION METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (17) 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. (18) 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. (19)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site dBA CNEL transportation noise impacts. Table 6-1 identifies the 39 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of San Bernardino and City of Highland General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Airport Gateway Specific Plan Traffic Impact Study*, prepared by Kimley-Horn and Associates, Inc. for the following traffic scenarios under both Without and With Project conditions: Existing, and Future Build-Out 2040. (20)

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts, without and with project ADT traffic volumes from the Project traffic study.



ID	Roadway	Segment	Receiving Land Use ¹	Classification ²	Centerline Distance to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	Major Arterial	50'	40
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	Major Arterial	50'	40
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	Secondary Arterial	44'	45
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	Secondary Arterial	44'	45
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	Major Arterial	50'	45
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive	Major Arterial	50'	45
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	Major Arterial	50'	45
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	Major Arterial	50'	45
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	Major Arterial	33'	35
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	Major Arterial	50'	45
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	Major Arterial	50'	45
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	Major Arterial	50'	45
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	Major Arterial	50'	45
14	Sterling Avenue	Base Line to 9th Street	Sensitive	Major Arterial	50'	40
15	Sterling Avenue	9th Street to 6th Street	Sensitive	Major Arterial	50'	40
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	Major Arterial	50'	40
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	Secondary Arterial	44'	40
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	Secondary Arterial	44'	40
19	Victoria Avenue	Base Line to 9th Street	Sensitive	Secondary Arterial	44'	45
20	Victoria Avenue	9th Street to 6th Street	Sensitive	Secondary Arterial	44'	45
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	Secondary Arterial	44'	45
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	Collector	30'	40

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS



ID	Roadway	Segment	Receiving Land Use ¹	Classification ²	Centerline Distance to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	Collector	30'	40
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	Collector	30'	40
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	Collector	30'	40
26	5th Street	I-215 NB Ramps to E Street	Sensitive	Major Arterial	50'	45
27	5th Street	E Street to Waterman Avenue	Sensitive	Major Arterial	50'	45
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	Major Arterial	33'	45
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	Major Arterial	33'	45
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	Major Arterial	50'	45
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	Major Arterial	33'	45
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	Major Arterial	50'	45
33	5th Street	Central Avenue to Palm Avenue	Sensitive	Major Arterial	50'	45
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	Major Arterial	50'	45
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	Major Arterial	50'	45
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	Major Arterial	50'	45
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	Major Arterial	50'	45
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	Major Arterial	50'	45
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	Major Arterial	50'	45

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

² City of San Bernardino Circulation Project Figure 3-11a and City of Highland Circulation Element Figure 3-12a.

³ Based upon the right-of-way distances for each roadway classification provided in the General Plan Circulation Element.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Impact Study*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios.

			Aver	age Daily T	raffic Volur	nes1
ID	Roadway	Segment	Exis	ting	Future B 20	uild-Out 40
			Without Project	With Project	Without Project	With Project
1	Waterman Avenue	Baseline Street to 5th Street	25,741	26,062	28,982	29,303
2	Waterman Avenue	5th Street to 3rd Street	27,528	28,232	31,551	32,255
3	Tippecanoe Avenue	Baseline Street to 6th Street	12,006	13,152	19,291	20,437
4	Tippecanoe Avenue	6th Street to 3rd Street	14,330	19,390	16,328	21,388
5	Tippecanoe Avenue	3rd Street to Mill Street	28,362	38,124	43,928	53,690
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	32,591	42,353	47,921	57,683
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	25,471	35,233	29,159	38,921
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	23,780	26,080	26,238	28,538
9	Del Rosa Drive	Highland Avenue to Pacific Street	17,645	19,945	19,585	21,885
10	Del Rosa Drive	Pacific Street to Baseline Street	12,318	14,618	15,318	17,618
11	Del Rosa Drive	Baseline Street to 9th Street	9,963	16,471	12,139	18,647
12	Del Rosa Drive	9th Street to 6th Street	9,871	16,379	12,294	18,802
13	Del Rosa Drive	6th Street to 3rd Street	9,576	11,560	12,774	14,758
14	Sterling Avenue	Base Line to 9th Street	13,368	16,806	13,433	16,871
15	Sterling Avenue	9th Street to 6th Street	10,609	12,775	14,385	16,551
16	Sterling Avenue	6th Street to 3rd Street	6,984	14,366	11,619	19,001
17	Victoria Avenue	Highland Avenue to Pacific Street	12,184	16,944	26,114	30,874
18	Victoria Avenue	Pacific Street to Base Line	14,431	19,687	17,643	22,899
19	Victoria Avenue	Base Line to 9th Street	11,210	16,466	13,063	18,319
20	Victoria Avenue	9th Street to 6th Street	8,368	13,624	10,302	15,558
21	Victoria Avenue	6th Street to 3rd Street	8,368	9,436	12,525	13,593
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	3,249	4,491	5,359	6,601
23	6th Street	Del Rosa Drive to Sterling Avenue	4,714	7,674	7,501	10,461
24	6th Street	Sterling Avenue to Victoria Avenue	3,519	10,051	8,278	14,810
25	6th Street	Victoria Avenue to Central Avenue	4,047	10,918	5,844	12,715

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES



			Aver	age Daily T	raffic Volur	nes1	
ID	Roadway	Segment	Exis	ting	Future Build-Out 2040		
			Without Project	With Project	Without Project	With Project	
26	5th Street	I-215 NB Ramps to E Street	30,975	43,371	37,481	49 <i>,</i> 877	
27	5th Street	E Street to Waterman Avenue	20,083	32,479	22,657	35 <i>,</i> 053	
28	5th Street	Waterman Avenue to Tippecanoe Avenue	9,167	22,329	13,621	26,783	
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	8,725	23,858	14,297	29,430	
30	5th Street	Del Rosa Drive to Sterling Avenue	5 <i>,</i> 595	26,122	10,664	31,191	
31	5th Street	Sterling Avenue to Victoria Avenue	3,911	25,904	8,476	30,469	
32	5th Street	Victoria Avenue to Central Avenue	9,939	32,258	11,954	34,273	
33	5th Street	Central Avenue to Palm Avenue	9,939	35,031	11,912	37,004	
34	5th Street	Palm Avenue to SR-210 EB Ramps	26,098	52,097	33,870	59 <i>,</i> 869	
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	10,460	11,686	13,621	14,847	
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	15,620	27,119	19,594	31,093	
37	3rd Street	Del Rosa Drive to Sterling Avenue	18,143	28,583	34,523	44,963	
38	3rd Street	Sterling Avenue to Victoria Avenue	13,457	19,662	21,178	27,383	
39	3rd Street	Victoria Avenue to Palm Avenue	10,714	17,123	18,390	24,799	

¹ Traffic Impact Study for the Airport Gateway Specific Plan Project, Kimley-Horn and Associates, Inc.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

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

¹ Typical Southern California vehicle mix.

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

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	TOLAI
All Segments	97.86%	1.28%	0.86%	100.00%

Based on an existing vehicle count taken at Tippecanoe Avenue and 5th Street (Traffic Impact Study for the Airport Gateway Specific Plan, Kimley-Horn and Associates, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.



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7 OFF-SITE TRAFFIC NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on *Airport Gateway Specific Plan Traffic Impact Study*. (20) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 7-1 through 7-4 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation. Roadway segments are analyzed from the without Project to the with Project conditions in each of the following timeframes: Existing and Future Build-Out 2040. Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.



	Deed	6	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	69.5	RW	99	214
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	71.4	62	135	290
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	68.3	RW	73	156
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	69.0	RW	82	176
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	72.8	77	166	359
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive	71.8	66	141	304
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	72.4	72	155	334
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	70.4	53	114	247
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	69.0	RW	61	132
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	67.5	RW	74	159
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	66.6	RW	64	138
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	66.6	RW	64	137
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	66.4	RW	62	134
14	Sterling Avenue	Base Line to 9th Street	Sensitive	66.6	RW	64	138
15	Sterling Avenue	9th Street to 6th Street	Sensitive	65.6	RW	55	119
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	63.8	RW	RW	90
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	67.1	RW	60	130
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	67.8	RW	68	146
19	Victoria Avenue	Base Line to 9th Street	Sensitive	68.0	RW	69	149
20	Victoria Avenue	9th Street to 6th Street	Sensitive	66.7	RW	57	123
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	66.7	RW	57	123
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	63.9	RW	RW	55

TABLE 7-1: EXISTING WITHOUT PROJECT NOISE CONTOURS



	Road	Segment	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
IJ	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	65.5	RW	33	70
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	64.3	RW	RW	58
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	64.9	RW	RW	63
26	5th Street	I-215 NB Ramps to E Street	Sensitive	71.5	63	136	294
27	5th Street	E Street to Waterman Avenue	Sensitive	69.7	RW	102	220
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	68.8	RW	59	128
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	68.6	RW	57	124
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	64.1	RW	RW	94
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	65.1	RW	34	73
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	66.6	RW	64	138
33	5th Street	Central Avenue to Palm Avenue	Sensitive	66.6	RW	64	138
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	70.8	57	122	262
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	66.8	RW	66	143
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	68.6	RW	86	186
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	69.2	RW	96	206
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	67.9	RW	78	169
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	66.9	31	67	145

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

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

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

	Deed	Segment	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
U	коао	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	69.5	RW	100	216	
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	71.6	64	137	295	
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	68.7	RW	77	166	
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	70.3	46	100	215	
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	74.1	94	203	437	
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive	72.9	78	168	362	
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	73.8	89	192	414	
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	70.8	56	122	262	
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	69.6	RW	66	143	
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	68.3	RW	83	178	
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	68.8	RW	90	193	
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	68.8	RW	89	192	
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	67.3	RW	71	152	
14	Sterling Avenue	Base Line to 9th Street	Sensitive	67.6	RW	75	161	
15	Sterling Avenue	9th Street to 6th Street	Sensitive	66.4	RW	62	134	
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	66.9	RW	67	145	
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	68.5	RW	75	162	
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	69.1	RW	83	179	
19	Victoria Avenue	Base Line to 9th Street	Sensitive	69.6	RW	90	193	
20	Victoria Avenue	9th Street to 6th Street	Sensitive	68.8	RW	79	170	
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	67.2	RW	62	133	
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	65.3	RW	31	68	

TABLE 7-2: EXISTING WITH PROJECT NOISE CONTOURS



	Road	Segment	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
U	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	67.6	RW	45	97
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	68.8	RW	54	116
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	69.2	RW	57	123
26	5th Street	I-215 NB Ramps to E Street	Sensitive	73.0	79	171	368
27	5th Street	E Street to Waterman Avenue	Sensitive	71.7	65	141	303
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	72.7	50	108	232
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	73.0	52	112	242
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	70.8	57	122	262
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	73.3	55	119	256
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	71.7	65	140	302
33	5th Street	Central Avenue to Palm Avenue	Sensitive	72.1	69	148	319
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	73.8	90	193	416
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	67.3	RW	71	154
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	71.0	58	125	269
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	71.2	60	129	279
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	69.6	RW	101	217
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	69.0	RW	92	198

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

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

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

		Segment	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
U	коад	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	70.0	50	108	232
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	72.0	68	147	317
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	70.3	46	99	214
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	69.6	RW	89	192
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	74.7	103	223	480
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive	73.4	85	183	393
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	73.0	79	170	365
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	70.8	57	122	263
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	69.5	RW	66	141
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	68.5	RW	85	184
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	67.5	RW	73	157
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	67.5	RW	74	159
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	67.7	RW	76	163
14	Sterling Avenue	Base Line to 9th Street	Sensitive	66.7	RW	64	139
15	Sterling Avenue	9th Street to 6th Street	Sensitive	67.0	RW	67	145
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	66.0	RW	59	126
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	70.4	47	100	216
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	68.7	RW	77	167
19	Victoria Avenue	Base Line to 9th Street	Sensitive	68.6	RW	77	165
20	Victoria Avenue	9th Street to 6th Street	Sensitive	67.6	RW	65	141
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	68.4	RW	75	161
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	66.1	RW	35	76

TABLE 7-3: FUTURE BUILD-OUT 2040 WITHOUT PROJECT NOISE CONTOURS



	Road	Segment	Receiving	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
U	коад	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	67.5	RW	44	95
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	68.0	RW	47	102
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	66.5	RW	38	81
26	5th Street	I-215 NB Ramps to E Street	Sensitive	72.4	72	155	334
27	5th Street	E Street to Waterman Avenue	Sensitive	70.2	51	111	239
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	70.6	36	77	167
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	70.8	37	80	172
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	66.9	RW	67	144
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	68.5	RW	56	121
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	67.4	RW	72	156
33	5th Street	Central Avenue to Palm Avenue	Sensitive	67.4	RW	72	155
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	71.9	67	145	312
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	68.0	RW	79	170
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	69.6	RW	101	217
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	72.0	68	147	316
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	69.9	RW	106	228
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	69.3	RW	96	208

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

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

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

		- ·	Receiving	CNEL at Nearest	Distanc Ce	Distance to Contour from Centerline (Feet)		
IJ	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	70.0	50	108	234	
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	72.1	69	150	322	
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	70.6	48	103	223	
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	70.8	49	107	230	
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	75.6	118	255	549	
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive 74.2		96	207	445	
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	74.2	95	206	443	
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	71.2	60	129	278	
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	70.0	33	71	152	
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	69.1	RW	94	202	
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	69.3	RW	97	210	
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	69.4	RW	98	211	
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	68.3	RW	83	179	
14	Sterling Avenue	Base Line to 9th Street	Sensitive	67.6	RW	75	162	
15	Sterling Avenue	9th Street to 6th Street	Sensitive	67.6	RW	74	160	
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	68.2	RW	81	175	
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	71.1	52	112	242	
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	69.8	RW	92	198	
19	Victoria Avenue	Base Line to 9th Street	Sensitive	70.1	45	96	207	
20	Victoria Avenue	9th Street to 6th Street	Sensitive	69.4	RW	86	186	
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	68.8	RW	79	170	
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	67.0	RW	41	88	

TABLE 7-4: FUTURE BUILD-OUT 2040 WITH PROJECT NOISE CONTOURS



	Deed	Road Segment	Receiving	CNEL at Nearest	Distand Ce	e to Conto nterline (Fe	e to Contour from terline (Feet)	
IJ	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	69.0	RW	55	119	
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	70.5	32	70	150	
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	69.8	RW	63	136	
26	5th Street	I-215 NB Ramps to E Street	Sensitive	73.6	87	187	404	
27	5th Street	E Street to Waterman Avenue	Sensitive	72.1	69	148	319	
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	73.5	56	121	262	
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	73.9	60	129	279	
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	71.6	64	137	295	
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	74.0	61	132	285	
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	72.0	68	146	315	
33	5th Street	Central Avenue to Palm Avenue	Sensitive	72.3	71	154	331	
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	74.4	98	212	456	
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	68.3	RW	84	180	
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	71.6	64	137	295	
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	73.2	81	175	377	
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	71.0	58	126	271	
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	70.6	55	118	254	

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

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

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

7.2 EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report to fully analyze all the existing traffic scenarios identified in *Airport Gateway Specific Plan Traffic Impact Study*. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 63.8 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 65.3 to 74.1 dBA CNEL. Table 7-5 shows that the Project off-site traffic noise level impacts will range from 0.0 to 8.2 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-2, 28 of the study area roadway segments are shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project under Existing with Project conditions.

Section 7.4 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under Existing with Project conditions that would exceed the established thresholds of significance.

7.3 FUTURE BUILD-OUT 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Future Build-Out 2040 without Project conditions CNEL noise levels. The Future Build-Out 2040 without Project exterior noise levels are expected to range from 66.0 to 74.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Future Build-Out 2040 with Project conditions will range from 67.0 to 75.6 dBA CNEL. Table 7-6 shows that the Project off-site traffic noise level increases will range from 0.0 to 5.5 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-2, 24 of the study area roadway segments are shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project under Future Build-Out (2040) with Project conditions.

ID	Road	Segment	Receiving	CN La	CNEL at Receiving Land Use (dBA) ²			Incremental Noise Level Increase Threshold ³	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?	
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	69.5	69.5	0.0	1.0	No	
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	71.4	71.6	0.2	1.0	No	
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	68.3	68.7	0.4	1.0	No	
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	69.0	70.3	1.3	1.0	Yes	
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	72.8	74.1	1.3	1.0	Yes	
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino Avenue	Sensitive	71.8	72.9	1.1	1.0	Yes	
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	72.4	73.8	1.4	1.0	Yes	
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	70.4	70.8	0.4	1.0	No	
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	69.0	69.6	0.6	1.0	No	
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	67.5	68.3	0.8	1.0	No	
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	66.6	68.8	2.2	1.0	Yes	
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	66.6	68.8	2.2	1.0	Yes	
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	66.4	67.3	0.9	1.0	No	
14	Sterling Avenue	Base Line to 9th Street	Sensitive	66.6	67.6	1.0	1.0	Yes	
15	Sterling Avenue	9th Street to 6th Street	Sensitive	65.6	66.4	0.8	1.0	No	
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	63.8	66.9	3.1	2.0	Yes	
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	67.1	68.5	1.4	1.0	Yes	
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	67.8	69.1	1.3	1.0	Yes	
19	Victoria Avenue	Base Line to 9th Street	Sensitive	68.0	69.6	1.6	1.0	Yes	
20	Victoria Avenue	9th Street to 6th Street	Sensitive	66.7	68.8	2.1	1.0	Yes	
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	66.7	67.2	0.5	1.0	No	

TABLE 7-5: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES



ID	Road	Road Segment	Receiving	CN La	IEL at Receiv and Use (dBA	Incremental Noise Level Increase Threshold ³		
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	63.9	65.3	1.4	2.0	No
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	65.5	67.6	2.1	1.0	Yes
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	64.3	68.8	4.5	2.0	Yes
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	64.9	69.2	4.3	2.0	Yes
26	5th Street	I-215 NB Ramps to E Street	Sensitive	71.5	73.0	1.5	1.0	Yes
27	5th Street	E Street to Waterman Avenue	Sensitive	69.7	71.7	2.0	1.0	Yes
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	68.8	72.7	3.9	1.0	Yes
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	68.6	73.0	4.4	1.0	Yes
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	64.1	70.8	6.7	2.0	Yes
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	65.1	73.3	8.2	1.0	Yes
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	66.6	71.7	5.1	1.0	Yes
33	5th Street	Central Avenue to Palm Avenue	Sensitive	66.6	72.1	5.5	1.0	Yes
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	70.8	73.8	3.0	1.0	Yes
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	66.8	67.3	0.5	1.0	No
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	68.6	71.0	2.4	1.0	Yes
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	69.2	71.2	2.0	1.0	Yes
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	67.9	69.6	1.7	1.0	Yes
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	66.9	69.0	2.1	1.0	Yes

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

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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-2)?

ID	Road	Road Segment		CN La	EL at Receiv Ind Use (dBA	ing \) ²	Incremental Noise Level Increase Threshold ³	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
1	Waterman Avenue	Baseline Street to 5th Street	Sensitive	70.0	70.0	0.0	1.0	No
2	Waterman Avenue	5th Street to 3rd Street	Non-Sensitive	72.0	72.1	0.1	1.0	No
3	Tippecanoe Avenue	Baseline Street to 6th Street	Sensitive	70.3	70.6	0.3	1.0	No
4	Tippecanoe Avenue	6th Street to 3rd Street	Sensitive	69.6	70.8	1.2	1.0	Yes
5	Tippecanoe Avenue	3rd Street to Mill Street	Sensitive	74.7	75.6	0.9	1.0	No
6	Tippecanoe Avenue	Mill Street to Orange Show Road /San Bernardino AvenueSensitive73.4		74.2	0.8	1.0	No	
7	Tippecanoe Avenue	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	Sensitive	73.0	74.2	1.2	1.0	Yes
8	Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	Sensitive	70.8	71.2	0.4	1.0	No
9	Del Rosa Drive	Highland Avenue to Pacific Street	Sensitive	69.5	70.0	0.5	1.0	No
10	Del Rosa Drive	Pacific Street to Baseline Street	Sensitive	68.5	69.1	0.6	1.0	No
11	Del Rosa Drive	Baseline Street to 9th Street	Sensitive	67.5	69.3	1.8	1.0	Yes
12	Del Rosa Drive	9th Street to 6th Street	Sensitive	67.5	69.4	1.9	1.0	Yes
13	Del Rosa Drive	6th Street to 3rd Street	Sensitive	67.7	68.3	0.6	1.0	No
14	Sterling Avenue	Base Line to 9th Street	Sensitive	66.7	67.6	0.9	1.0	No
15	Sterling Avenue	9th Street to 6th Street	Sensitive	67.0	67.6	0.6	1.0	No
16	Sterling Avenue	6th Street to 3rd Street	Sensitive	66.0	68.2	2.2	1.0	Yes
17	Victoria Avenue	Highland Avenue to Pacific Street	Sensitive	70.4	71.1	0.7	1.0	No
18	Victoria Avenue	Pacific Street to Base Line	Sensitive	68.7	69.8	1.1	1.0	Yes
19	Victoria Avenue	Base Line to 9th Street	Sensitive	68.6	70.1	1.5	1.0	Yes
20	Victoria Avenue	9th Street to 6th Street	Sensitive	67.6	69.4	1.8	1.0	Yes
21	Victoria Avenue	6th Street to 3rd Street	Sensitive	68.4	68.8	0.4	1.0	No
22	6th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	66.1	67.0	0.9	1.0	No

TABLE 7-6: FUTURE BUILD-OUT 2040 WITH PROJECT TRAFFIC NOISE INCREASES



ID	Road	Segment	Receiving	CN La	IEL at Receiv and Use (dBA	Incremental Noise Level Increase Threshold ³		
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
23	6th Street	Del Rosa Drive to Sterling Avenue	Sensitive	67.5	69.0	1.5	1.0	Yes
24	6th Street	Sterling Avenue to Victoria Avenue	Sensitive	68.0	70.5	2.5	1.0	Yes
25	6th Street	Victoria Avenue to Central Avenue	Sensitive	66.5	69.8	3.3	1.0	Yes
26	5th Street	I-215 NB Ramps to E Street	Sensitive	72.4	73.6	1.2	1.0	Yes
27	5th Street	E Street to Waterman Avenue	Sensitive	70.2	72.1	1.9	1.0	Yes
28	5th Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	70.6	73.5	2.9	1.0	Yes
29	5th Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	70.8	73.9	3.1	1.0	Yes
30	5th Street	Del Rosa Drive to Sterling Avenue	Sensitive	66.9	71.6	4.7	1.0	Yes
31	5th Street	Sterling Avenue to Victoria Avenue	Sensitive	68.5	74.0	5.5	1.0	Yes
32	5th Street	Victoria Avenue to Central Avenue	Sensitive	67.4	72.0	4.6	1.0	Yes
33	5th Street	Central Avenue to Palm Avenue	Sensitive	67.4	72.3	4.9	1.0	Yes
34	5th Street	Palm Avenue to SR-210 EB Ramps	Non-Sensitive	71.9	74.4	2.5	1.0	Yes
35	3rd Street	Waterman Avenue to Tippecanoe Avenue	Sensitive	68.0	68.3	0.3	1.0	No
36	3rd Street	Tippecanoe Avenue to Del Rosa Drive	Sensitive	69.6	71.6	2.0	1.0	Yes
37	3rd Street	Del Rosa Drive to Sterling Avenue	Sensitive	72.0	73.2	1.2	1.0	Yes
38	3rd Street	Sterling Avenue to Victoria Avenue	Sensitive	69.9	71.0	1.1	1.0	Yes
39	3rd Street	Victoria Avenue to Palm Avenue	Sensitive	69.3	70.6	1.3	1.0	Yes

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

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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-2)?

7.4 OFF-SITE TRAFFIC NOISE MITIGATION

To reduce the *potentially significant* Project traffic noise level increases on the 28 study area roadway segments for Existing plus Project, and on the 24 study area roadway segments for Future Build-Out with Project conditions, potential noise mitigation measures are identified in this analysis. Potential mitigation measures discussed below include rubberized asphalt hot mix pavement and off-site noise barriers for the existing residential land uses adjacent to impacted roadway segments.

7.4.1 RUBBERIZED ASPHALT

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the off-site Project-related traffic noise level increases. To reduce traffic noise levels at the noise source, Caltrans research has shown that rubberized asphalt can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. (21) Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement, and constant speeds. (2) According to research conducted by Caltrans (21) and the Canadian Ministry of Transportation and Highways (22) a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

The effectiveness of reducing traffic noise levels is higher on roadways with low percentages of heavy trucks, since the heavy truck engine and exhaust noise is not affected by rubberized alternative pavement due to the truck engine and exhaust stack height above the pavement itself. (21) Per Caltrans guidance a truck stack height is modeled using a height of 11.5 feet above the road. (4) (23) With the primary off-site traffic noise source consisting of heavy trucks with a stack height of 11.5 feet off the ground, the tire/pavement noise reduction benefits associated rubberized asphalt will be primarily limited to autos.

While the off-site Project-related traffic noise level increases would theoretically be reduced with the 4 dBA reduction provided by rubberized asphalt, the reduction would not provide reliable benefits for the noise levels generated by heavy truck traffic. This is, as previously stated, due to the noise source height difference between automobiles and trucks. While rubberized asphalt will provide some noise reduction, this noise study recognizes that this is only effective for tireon-pavement noise at higher speeds and would not reduce truck-related off-site traffic noise levels associated with truck engine and exhaust stacks to less than significant levels. Since the use of rubberized asphalt would not lower the off-site traffic noise levels below a level of significance, rubberized asphalt is not proposed as mitigation for the Project and the off-site Project-related traffic noise level increases at adjacent land uses would remain *significant*.



7.4.2 OFF-SITE NOISE BARRIERS

Since existing and future noise-sensitive receiving land uses are located adjacent to the impacted roadway segments in the Project study area, off-site noise barriers were considered in this analysis as a potential traffic noise mitigation measure to reduce the impacts. Off-site noise barriers are estimated to provide a *readily perceptible* 5 dBA reduction which, according to the FHWA, is *simple* to attain when blocking the line-of-sight from the noise source to the receiver. (4) As previously discussed, Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, *the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor*, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. (23) Therefore, any exterior noise barriers at receiving noise sensitive land uses experiencing Project-related traffic noise level increases would need to be high enough and long enough to block the line-of-sight from the noise source (at 11.5 feet high per Caltrans) to the receiver (at 5 feet high per FHWA guidance) in order to provide a 5 dBA reduction per FHWA guidance. (23)

In addition, according to FHWA guidance, outdoor living areas are generally limited to outdoor living areas of frequent human use (e.g., backyards of single-family homes). Therefore, front and side yards of residential homes adjacent to off-site roadway segments do not represent noise sensitive areas of frequent human use that require exterior noise mitigation. (4) Exterior noise mitigation in the form of noise barriers is not anticipated to provide the FHWA attainable reduction of 5 dBA required to reduce the off-site traffic noise level increases and would also require potential openings for driveway access to individual residential lots fronting the road. As such, off-site noise barriers would not be feasible and would not lower the off-site traffic noise levels below a level of significance, and therefore, noise barriers are not proposed as mitigation for the Project.

7.4.3 SIGNIFICANT OFF-SITE TRAFFIC NOISE IMPACTS

Both rubberized asphalt and off-site noise barriers are considered as potential noise mitigation measures to reduce the *potentially significant* off-site traffic noise level increases shown on Tables 7-5 and 7-6. However, neither form of mitigation would eliminate the off-site traffic noise level increases at the adjacent land uses to the impacted roadway segments. Therefore, the Project-related off-site traffic noise level increases at adjacent noise-sensitive land are considered a *significant and unavoidable* impact.



8 SENSITIVE RECEIVER LOCATIONS

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

To describe the potential off-site Project noise levels, eight receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 7886 Fairfax Lane, approximately 74 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the residential building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 25498 6th Street, approximately 84 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R2 is placed at the residential building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 26188 6th Street, approximately 98 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R3 is placed at the residential building façade. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.
- R4: Location R4 represents the existing noise sensitive residence at 26740 6th Street, approximately 31 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the residential building



façade. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.

- R5: Location R5 represents the Highland Branch Library at 7863 Central Avenue, approximately 209 feet northeast of the Project site. Receiver R5 is placed at the building façade. A 24-hour noise measurement near this location, L5, is used to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence at 27487 E 6th Street, approximately 123 feet north of the Project site. R6 is placed at the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement near this location, L6, is used to describe the existing ambient noise environment.
- R7: Location R6 represents the Trinity Christian Fellowship Church at 8174 Tippecanoe Avenue, approximately 72 feet southwest of the Project site. R7 is placed at the building façade. A 24-hour noise measurement near this location, L7 is used to describe the existing ambient noise environment.
- R8: Location R8 represents the existing noise sensitive residence at 7976 Tippecanoe Avenue, approximately 115 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R8 is placed at the residential building façade. A 24-hour noise measurement near this location, L8, is used to describe the existing ambient noise environment.





EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS

13635-05 Noise Study



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9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the AGSP.

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the typical daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The on-site Project-related noise sources are expected to include loading dock activity, delivery van activity, roof-top air conditioning units, parking lot vehicle activity, and trash enclosure activity.

9.2 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 9-1 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 loading dock activity, delivery van activity, roof-top air conditioning units, parking lot vehicle activity, and trash enclosure activity all operating continuously. These sources of noise activity will likely vary throughout the day.

9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (16)





Noise Source ¹	Noise Source Height	Min./	Hour ²	Reference Noise Level @50 feet	Sound Power Level		
	(Feet)	Day	Night	(dBA L _{eq})	(dBA) ³		
Loading Dock Activity	8'	60	60	65.7	111.5		
Delivery Van Activity	5'	60	60	61.4	101.2		
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9		
Trash Enclosure Activity	5'	20	20	56.8	89.0		
Parking Lot Activity	5'	60	60	55.5	79.9		

¹ As measured by Urban Crossroads, Inc.

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

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

³ Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, unloading/loading, docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background forklift operations. To describe the loading dock activities for cold storage, a reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked. Noise associated with parking lot vehicle movements is expected 24 hours per day.

9.2.3 DELIVERY VAN ACTIVITY

To describe the delivery van activity, Urban Crossroads, collected reference noise level measurements from a delivery service partner. The delivery service partner maintains over 50 delivery vans and supporting operations. The reference noise level measurements suggest that at the center of activity the delivery vans generate a noise level of 61.4 dBA L_{eq} at a reference distance of 50 feet. The delivery van activities are limited to the daytime hours with no deliveries during the noise sensitive nighttime hours.



9.2.4 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units, reference noise level measurements were collected from a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for an average of 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. For this noise analysis, the air conditioning units are expected to be located on the roof of the proposed building. This reference noise level describes the expected roof-top air conditioning units located 5 feet above the roof for the planned air conditioning units at the Development Site.

9.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 56.8 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building. Typical trash enclosure activities are estimated to occur for 20 minutes per hour.

9.2.6 PARKING LOT ACTIVITY

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at an existing warehouse parking lot. The reference noise level at 50 feet from parking lot vehicle movements was measured at 55.5 dBA L_{eq} . The parking lot noise levels are mainly due to employee shift changes with cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected 24 hours per day.

9.3 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 (Lw) to describe individual noise sources. While sound pressure levels (e.g. Leq)



quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (Lw) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish from intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces consistent with study area conditions. Appendix 9.1 includes the detailed noise model inputs.

9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, delivery van activity, roof-top air conditioning units, parking lot vehicle activity, and trash enclosure activity, Urban Crossroads, Inc. calculated the unmitigated operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. The hourly Project operational noise levels at the off-site receiver locations are expected to range from 60.9 to 62.9 dBA Leq.

9.5 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 exterior noise level standards at nearest noise-sensitive receiver locations. Table 9-2 shows the operational noise levels associated with AGSP will satisfy the 65 dBA L_{eq} exterior noise level standards at the nearest receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearest noise-sensitive receiver locations.

9.6 **PROJECT OPERATIONAL NOISE LEVEL INCREASES**

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearest 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. (2) Instead, they must be logarithmically added using the following base equation:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels.



Receiver Location ¹	Project Noise Level (dBA Leq) ²	Noise Level Standards (dBA Leq) ³	Noise Level Standards Exceeded? ⁴
R1	62.9	65	No
R2	62.7	65	No
R3	62.7	65	No
R4	62.5	65	No
R5	60.9	65	No
R6	62.2	65	No
R7	62.5	65	No
R8	61.5	65	No

TABLE 9-2: OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 8-A for the receiver locations.

² Project CadnaA operational noise level calculations are included in Appendix 9.1.

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

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

The difference between the combined Project and ambient noise levels describe the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-3 and 9-4, the Project will generate daytime and nighttime operational noise level increases ranging from 0.9 to 12.7 dBA L_{eq} at the nearest receiver locations. Therefore, the unmitigated Project operational incremental noise level increase is considered *potentially significant*.

9.7 OPERATIONAL NOISE ABATEMENT MEASURES

To reduce potential operational noise levels increases at the nearby noise-sensitive receiver locations, the AGSP shall include the following operational noise mitigation measures:

- The AGSP shall be designed to minimize the potential noise exposure to nearby noise sensitive land uses including:
 - locating driveways and vehicle access points away from noise sensitive uses.
 - locating loading docks away from adjacent noise sensitive uses.
 - minimize the use of outside speakers and amplifiers.
 - incorporate walls landscaping and other noise buffers and barriers between uses, as appropriate.
- Sound barrier walls or earth berms of sufficient height and length shall be provided to reduce exterior noise levels to 65 CNEL or lower at nearby noise sensitive uses. Prior to the issuance of grading permits, an acoustical analysis report shall be prepared by a qualified acoustical consultant. The report shall specify the noise barriers' height, location, and types capable of achieving the desired mitigation affect.



- All on-site operating equipment that is used in outdoor areas (including but not limited to trucks, tractors, forklifts, and hostlers), shall be operated with properly functioning and well-maintained mufflers.
- Maintain quality pavement conditions on the property that are free of vertical deflection (i.e. speed bumps) to minimize truck noise.
- The truck access gates and loading docks within the truck court on the Project site shall be posted with signs which state:
 - Truck drivers shall turn off engines when not in use;
 - Diesel trucks servicing the Project shall not idle for more than five (5) minutes; and
 - Post telephone numbers of the building facilities manager to report idling violations.

With the implementation of the recommended operational noise mitigation measures, the incremental noise level increase will be reduced to less than significant.



Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels⁴	Combined Project and Ambient⁵	Project Increase ⁶	Noise Sensitive Land Use?	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	62.9	L1	57.7	64.0	6.3	Yes	3.0	Yes
R2	62.7	L2	64.2	66.5	2.3	Yes	3.0	No
R3	62.7	L3	60.5	64.7	4.2	Yes	3.0	Yes
R4	62.5	L4	61.4	65.0	3.6	Yes	3.0	Yes
R5	60.9	L5	51.9	61.4	9.5	Yes	5.0	Yes
R6	62.2	L6	58.5	63.7	5.2	Yes	5.0	Yes
R7	62.5	L7	70.6	71.2	0.6	Yes	1.5	No
R8	61.5	L8	64.4	66.2	1.8	Yes	3.0	No

TABLE 9-3: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

¹ See Exhibit 8-A for the receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance increase criteria as shown on Table 4-2.



Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Noise Sensitive Land Use?	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	62.9	L1	54.9	63.5	8.6	Yes	5.0	Yes
R2	62.7	L2	59.1	64.3	5.2	Yes	3.0	Yes
R3	62.7	L3	57.2	63.8	6.6	Yes	3.0	Yes
R4	62.5	L4	58.6	64.0	5.4	Yes	3.0	Yes
R5	60.9	L5	48.4	61.1	12.7	Yes	5.0	Yes
R6	62.2	L6	57.1	63.4	6.3	Yes	3.0	Yes
R7	62.5	L7	68.8	69.7	0.9	Yes	1.0	No
R8	61.5	L8	61.6	64.6	3.0	Yes	2.0	Yes

TABLE 9-4: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

¹ See Exhibit 8-A for the receiver locations.

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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance increase criteria as shown on Table 4-2.



10 CONSTRUCTION IMPACTS

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

10.1 CONSTRUCTION NOISE LEVELS

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

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving/Landscaping
- 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.

10.2 Typical Construction Reference Noise Levels

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




EXHIBIT 10-A: TYPICAL CONSTRUCTION NOISE SOURCE LOCATIONS



Construction Stage	Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})	Highest Reference Noise Level (dBA L _{eq})			
	Demolition Activity	67.9				
Demolition	Backhoe	64.2	71.9			
	Water Truck Pass-By & Backup Alarm	71.9				
<u></u>	Scraper, Water Truck, & Dozer Activity	75.3				
Site	Backhoe	64.2	75.3			
reputation	Water Truck Pass-By & Backup Alarm	71.9]			
Grading	Rough Grading Activities	73.5				
	Water Truck Pass-By & Backup Alarm	73.5				
	Construction Vehicle Maintenance Activities					
	Foundation Trenching	68.2				
Building Construction	Framing	62.3	71.6			
	Concrete Mixer Backup Alarms & Air Brakes	71.6				
Paving/ Landscaping	Concrete Mixer Truck Movements	71.2				
	Concrete Paver Activities	65.6	71.2			
	Concrete Mixer Pour & Paving Activities	65.9				
Architectural Coating	Air Compressors	65.2				
	Generator	64.9	65.2			
	Crane	62.3				

TABLE 10-1: TYPICAL CONSTRUCTION REFERENCE NOISE LEVELS

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

10.3 Typical Construction Noise Analysis

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts with multiple pieces of equipment operating simultaneously at the nearest 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 10-2, the construction noise levels are expected to range from 60.4 to 72.5 dBA L_{eq}, and the highest construction levels are expected to range from 70.5 to 72.5 dBA L_{eq} at the nearest receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.



	Construction Noise Levels (dBA Leq)									
Location ¹	Demolition	Site Preparation	Grading	Building Construction	Paving/ Landscaping	Architectural Coating	Highest Levels ²			
R1	69.1	72.5	70.7	68.8	68.4	62.4	72.5			
R2	68.8	72.2	70.4	68.5	68.1	62.1	72.2			
R3	68.8	72.2	70.4	68.5	68.1	62.1	72.2			
R4	68.7	72.1	70.3	68.4	68.0	62.0	72.1			
R5	67.1	70.5	68.7	66.8	66.4	60.4	70.5			
R6	68.4	71.8	70.0	68.1	67.7	61.7	71.8			
R7	68.7	72.1	70.3	68.4	68.0	62.0	72.1			
R8	67.7	71.1	69.3	67.4	67.0	61.0	71.1			

TABLE 10-2: TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

 $^{1}\,\mathrm{Noise}$ receiver locations are shown on Exhibit 10-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 10.1.

10.4 Typical Construction Noise Level Compliance

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

- .	Construction Noise Levels (dBA Leq)							
Receiver Location ¹	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴					
R1	72.5	80	No					
R2	72.2	80	No					
R3	72.2	80	No					
R4	72.1	80	No					
R5	70.5	80	No					
R6	71.8	80	No					
R7	72.1	80	No					
R8	71.1	80	No					

TABLE 10-3: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

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

² Highest construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations as shown on Table 10-2.

³ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

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



10.6 Typical Construction Vibration Analysis

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

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

TABLE 10-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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

Table 10-5 presents the expected Project related typical construction activity vibration levels at each of the receiver locations. At distances ranging from 72 to 209 feet from Project construction activity, the transient construction vibration velocity levels are estimated to range from 0.004 to 0.018 PPV in/sec, as shown on Table 10-5. Based on maximum acceptable transient vibration threshold of 1.0 PPV (in/sec) for new residential structures, the typical Project construction vibration levels will satisfy the building damage thresholds at all the nearest receiver locations.

In addition, the construction vibration analysis on Table 10-5 shows that the vibration levels will satisfy the *barely perceptible* maximum transient vibration human annoyance threshold of 0.04 PPV (in/sec) at all the nearest receiver locations. Therefore, the vibration impacts due to the typical Project construction activities are considered *less than significant*. In addition, the typical construction vibration levels at the nearest sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site boundaries.



Structure		Distance to	Typical Construction Vibration Levels PPV (in/sec) ⁴				Thresholds PPV (in/sec) ⁵		Thresholds Exceeded? ⁶		
Receiver ¹	Type ²	Const. Activity (Feet) ³	Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level	Building Damage	Human Annoyance	Building Damage	Human Annoyance
R1	Residential	74'	0.001	0.007	0.015	0.017	0.017	1.00	0.04	No	No
R2	Residential	84'	0.000	0.006	0.012	0.014	0.014	1.00	0.04	No	No
R3	Residential	98'	0.000	0.005	0.010	0.011	0.011	1.00	0.04	No	No
R4	Residential	105'	0.000	0.004	0.009	0.010	0.010	1.00	0.04	No	No
R5	Library	209'	0.000	0.001	0.003	0.004	0.004	1.00	0.04	No	No
R6	Residential	123'	0.000	0.003	0.007	0.008	0.008	1.00	0.04	No	No
R7	Church	72'	0.001	0.007	0.016	0.018	0.018	1.00	0.04	No	No
R8	Residential	115'	0.000	0.004	0.008	0.009	0.009	1.00	0.04	No	No

TABLE 10-5: TYPICAL CONSTRUCTION EQUIPMENT VIBRATION LEVELS

¹Receiver locations are shown on Exhibit 8-A.

² Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Tables 19, p. 38.

³ Distance from receiver location to Project construction boundary.

⁴ Based on the Vibration Source Levels of Construction Equipment (Table 10-4).

⁵ Thresholds for transient sources associated with typical construction activities, Caltrans Transportation and Construction Vibration Manual, April 2020 p.38. (see Tables 3-2 & 3-3).

⁶ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity



11 REFERENCES

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- 3. Environmental Protection Agency Office of Noise Abatement and Control. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974. EPA/ONAC 550/9/74-004.
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- 21. California Department of Transportation Environmental Program. *I-80 Davis OGAC Pavement Noise Study.* September 2001.
- 22. Canadian Ministry of Transportation and Highways, Highway Environment Branch. Open-Graded Asphalt 'Quiet Pavement' Assessment of Traffic Noise Reduction Performance. November 1995.
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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Airport Gateway 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) 584-3148.

Bill Lawson, P.E., INCE Principal 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 SAN BERNARDINO MUNICIPAL CODE



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ARTICLE III - GENERAL REGULATIONS

CHAPTER 19.20 PROPERTY DEVELOPMENT STANDARDS

Sections:

19.20.010	Purpose
19.20.020	Applicability
19.20.030	General Standards
Tables:	
20.01	Fences and Walls Height and Type Limits

19.20.010 Purpose

These standards shall ensure that new or modified uses and development will produce an urban environment of stable, desirable character which is harmonious with the existing and future development, consistent with the General Plan.

19.20.020 Applicability

Any permit which authorizes new construction or modifications to an existing structure in excess of 25% of the structure floor area shall be subject to the standards set forth in this Chapter.

19.20.030 General Standards

No permit shall be approved unless it conforms to all of the following standards set forth in this Chapter:

- 1. Access
- 2. Additional Structural Setback Restirictions
- 3. Antennae, Satellite Dishes and Telecommunications Facilities
- 4. Design Considerations
- 5. Dust and Dirt
- 6. Environmental Resources/Constraints
- 7. Exterior Building/Structure Walls

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14. LIGHTING

Exterior lighting shall be energy-efficient and shielded or recessed so that direct glare and reflections are contained within the boundaries of the parcel, and shall be directed downward and away from adjoining properties and public rights-of-way. No lighting shall blink, flash, or be of unusually high intensity or brightness. All lighting fixtures shall be appropriate in scale, intensity, and height to the use it is serving. Security lighting shall be provided at all entrances/exits.

15. NOISE

No loudspeaker, bells, gongs, buzzers, mechanical equipment or other sounds, attention-attracting, or communication device associated with any use shall be discernible beyond any boundary line of the parcel, except fire protection devices, burglar alarms and church bells. The following provisions shall apply:

- A. In residential areas, no exterior noise level shall exceed 65dBA and no interior noise level shall exceed 45dBA.
- B. All residential developments shall incorporate the following standards to mitigate noise levels:
 - 1. Increase the distance between the noise source and receiver.
 - 2. Locate land uses not sensitive to noise (i.e., parking lots, garages, maintenance facilities, utility areas, etc.) between the noise source and the receiver.
 - 3. Bedrooms should be located on the side of the structure away from major rights-of-way.
 - 4. Quiet outdoor spaces may be provided next to a noisy right-of-way by creating a U-shaped development which faces away from the right-of-way.

- C. The minimum acceptable surface weight for a noise barrier is four pounds per square foot (equivalent to ³/₄-inch plywood). The barrier shall be of a continuous material which is resistant to sound including:
 - 1. Masonry block
 - 2. Precast concrete
 - 3. Earth berm or a combination of earth berm with block concrete.
- D. Noise barriers shall interrupt the line-of-sight between noise source and receiver.
- 16. ODOR

No use shall emit any obnoxious odor or fumes.

17. PROJECTIONS/CONSTRUCTION AND EQUIPMENT PERMITTED INTO SETBACKS

The following list represents the only projections, construction, or equipment that shall be permitted within the required setbacks:

- A. Front Setback: Roof overhangs, fireplace chimney, awnings & canopies
- B. Rear Setback: Roof overhangs, pools, patio covers, tennis courts, gazebos, and awnings & canopies, provided there is no projection within 10 feet of the property line. Accessory structures may be built to the interior side or rear property lines provided that such structures are not closer than 10 feet to any other structures.

(Ord. MC-876, 6-09-93)

C. Side Setback: Roof overhangs, fireplace chimney, awnings & canopies

Building Code requirements may further restrict the distance required to be maintained from the property lines and other structures.

28. VIBRATION

No vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property.

Chapter 8.54 NOISE CONTROL

Sections:

- 8.54.010 **Purpose and Intent**
- 8.54.020 Prohibited Acts
- 8.54.030 Issuance of Written Notice and Impoundment
- 8.54.040 Cost Recovery for Second Response
- 8.54.050 Controlled Hours of Operation
- 8.54.060 Exemptions
- 8.54.070 Disturbances From Construction Activity
- 8.54.080 Violation Penalty
- 8.54.090 Severability

8.54.010 Purpose and Intent

- A. It is the purpose and intent of these regulations to establish community-wide noise standards. It is further the purpose of these regulations to recognize that the existence of excessive noise within the City is a condition which is detrimental to the health, safety, welfare, and quality of life of the citizens and shall be regulated in the public interest.
- B. In furtherance of the foregoing purpose, it is found and declared as follows:
 - 1. The making, creation, or maintenance of such loud, unnecessary, unnatural, or unusual noises that are prolonged, unusual, annoying, disturbing and unnatural in their time, place, and use are a detriment to public health, comfort, convenience, safety, general welfare, and the peace and quiet of the City and its inhabitants; and
 - 2. The public interest and necessity of the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of, and for the purpose of, securing and promoting the public health, comfort, convenience, safety, general welfare and property, and the peace and quiet of the City and its inhabitants.

(Ord. MC-1246, 5-23-07; Ord. 1925, 11-06-51)

8.54.020 Prohibited Acts

It shall be unlawful for any person to engage in the following activities:

- A. Sounding any horn or signal device on any automobile, motorcycle, bus, or other motor vehicle in any other manner or circumstances or for any other purpose than required or permitted by the California Vehicle Code, or other laws, for an unnecessary or unreasonable period of time;
- B. Racing the engine of any motor vehicle while the vehicle is not in motion, except when necessary to do so in the course of repairing, adjusting, or testing the same.
- C. Operating or permitting the use of any motor vehicle on any public right-of-way or public place or on private property within a residential zone for which the exhaust muffler, intake muffler, or any other noise abatement device has been modified or changed in a manner such that the noise emitted by the motor vehicle is increased above that emitted by the vehicle as originally manufactured.
- D. Using, operating, or permitting to be played, used or operated any radio receiving set, musical instrument, phonograph, or other sound amplification or production equipment for producing or reproducing sound in such a manner as to disturb the peace, quiet, or comfort of neighboring persons, or at any time with louder volume than is necessary for the convenient hearing of the person or persons who are in the room, vehicle, or other enclosure in which such machine or device is operated, and who are voluntary listeners thereto and that is:
 - 1. Plainly audible across property boundaries;
 - 2. Plainly audible through partitions common to two residences within a building;
 - 3. Plainly audible at a distance of 50 feet in any direction from the source of the music or sound between the hours of 8:00 a.m. and 10:00 p.m.; or
 - 4. Plainly audible at a distance of 25 feet in any direction from the source of the music or sound between the hours of 10:00 p.m. and 8:00 a.m.
- E. The intentional sounding or permitting the sounding outdoors of any fire, burglar, or civil defense alarm, siren, whistle, or any motor vehicle burglar alarm, except for emergency purposes or for testing, unless such alarm is terminated within fifteen minutes of activation.

- F. Yelling, shouting, whistling, or singing in a loud and boisterous manner on the public streets so as to disturb the quiet, comfort, or repose of persons in any office, dwelling, hotel, or other type of residence, or neighborhood.
- G. The keeping of any animal, fowl, or bird which by causing frequent or long continued noise disturbs the comfort, quiet, or repose of any person or neighborhood.
- H. The unnecessary or excessive blowing of whistles, sounding of horns, ringing of bells, or use of signaling devices by operators of trains, motor trucks, and other transportation equipment.
- I. The creation of loud and excessive noise in connection with the loading or unloading of motor trucks and other vehicles.
- J. The shouting and crying of peddlers, hawkers, and vendors which disturbs the peace and quiet of any considerable number of persons or neighborhood.
- K. The doing of automobile, automotive body or fender repair work, or other work on metal objects and metal parts in a residential district so as to cause loud and excessive noise which disturbs the peace, quiet, and repose of any person occupying adjoining or closely situated property or neighborhood.
- L. The operation or use between the hours of 10:00 p.m. and 8:00 a.m. of any pile driver, steam shovel, pneumatic hammers, derrick, steam or electric hoist, power driven saw, or any other tool or apparatus, the use of which is attended by loud and excessive noise, except with the approval of the City.
- M. Creating excessive noise adjacent to any school, church, court, or library while the same is in use, or adjacent to any hospital or care facility, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such streets indicating the presence of a school, institution of learning, church, court, or hospital.
- N. Making or knowingly and unreasonably permitting to be made any unreasonably loud, unnecessary, or unusual noise that disturbs the comfort, repose, health, peace and quiet, or which causes discomfort or annoyance to any reasonable person of normal sensitivity. The characteristics and conditions that may be considered in determining whether this section has been violated include, but are not limited to, the following:
 - 1. The level of noise;
 - 2. The level of background noise;

- 3. The proximity of the noise to sleeping facilities;
- 4. The nature and zoning of the areas within which the noise emanates;
- 5. The density of the inhabitation of the area within which the noise emanates;
- 6. The time of day or night the noise occurs;
- 7. The duration of the noise;
- 8. Whether the noise is recurrent, intermittent, or constant; and
- 9. Whether the noise is produced by a commercial or noncommercial activity.

(Ord. MC-1246, 5-23-07; Ord. 2102, 4-03-56; Ord. 1925, 11-06-51)

8.54.030 Issuance of Written Notice and Impoundment

- A. Any officer who encounters a violation of this section may issue a written notice to the Responsible Person demanding immediate abatement of the violation. The written notice shall inform the recipient that a second violation of the same provision within a seventy two (72) hour period may result in the issuance of a criminal citation, the imposition of criminal and civil penalties, and confiscation and impoundment, as evidence, of the components that are amplifying or transmitting the prohibited noise.
 - Responsible Person means (a) any person who owns, leases, or is lawfully in charge of the property or motor vehicle where the noise violation takes place, or (b) any person who owns or controls the source of the noise or violation. If the Responsible Person is a minor, then the parent or guardian who has custody of the child at the time of the violation shall be the Responsible Person who is liable under this chapter.
- B. Any officer who encounters a second violation of this chapter within a seventy two (72) hour period following the issuance of a written notice is empowered to confiscate and impound, as evidence, any or all of the components amplifying or transmitting the sound. The immediate confiscation of a motor vehicle to which a component is attached may be made if the same may not be removed without causing harm to the vehicle or component.

C. Any person claiming legal ownership of the items confiscated and impounded under this chapter may request the return of the item by filing a written request with the police department within seven (7) calendar days of the confiscation. Such requests shall be processed in accordance with the procedures adopted by the department.

(Ord. MC-1246, 5-23-07; Ord. MC-649, 1-04-89; Ord. 1925, 11-06-51)

8.54.040 Cost Recovery for Second Response

- A. Whenever any officer issues a written notice to a responsible person to discontinue a noise violation, the Responsible Person shall be liable for the actual cost of each subsequent response required to abate the violation within seventy two (72) hours of the issuance of the written warning.
- B. The bill for the response charge shall be served upon the Responsible Person within thirty (30) days after the violation. If the Responsible Person has no last known business or residence address, the location of the violation shall be deemed to be the proper address for service. The bill shall include a notice of the right of the person being charged to request a hearing to dispute the imposition of the response charge or the amount of the charge.
- C. The response charge shall be deemed to be a civil debt to the City.

(Ord. MC-1246, 5-23-07; Ord. MC-460, 5-15-85; Ord. 1925, 11-06-51)

8.54.050 Controlled Hours of Operation

It shall be unlawful for any person to engage in the following activities other than between the hours of 8:00 a.m. and 8:00 p.m. in residential zones and other than between the hours of 7:00 a.m. and 8:00 p.m. in all other zones:

- A. Operate or permit the use of powered model vehicles and planes.
- B. Load or unload any vehicle, or operate or permit the use of dollies, carts, forklifts, or other wheeled equipment that causes any impulsive sound, raucous, or unnecessary noise within one thousand (1,000) feet of a residence.
- C. Operate or permit the use of domestic power tools, or machinery or any other equipment or tool in any garage, workshop, house, or any other structure.
- D. Operate or permit the use of gasoline or electric powered leaf blowers, such as commonly used by gardeners and other persons for cleaning lawns, yards, driveways, gutters, and other property.

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- E. Operate or permit the use of privately operated street/parking lot sweepers or vacuums, except that emergency work and/or work necessitated by unusual conditions may be performed with the written consent of the City Manager.
- F. Operate or permit the use of electrically operated compressor, fan, and other similar devices.
- G. Operate or permit the use of any motor vehicle with a gross vehicle weight rating in excess of ten thousand (10,000) pounds, or of any auxiliary equipment attached to such a vehicle, including, but not limited to, refrigerated truck compressors for a period longer than fifteen (15) minutes in any hour while the vehicle is stationary and on a public right-of-way or public space except when movement of said vehicle is restricted by other traffic.
- H. Repair, rebuild, reconstruct, or dismantle any motor vehicle or other mechanical equipment or devices in a manner so as to be plainly audible across property lines.

(Ord. MC-1246, 5-23-07)

8.54.060 Exemptions

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

- A. The use of horns, sirens, or other signaling or warning devices by persons vested with legal authority to use the same, and in pursuit of their lawful duties, such as on ambulances, fire, police, or other governmental or official equipment.
- B. Such noises as are an accompaniment and effect of a lawful business, commercial or industrial enterprise carried on in an area zoned for that purpose, except where there is evidence that such noise is a nuisance and that such a nuisance is a result of the employment of unnecessary and injurious methods of operation.
- C. Activities conducted on the grounds of any public or private school during regular hours of operation.
- D. Outdoor gatherings, public dances, shows, and sporting and entertainment events provided said events are authorized by the City.
- E. Activities conducted at public spaces during regular hours of operation.
- F. Any mechanical devices, apparatus, or equipment used, related to, or connected with emergency machinery, vehicle, or work.

G. Construction, repair, or excavation necessary for the immediate preservation of life or property.

- H. Construction, operation, maintenance, and repairs of equipment, apparatus, or facilities of park and recreation departments, public work projects, or essential public services and facilities, including, but not limited to, trash collection and those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.
- I. Construction, repair, or excavation work performed pursuant to a valid written agreement with the City, or any of its political subdivisions, which provides for noise mitigation measures.
- J. Any activity to the extent that regulation thereof has been preempted by State or Federal law.
- K. Sounds generated in connection with speech or communication protected by the United States Constitution or the California Constitution, except to the extent such sounds are subject to permissible time, place, and manner restrictions.

(Ord. MC-1246, 5-23-07)

8.54.070 Disturbances from Construction Activity

No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 a.m. and 8:00 p.m.

(Ord. MC-1246, 5-23-07)

8.54.080 Violation - Penalty

Any person violating any of the provisions of this Chapter is guilty of an infraction or a misdemeanor, which upon conviction thereof is punishable in accordance with the provisions of Section 1.12.010 of this code.

(Ord. MC-1246, 5-23-07)

8.54.090 Severability

The provisions of this Chapter are severable, and, if any sentence, section or other part of this Chapter should be found to be invalid, such invalidity shall not affect the remaining provisions, and the remaining provisions shall continue in full force and effect.

(Ord. MC-1246, 5-23-07)

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[Rev. June 2020]

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APPENDIX 3.2:

CITY OF HIGHLAND MUNICIPAL CODE



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Chapter 8.50

NOISE CONTROL

Sections:

- 8.50.010 Findings and purpose.
- 8.50.020 Definitions.
- 8.50.030 Prohibited acts.
- 8.50.040 Excessive noise and vibration emanating from a motor vehicle.
- 8.50.050 Controlled hours of operation.
- 8.50.060 Exemptions.
- 8.50.070 Enforcement and administration.
- 8.50.080 Enforcement Interference.
- 8.50.090 Violations Notices Abatement.
- 8.50.100 *Repealed*.
- 8.50.110 Violations Notices Service Effect.
- 8.50.120 Immediate threats to health and welfare.
- 8.50.130 Administrative citations and costs of second and subsequent responses.
- 8.50.140 Modification, suspension and/or revocation of validly issued city permit and/or city license.

8.50.010 Findings and purpose.

A. It is the purpose of these regulations to implement the goals and objectives of the noise element of the city's general plan, to establish community-wide noise standards and to serve as a reference for locating other city regulations relating to noise in the community. It is further the purpose of these regulations to recognize that the existence of excessive noise within the city is a condition which is detrimental to the health, safety, welfare and quality of life of the citizens which should be regulated in the public interest.

B. In furtherance of the foregoing purpose, the city council finds and declares as follows:

1. The making, creation or maintenance of such loud, unnecessary, unnatural or unusual noises or vibrations that are prolonged, unusual, annoying, disturbing and unnatural in their time, place and use are a detriment to the public health, comfort, convenience, safety, general welfare and the peace and quiet of the city and its inhabitants; and

2. The public interest necessity for the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuit of and for the purpose of securing and promoting the public health, comfort, convenience, safety, general welfare and property and the peace and quiet of the city and its inhabitants. (Ord. 324 § 2, 2008)

8.50.020 Definitions.

For the purposes of this chapter, the following terms shall have the meanings given:

"Construction equipment" means tools, machinery or equipment used in connection with construction operations, including all types of "special construction" equipment as defined in the pertinent sections of the California Vehicle Code when used in the construction process on any construction site, home improvement site or property maintenance site, regardless of whether such site be located on highway or off highway.

"Enforcement officer" means a city code enforcement officer or peace officer authorized to enforce the provisions and prohibitions of this chapter pursuant to HMC 8.50.070.

"Plainly audible" means any sound that can be detected by a person using his or her unaided hearing faculties. As an example, if the sound source under investigation is a portable or personal vehicular sound amplification or reproduction device, the investigating enforcement officer need not determine the title of any music, specific words, or the artist performing the music. The detection of the vibration from the rhythmic bass component of the music is sufficient to constitute a plainly audible sound.

"Public right-of-way" means any street, avenue, boulevard, highway, sidewalk, alley or similar place, owned or controlled by a government entity.

"Public space" means any real property or structure(s) on real property, owned by a government entity and normally accessible to the public, including but not limited to parks and other recreation areas.

"Responsible person" means (1) any person who owns, leases or is lawfully in charge of the property or motor vehicle where the noise violation takes place or (2) any person who owns or controls the source of the noise or violation. If the responsible person is a minor, then the parent or guardian who has custody of the child at the time of the violation shall be the responsible person who is liable under this chapter. (Ord. 324 § 2, 2008)

8.50.030 Prohibited acts.

A. It shall be unlawful for any person to engage in the following activities:

1. Sounding any horn or signal device on any automobile, motorcycle, bus or other motor vehicle in any other manner or circumstance(s) or for any other purpose than required or permitted by the Vehicle Code or other state laws.

2. Racing the engine of any motor vehicle while the vehicle is not in motion, except when necessary to do so in the course of repairing, adjusting or testing the same.

3. Operating or permitting the use of any motor vehicle on any public right-of-way or public place or on private property within a residential zone for which the exhaust muffler, intake muffler or any other noise abatement device has been modified or changed in a manner such that the noise emitted by the motor vehicle is increased above that emitted by the vehicle as originally manufactured.

4. Operating or permitting the use or operation of personal or commercial music or sound amplification or production equipment that is:

a. Plainly audible across property boundaries;

b. Plainly audible through partitions common to two residences within a building;

c. Plainly audible at a distance of 50 feet in any direction from the source of music or sound, between the hours of 7:00 a.m. and 10:00 p.m.; or

d. Plainly audible at a distance of 25 feet in any direction from the source of music or sound, between the hours of 10:00 p.m. and 7:00 a.m.

5. The intentional sounding or permitting the sounding outdoors of any fire, burglar, or civil defense alarm, siren, whistle, or any motor vehicle burglar alarm, except for emergency purposes or for testing, unless such alarm is terminated within 15 minutes of activation.

6. Creating excessive noise adjacent to any school, church, court or library while the same is in use, or adjacent to any hospital or care facility, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed, clearly visible to the motoring public, indicating the presence of a school, institution of learning, church, court or hospital.

7. Making or knowingly and unreasonably permitting to be made any unreasonably loud, unnecessary or unusual noise that disturbs the comfort, repose, health, peace and quiet or which causes discomfort or annoyance to any reasonable person of normal sensitivity. The characteristics and conditions that may be considered in determining whether this section has been violated include, but are not limited to, the following:

- a. The level of noise;
- b. Whether the nature of the noise is usual or unusual;
- c. Whether the origin of the noise is natural or unnatural;

- d. The level of the background noise;
- e. The proximity of the noise to sleeping facilities;
- f. The nature and zoning of the area(s) within which the noise emanates;
- g. The density of the inhabitation of the area within which the noise emanates;
- h. The time of day or night the noise occurs;
- i. The duration of the noise; and
- j. Whether the noise is produced by a commercial or noncommercial activity.

B. A violation of this section is a public nuisance.

C. A violation of this section may result in the following:

1. Issuance of an administrative citation, where the fines and penalties shall be assessed as infractions in accordance with HMC 2.56.110;

2. Issuance of a notice of public nuisance and abatement pursuant to Chapter 8.28 HMC;

3. Imposition of criminal and civil penalties, including those in Chapter 1.24 HMC; and

4. Confiscation and impoundment as evidence of the components that are amplifying or transmitting the prohibited noise.

D. An enforcement officer who encounters a violation of this section may issue a written notice to the responsible person demanding immediate abatement of the violation (written notice). The written notice shall inform the recipient that a second violation of the same provision within a 72-hour period may result in the issuance of a criminal citation and/or notice of public nuisance, the imposition of criminal and civil penalties, and confiscation and impoundment as evidence of the components that are amplifying or transmitting the prohibited noise.

E. Any peace officer who encounters a second violation of this section within a 72-hour period following issuance of a written notice is empowered to confiscate and impound as evidence any or all of the components amplifying or transmitting the sound.

F. Any person claiming legal ownership of the items confiscated and impounded under this section may request the return of the item by filing a written request with the police department within seven calendar days of the confiscation. Such requests shall be processed in accordance with the procedures adopted by the police department. (Ord. 370 § 27, 2012; Ord. 324 § 2, 2008)

8.50.040 Excessive noise and vibration emanating from a motor vehicle.

A. No person shall operate or occupy a motor vehicle on any public right-of-way, public place or private property, while operating or permitting the use or operation of any radio, stereo receiver, musical instrument, television, computer, compact disc player, tape recorder, cassette player or any other device for the production or reproduction of sound from within the motor vehicle, so that the sound is plainly audible at a distance of 50 feet from such vehicle, or in the case of a motor vehicle on private property, beyond the property line.

B. A violation of this section is a public nuisance.

C. A violation of this section may result in the following:

1. Issuance of an administrative citation, where the fines and penalties shall be assessed as infractions in accordance with HMC 2.56.110;

2. Issuance of a notice of public nuisance and abatement pursuant to Chapter 8.28 HMC;

3. Imposition of criminal and civil penalties, including those in Chapter 1.24 HMC; and

4. Immediate confiscation and impoundment as evidence of the components that are amplifying or transmitting the prohibited noises or the immediate confiscation and impoundment of the motor vehicle to which the component is attached if the same may not be removed without causing harm to the vehicle or the component.

D. Any person claiming legal ownership of a motor vehicle confiscated and impounded under this section may request the return of the vehicle by filing a written request with the police department within seven calendar days of the confiscation. Such requests shall be processed in accordance with procedures adopted by the police department.

E. Any person claiming legal ownership of the items confiscated and impounded under this section, other than a motor vehicle, may request the return of the item by filing a written request with the police department, which shall be processed in accordance with procedures adopted by the police department. (Ord. 370 § 28, 2012; Ord. 324 § 2, 2008)

8.50.050 Controlled hours of operation.

It shall be unlawful for any person to engage in the following activities at a time other than between the hours of 5:00 a.m. and 10:00 p.m. on any day in the industrial (I) zone, and between the hours of 7:00 a.m. and 10:00 p.m. on any day in all other zones:

A. Operate or permit the use of powered model vehicles and planes.

B. Load or unload any vehicle, or operate or permit the use of dollies, carts, forklifts, or other wheeled equipment that causes any impulsive sound, raucous or unnecessary noise within 1,000 feet of a residence.

C. Operate or permit the use of domestic power tools, machinery, or any other equipment or tool in any garage, workshop, house or any other structure.

D. Operate or permit the use of gasoline or electric-powered leaf blowers such as commonly used by gardeners and other persons for cleaning lawns, yards, driveways, gutters and other property.

E. Operate or permit the use of privately operated street/parking lot sweepers or vacuums, except that emergency work and/or work necessitated by unusual conditions may be performed with the written consent of the code enforcement officer.

F. Operate or permit the use of electrically operated compressor(s), fan(s) and other similar device(s).

G. Operate or permit the use of pile driver(s), steam or gasoline shovel(s), pneumatic hammer(s), steam or electric hoist(s) or other similar device(s).

H. Perform ground maintenance on golf course grounds and tennis courts contiguous to golf courses that creates a noise disturbance across a residential or commercial property line.

I. Operate or permit the use of any motor vehicle with a gross vehicle weight rating in excess of 10,000 pounds, or of any auxiliary equipment attached to such a vehicle, including but not limited to refrigerated truck compressors, for a period longer than 15 minutes in any hour while the vehicle is stationary and on a public right-of-way or public space, except when movement of said vehicle is restricted by other traffic.

J. Repair, rebuild, reconstruct or dismantle any motor vehicle or other mechanical equipment or device(s) in a manner so as to be plainly audible across property lines.

K. Load, unload, open, close or otherwise handle garbage cans, recycling bins or other similar objects between the hours of 10:00 p.m. and 7:00 a.m. the following morning, except city-permitted trash collection. (Ord. 352 § 1, 2010; Ord. 324 § 2, 2008)

8.50.060 Exemptions.

The following activities and noise sources shall not be subject to the provisions of this chapter:

A. Those noise events in the community (e.g., airport noise, arterial traffic noise, railroad noise) that are more accurately measured by application of the general plan noise element policy, utilizing the community noise equivalent level (CNEL) method.

B. Activities conducted on the grounds of any public or private school during regular hours of operation.

C. Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are authorized by the city.

D. Legally permitted activities conducted at public places during regular hours of operation.

E. Any mechanical device, apparatus, or equipment used, related to or connected with emergency machinery, vehicle or work.

F. All mechanical devices, apparatus, or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions.

G. Mobile noise sounds associated with agricultural operations, provided such operations do not take place between the hours of 10:00 p.m. and 7:00 a.m. on weekdays, including Saturdays, or at any time on Sunday or a state holiday.

H. Mobile noise sources associated with agricultural pest control through pesticide application.

I. Warning devices necessary for the protection of the public safety, including, but not limited to, police, fire and ambulance sirens and train horns and sounds for the purpose of alerting persons to the existence of an emergency.

J. Construction, repair or excavation necessary for the immediate preservation of life or property.

K. Construction, operation, maintenance and repair of equipment, apparatus or facilities of the park and recreation department, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the Public Utilities Commission.

L. Construction, repair or excavation work performed pursuant to a valid written agreement with the city or any of its political subdivisions, which agreement provides for noise mitigation measures.

M. Any activity, to the extent regulation thereof has been preempted by state or federal law.

N. Any specific activity or noise source governed elsewhere in this code. Such activities include, but are not limited to:

- 1. Security alarm systems (Chapter 8.04 HMC);
- 2. Animal noise (Chapter 6.04 HMC);
- 3. Loud, unruly or disorderly private parties or assemblies (Chapter 9.17 HMC). (Ord. 324 § 2, 2008)

8.50.070 Enforcement and administration.

The city manager, chief of police and/or their designees shall be responsible for administering and enforcing the provisions of this chapter. (Ord. 324 § 2, 2008)

8.50.080 Enforcement – Interference.

No person shall interfere with, oppose, or resist any authorized person charged with the enforcement of this chapter while such person is engaged in the performance of his duty. (Ord. 324 § 3, 2008; Ord. 283 § 4, 2002. Formerly 8.50.140)

8.50.090 Violations – Notices – Abatement.

Violations of this chapter shall be prosecuted in the same manner as other violations of this code; provided, however, in the event of an initial violation of the provisions of this chapter, a written notice shall be given the

Highland Municipal Code Chapter 8.50 NOISE CONTROL

alleged violator which specifies the time by which the condition shall be corrected or, where applicable, an application for a permit shall be received by the planning division. No complaint or further action shall be taken in the event the cause of the violation has been removed or the condition abated or fully corrected within the time period specified in the written notice. (Ord. 370 § 29, 2012; Ord. 324 § 3, 2008; Ord. 283 § 4, 2002. Formerly 8.50.150)

8.50.100 Violations – Penalties.

Repealed by Ord. 370. (Ord. 324 § 3, 2008; Ord. 283 § 4, 2002. Formerly 8.50.160)

8.50.110 Violations – Notices – Service – Effect.

In the event the alleged violator cannot be located in order to serve the violation of intention to prosecute, such notice shall be deemed to be given upon mailing such notice by registered or certified mail to the alleged violator at his last known address or at the place where the violation occurred, in which event the specified time period for abating the violation or applying for a variance shall commence on the date of the day following the mailing of such notice. Subsequent violations of the same offense shall result in the immediate filing of a complaint. (Ord. 370 § 30, 2012; Ord. 324 § 3, 2008; Ord. 283 § 4, 2002. Formerly 8.50.170)

8.50.120 Immediate threats to health and welfare.

A. The city manager may order an immediate halt to any sound which exposes any person, except those excluded pursuant to HMC 8.50.060, to continuous sound levels in excess of those described herein. Within two days following the issuance of any such order, the city shall apply to the appropriate court for an injunction to replace the order.

B. No order pursuant to subsection A of this section shall be issued if the only persons exposed to sound levels in excess of those contained herein are exposed as a result of (1) trespassing; (2) an invitation upon private property by the person causing or permitting the sound; or (3) employment by the person or contractor of the person causing or permitting the sound.

C. Any person subject to an order issued pursuant to subsection A of this section shall comply with such order until (1) the sound is brought into compliance with the order, as determined by the city manager; or (2) a judicial order has superseded the order of the city manager. (Ord. 324 § 3, 2008; Ord. 283 § 4, 2002. Formerly 8.50.180)

8.50.130 Administrative citations and costs of second and subsequent responses.

The city manager or his designee, in his/her sole discretion, may prosecute violations of this chapter through the administrative citation process set forth in Chapter 2.56 HMC, in lieu of the criminal or nuisance abatement process. In the case of second and subsequent violations of this chapter, the city may assess a second response service fee in compliance with HMC 9.17.030 through 9.17.060, inclusive. (Ord. 324 § 4, 2008)

8.50.140 Modification, suspension and/or revocation of validly issued city permit and/or city license.

The violation of this chapter by any city permittee or licensee more than twice in any six-calendar-month period, in the course of operating pursuant to a validly issued city permit and/or license, may be grounds for the modification, suspension or revocation of such license subject to normal city processes, in the discretion of the city manager. (Ord. 324 § 4, 2008)

APPENDIX 3.3:

CITY OF HIGHLAND GENERAL PLAN NOISE ELEMENT



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7. Noise Element

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Chapter 7. Noise

INTRODUCTION

Purpose and Function

The everyday activities of residents, visitors and workers have the potential to generate a variety of noise sources in the City of Highland. The San Bernardino International Airport (SBIA) is a public, full-service airport designed to serve the western United States with commercial and cargo air traffic. The SBIA contains and is surrounded by multiple commercial and industrial properties, all of which have the potential to generate noise through their business activities. Highland also generates and draws a significant level of passenger and truck traffic through the City along the major roadways and highways, creating mobile sources of noise that can impact noise-sensitive land uses such as homes and schools.

The Noise Element provides the goals and strategies necessary to ensure an appropriately quiet environment for the residents, employees and visitors in Highland. Since the regulation of transportation noise sources such as roadway and aircraft primarily fall under either state or federal jurisdiction, local land use and development planning decisions are generally made in terms of limiting locations or volumes of such sources, of avoiding development in noise impact zones or in shielding impacted receiver sites.

As development continues, the City shall carefully review proposals to ensure that land uses incompatible with the noise environment are avoided. This Element identifies noise issues within the City and provides goals and policies aimed at minimizing noise conflicts and furthering the public health, safety and welfare.


Element Components

The Noise Element has been organized into three sections:

- **Introduction**. This section states the purpose of the Element, provides a brief introduction to the topic of noise and discusses other related plans and programs that affect the noise environment of Highland.
- **Noise Assessment and Modeling**. This section presents the findings and standards of the General Plan noise analysis on the buildout of the General Plan Land Use Plan.
- **Goals and Policies**. This section provides a discussion of noise issues that apply to one area of the City or apply Citywide. Each of the issue discussions is followed by a series of goals and policies.

Understanding Noise

The principal characteristics of sound are its loudness (amplitude) and frequency (pitch). The frequency of a sound is significant because the human ear is not equally sensitive to all frequencies. At low frequencies, characterized as a rumble or roar, the ear is not very sensitive while at higher frequencies, characterized as a screech or a whine, the ear is most sensitive. To reflect this varying sensitivity, an A-weighted decibel scale (dBA) is typically used to measure the perceived loudness of a sound.

Noise refers to sound pressure variations audible to the ear. The audibility of a sound depends on the amplitude and frequency of the sound and the individual's capability to hear the sound. Whether the sound is judged as noise depends largely on the listener's current activity and attitude toward the sound source, as well as the amplitude and frequency of the sound. To obtain convenient measurements and sensitivities at extremely low and high sound pressures, sound is measured in units of the decibel (dB). A listener often judges an increase in sound levels of 10 dBA as a doubling of sound. Examples of the decibel level of various noise sources are shown in Figure 7.1.



	145	
Physically Painful	140	Sonic Boom
Extremely Loud	135	
	130	
	125	Jet Takeoff at 200 feet
Discomforting	120	Oxygen Torch
	115	Dance Club
	110	Motorcycle at 15 feet (unmuffled)
	105	Power Mower at 3 feet
Very Loud	100	Newspaper Press
	95	Freight Train at 50 feet
	90	Food Blender
	85	Electric Mixer, Alarm Clock
	80	Heavy Truck at 50 feet
	75	Busy Street at 50 feet
	70	Average Traffic at 100 feet,
Loud	65	
	60	Dishwasher at 10 feet
	55	Normal Conversation at 5 feet
	50	Typical Daytime Suburban Background
	45	Refrigerator
	40	Bird Calls
	35	Library
	30	
Quiet	25	
	20	Motion Picture Studio
	15	
	10	Leaves Rustling
	5	
	0	

Figure 7.1: Noise Levels of Familiar Sources

Ranges and Effects of Noise

The most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud engine noises equate to 110 dBA, which can cause serious discomfort. Physical health, psychological well-being, social cohesion, property values and economic productivity can all be affected by excessive amounts of noise.

The effects of noise on people can be grouped into three general categories: subjective effects, such as annoyance and nuisance; interference with activities such as conversation and sleep; and physiological effects, for example, a startle or hearing loss.

Noise Terminology

dB (Decibel) – The unit of measure that denotes the ratio between two quantities that are proportional to power; the number of decibels corresponding to the ratio of the two amounts of power is based on a logarithmic scale.

dBA (A-weighted decibel) – The A-weighted decibel scale discriminates against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale ranges from zero for the least perceptible sound to about 130 for the pain level.

CNEL (Community Noise Equivalent Level) – The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. CNEL and Ldn are the metrics used in this document to describe annoyance due to noise and to establish land use planning criteria for noise.

L50 – The A-weighted sound level that is exceeded 50 percent of the sample time. Alternatively, the A-weighted sound level that is exceeded 30 minutes in a 60-minute period (similarly, L10, L25, etc.). These values are typically used to demonstrate compliance with noise restrictions included in the City noise ordinance.

Leq (Equivalent Energy Level) – The average acoustic energy content of noise during the time it lasts. The Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure, no matter what time of day they occur.

Ldn (Day-Night Average Level) – The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. Note: CNEL and Ldn represent daily levels of noise exposure averaged on an annual or daily basis, while Leq represents the equivalent energy noise exposure for a shorter time period, typically one hour. CNEL and Ldn are the metrics used in this document to describe annoyance due to noise and to establish land use planning criteria for noise.

Noise Contours – Lines drawn around a noise source indicating equal levels of noise exposure.



Adverse reactions to noise generally increase with an increase in the difference between background or ambient noise and the noise generated from a particularly intrusive source such as a barking dog, traffic, aircraft or industrial operations. In most situations, noise control measures must reduce noise by 5 to 10 dBA in order to effectively lower the perceived sound. Therefore, loud, short duration noises from barking dogs and low-flying aircraft generally have little impact upon the Community Noise Equivalent Level (CNEL) levels of an area, due to the CNEL being a 24-hour weighted average of noise levels.

Managing the Noise Environment

There are a variety of strategies available for managing the City's noise environment and preserving those qualities of peace and quiet that are essential and highly valued community assets. Land use planning, transportation planning, project design mitigation, simple and sophisticated technical fixes, and acoustical barriers can be applied to address community noise compatibility issues.

In areas subject to significant or potentially significant noise impacts, site planning and design standards are geared to provide noise impact mitigation. Other mitigation measures include the use of buffer zones consisting of earthen berms, walls and landscaping between sensitive land uses and roadways and other noise sources. In addition, site planning and building orientation can provide shielding of outdoor living spaces and orient operable windows away from roadways. Effective acoustical materials can also be incorporated into building windows and walls that adequately reduce outdoor noise.

Sensitive Noise Receptors

A series of land uses have been deemed "noise-sensitive" by the State of California. These land uses require a serene environment as part of the overall facility or residential experience. Many of these facilities depend on low levels of sound to promote the well being of the occupants. Land uses deemed noise-sensitive by the State of California include residences, schools, hospitals, rest homes, long-term care and mental care facilities. Highland considers residential dwellings and institutional uses such as hospitals, convalescent homes and churches to be sensitive noise receptors. Activities conducted in proximity to these facilities must consider the noise output and ensure that they don't create unacceptable noise levels that may unduly affect the noise-sensitive uses.

Relatively noise insensitive land uses include retail and office developments. Land uses that are the least impacted by noise include industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, rifle ranges, warehousing, liquid and solid waste facilities, salvage yards and transit terminals.

Related Plans and Program

Other Elements

The Noise Element is most closely related to the Land Use and Airport Elements. The Land Use Element identifies land use patterns and policies to address land use compatibility. The Airport Element addresses comprehensive issues related to the San Bernardino International and Redlands Municipal Airports, including noise.

Municipal Code

The City of Highland Municipal Code sets forth the City's standards, guidelines and procedures concerning the regulation of noise use. Specifically, the Code includes Title 8, Health and Safety, which includes a chapter on noise control, and Title 16, Land Use and Development. Title 8 directly regulates noise while Title 16 lays out land use standards that indirectly regulate noise-generating and sensitive land uses. These regulations are intended to implement the goals, objectives and policies of the General Plan; protect property values and the health and general well being of the public; and ensure that any negative effects of noise are minimized or completely avoided.

The City categorizes land uses into designated noise zones to assign appropriate interior and exterior noise standards. The appropriate interior and exterior noise standards are identified in Tables 7.1 and 7.2, respectively.

Table 7.1: City of Highland Interior Noise Standards											
Type of Land Use	CNEL (dBA)										
Residential	45										
Educational/churches, other institutional uses	45										
General offices	50										
Retail stores, restaurants	55										
Manufacturing, warehousing	65										
Agricultural	55										
Sand and gravel operations	75										

Source: Chapter 8.50, Noise Control, City of Highland Municipal Code.



Table 7.2: City of Highland Exterior Noise Standards												
Type of Land Use	Time Interval	CNEL (dBA)										
Residential	10:00 p.m. – 7:00 a.m.	55										
Residential	7:00 a.m. – 10:00 p.m.	60										
Agricultural/Equestrian	10:00 p.m. – 7:00 a.m.	60										
Agricultural/Equestinan	7:00 a.m. – 10:00 p.m.	65										
Commercial	10:00 p.m. – 7:00 a.m.	65										
Commercial	7:00 a.m. – 10:00 p.m.	70										
Manufacturing or Industrial	Any Time	75										
Open Space Any Time 75												
Source: Chapter 8.50. Noise Control. City of Highland Municipal Code.												

San Bernardino International Airport Plans

The San Bernardino International Airport (SBD), located just outside the City's southern boundary, has the capacity to provide regional air traffic for domestic and international service, both commercial and cargo, along with the necessary support facilities for major and smaller airlines. When adopted, the Airport Master Plan should contain standards and guidelines on the appropriate range and design of land uses within areas impacted by noise emanating from airport operations.

Redlands Municipal Airport Land Use Compatibility Plan

Redlands Municipal Airport (RMA) is a General Aviation facility located south of Highland near the Santa Ana Wash. The Redlands Municipal Airport Land Use Compatibility Plan (LUCP) establishes procedures and criteria by which the City of Redlands can address, evaluate and review airport compatibility issues in the vicinity of the Redlands Municipal Airport. The (LUCP) also serves to alert the City of Highland to the potential effects of air traffic from the Redlands Municipal Airport on land uses in southern Highland.

Federal Regulations

State routes and freeways that run through the City are subject to federal funding and, as such, are under the purview of the Federal Highway Administration (FHWA). The FHWA has developed noise standards that are typically used for federally funded roadway projects or projects that require either federal or Caltrans review. The Environmental Protection Agency is charged with the regulation of railroad noise under the Noise Control Act, which is enforced by the Federal Railroad Administration.

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For a more detailed discussion of issues and policies related to the San Bernardino International Airport and Redlands Municipal Airport, please refer to the Airport Element.

California Department of Health Services

The California Department of Health Services (DHS) Office of Noise Control studied the correlation of noise levels and their effects on various land uses. As a result, the DHS established four categories for judging the severity of noise intrusion on specified land uses. Table 7.3 presents a land use compatibility chart for community noise prepared by the California Office of Noise Control to demonstrate land use compatibility. Whereas the interior and exterior noise standards presented in Tables 7.1 and 7.2 provides limits on noise exposure for land uses from those sources of noise under the jurisdiction of the City, Table 7.3 provides planning guidelines for the review and approval of development applications in terms of the compatibility of land uses with the existing and future noise environment.



Table 7.3: Community Noise a	nd Land Us	e Compati	bility			
	Comm	unity Nois	se Exposur	re Level La	In or CNEL	, dBA
Land Uses Category	55	60	65	70	75	80
Residential-Low Density Single Family Dwellings, Duplexes and						
Mobile Homes						
Residential Multi-Family Dwellings						
Transient Lodging – Motels, Hotels		_		_		
	<u> </u>					
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums Concert Halls Amphitheaters						
Autonams, concert nais, Amphilicaters						
Sports Arena, Outdoor Spectator Sports				_		
Playgrounds, Neighborhood Parks						
Colf Courses Diding Stables Water Decreation Comptories						
Soli Courses, Riding Stables, Water Recreation, Cemeteries						
Commercial and Office Buildings						
,						
Industrial, Manufacturing, Utilities, Agriculture						
Explanatory Notes	÷					
Normally Acceptable:	Nor	rmally Una	acceptable	:		
Specified land use is satisfactory based upon the	Nev	v constructi	on or develo f new constr	opment shou	uld generally	be toes
conventional construction without any special noise	proe	ceed, a deta	ailed analysi	s of the nois	e reduction	1063
insulation requirements.	requ	uirements n	nust be mad	e with need	ed noise insi	ulation
	shie	lded.			n areas mus	
Conditionally Accountable:		arly Lines	contable:			
New construction or development should be undertaken	Nev	v constructi	on or develo	opment shou	uld generally	not be
only after a detailed analysis of the noise reduction	und	ertaken. C	onstruction	cost to make	e the indoor	the
features included in the design. Conventional	oute	door enviro	nment woul	d not be usa	able.	uie

requirements is made and yes of the hoise reduction features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice. Outdoor environment will seem noisy.

Source: California Office of Noise Control

NOISE ASSESSMENT AND MODELING

To understand and evaluate the impacts of land use patterns, traffic and individual developments on the noise environment, the General Plan Environmental Impact Report incorporates a comprehensive noise analysis of existing noise sources and projections of traffic volumes associated with the buildout of the General Plan. Existing and future impacts have been modeled, with projected noise contours for the City's roadways and freeways at buildout presented in Figure 7.2.

Like all highly urbanized areas, the City of Highland is subject to noise from a myriad of sources. The major source of noise is from mobile sources and most specifically, traffic traveling through the City on its various roadways and freeways. Future noise impacts to the community are expected to be primarily generated by increasing traffic volumes.

It is important to note that special attention to project specific site design may substantially reduce noise impacts below those projected; therefore, these estimates are considered to be conservative and unmitigated. A wide range of design criteria affecting roadway engineering and traffic noise abatement include differences in final grade between the roadbed and the top of walls, spacing of intersections, setbacks and parkway widths, roadway composition and other considerations.



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City of Highland General Plan





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GOALS AND POLICIES

This section contains a brief discussion and detailed policy direction for noise issues within Highland. The first issue, Land Use Planning and Design, concerns the relationship between the design and approval of land uses and existing or potential noise sources. The second issue, Transportation Related Noise Sources, considers impacts that can be created by the operation of motor vehicles, trucks, aircraft and railways in the City. Non-Transportation-Related Noise Sources, the third issue, involves noise impacts created by business or residential activities, such as air conditioning units, mining activities, barking dogs or community events. By following the policies associated with each issue, Highland will ensure compatible development, protect noise-sensitive land uses and minimize the effects of excessive and nuisance noise.

In addition to these goals, it is important to note that additional land use direction is provided through other General Plan Elements, the Development Code and redevelopment efforts.

Land Use Planning and Design

As Highland grows, the City's population, employment and commercial activity may generate more traffic and attract additional noise producing uses. In addition, some undeveloped and underdeveloped areas are designated for land uses that may be noise-sensitive and are located in proximity to roadways and transit facilities. For example, along Base Line, mixed-use and medium density residential development is encouraged to stimulate the development of vibrant commercial activity. In addition, some older neighborhoods in the southwestern portion of the City adjacent to the SBIA are currently located in areas that are transitioning to potential noise-generating business park and industrial uses.

As a result, land use compatibility with noise is an important consideration in the planning and design process. To identify potential mitigation to address noise abatement strategies, noise evaluations should be conducted when a proposed project places sensitive land uses and major noise generators within close proximity to each other. The City's Community Development Department currently uses the project review process to identify potential noise issues and works with developers or landowners to apply site planning and other design strategies to reduce noise impacts. A developer, for example, could take advantage of the natural shape and contours of a site to arrange buildings and other uses in a manner that would reduce and possibly eliminate noise impacts. Examples of other site and architectural techniques could include:

• Increasing the distance between noise source and receiver;



- Placing non-noise-sensitive land uses such as parking lots, maintenance facilities and utility areas between the noise source and receiver, while maintaining aesthetic considerations;
- Using non-noise-sensitive structures such as garages to shield noise-sensitive areas;
- Orienting buildings to shield outdoor spaces from a noise source; and
- Locating bedrooms in residential developments on the side of the house facing away from major roads.

GOAL 7.1

Protect sensitive land uses and the citizens of Highland from annoying and excessive noise through diligent planning and regulation.

Policies

- Enforce the City's Noise Control Ordinance consistent with health and quality of life goals and employ effective techniques of noise abatement through such means as a noise ordinance, building codes and subdivision and zoning regulations.
- 2) Encourage the use of site planning and architectural techniques such as alternative building orientation and walls combined with landscaping to mitigate noise to levels consistent with interior and exterior noise standards.
- 3) Require mitigation where sensitive uses are to be placed along transportation routes to ensure compliance with interior and exterior noise standards.
- 4) Consider the compatibility of proposed land uses with the noise environment when preparing, revising or reviewing development proposals.
- 5) Prevent the siting of sensitive uses in areas in excess of established 65 dBA CNEL without appropriate mitigation. Special attention should be paid to potential development within the 65 dBA CNEL noise contour of the San Bernardino International Airport and mining operations of the Santa Ana River.
- 6) Work with San Bernardino International Airport Authority to ensure that future airport planning activities encourage consistency with adopted City land use plans and minimize impacts on Highland's economic development opportunities and quality of life.

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 - 7) Require that site-specific noise studies be conducted by a qualified acoustic consultant utilizing acceptable methodologies while reviewing the development of sensitive land uses or development that has the potential to impact sensitive land uses. Also require a site-specific noise study if the proposed development could potentially violate the noise provisions of the General Plan or City ordinance.

Actions

- 1) Coordinate with school districts to ensure that schools are located and designed so that:
 - interior noise in classrooms does not exceed 45 CNEL
 - noise exposure does not exceed 65 CNEL at classroom buildings; and
 - noise exposure does not exceed 70 CNEL on playgrounds and athletic fields.
- 2) Coordinate with the San Bernardino International Airport Authority to minimize flight patterns over the City.
- 3) When site and architectural design features cannot sufficiently reduce adverse noise levels, or cannot be economically provided, require the provision of noise barriers/berms, provided that noise barriers:
 - are sufficiently massive to prevent significant noise transmission and high enough to shield receiver from noise source;
 - noise barriers exhibit a minimum acceptable density of four pounds per square foot (equivalent to 3/4-inch plywood):
 - contain no cracks or openings; and
 - minimize the effect of flanking by bending the barrier back from the noise source at the end of the barrier.
- Require landscaping treatment to be provided in conjunction with noise barriers to provide visual relief and to reduce aesthetic impacts.
- 5) Require realtors representing homebuyers in the vicinity of the gun club to inform new buyers of the existence of potential noise impacts associated with gunfire.
- 6) Maintain a noise complaint file to document areas of excessive noise in the City.



Transportation-Related Noise Sources

Highland's proximity to southern Californian mountains, desert resorts and other cultural and recreational attractions draws a significant level of passenger and truck traffic through the City. The City contains two major highways (State Routes 30 and 330) and a number of major arterials (such as Base Line and 5th Street), and sits next to the San Bernardino International Airport. These transportation facilities, while important components to mobility and economic vitality, are the major contributors of noise in Highland. Cost effective strategies to reduce their influence on the community noise environment are an essential part of the Noise Element.

While local government has little direct control of transportation noise at the source, as these levels are set by state and federal agencies, the City does have some control over transportation noise that exceeds state and/or federal standards through the enforcement of the Municipal Code. The most effective method the City has to mitigate transportation noise is by reducing the impact of the noise onto the community through noise barriers and site design review. The effect of a noise barrier is critically dependent on the distance between the noise source and the receiver. Noise attenuation from barriers occurs when the barrier penetrates the "line of sight" between the source and receiver; the greater the penetration or height of the barrier, the greater the noise reduction. Additional attenuation can be achieved depending upon the source of transportation-related noise.

Roadways

Roadways are one of the biggest sources of noise in the City. Everyday, thousands of vehicles travel through and around Highland. Noise levels along roadways are determined by a number of traffic characteristics. The most important is the average daily traffic levels. Additional factors include the percentage of trucks, vehicle speed, the time distribution of this traffic and gradient of the roadway.

One way the City can control vehicle noise is through speed reduction. A change of just 5 miles per hour can change the resultant noise by approximately 1 to 2 dB. The difference in noise associated with a reduction of 10 miles per hour could be roughly equivalent to reducing the traffic volume by one-half. The City also has some control over traffic-generated noise through weight limitations and the designation of truck routes. Medium trucks (i.e., those with a gross vehicle weight between 5 and 13.25 tons) produce as much acoustical energy as approximately 5 to 16 automobiles depending on the speed, with slower speeds demonstrating greater differential. Similarly, heavy trucks (i.e.,

those with a gross vehicle weight in excess of 13.25 tons) produce as much acoustical energy as 10 to 60 automobiles.

The City can further reduce traffic-generated noise by ensuring that street paving is maintained and bumps and dips are minimized. Poor paving causes vehicles to bounce and this bouncing exacerbates the noise due to the rattling of the vehicle. This is especially important along those routes that realize augmented volumes of truck traffic. Noise contours for the City's roadways and freeways are presented in Figure 7.2. Future conditions consider sound levels given the buildout of land uses and the roadway network, but do not consider sound attenuation measures such as soundwalls.

Aircraft

Highland is subject to the activities of the San Bernardino International Airport (SBIA) and the Redlands Municipal Airport (RMA). Airport operations of the SBIA and RMA are of significant importance to the City of Highland because of their impacts to Highland's safety, physical development and economic welfare. In addition, local helicopter air traffic is commonplace throughout the City. News and other helicopters (e.g., freeway traffic report helicopters) fly through the area. Helicopter use for fire and police services and at local hospitals is considered as an emergency activity and is addressed by FAA regulations.

GOAL 7.2

Encourage the reduction of noise from transportation-related noise sources such as automobile and truck traffic.

Policies

- 1) Guide the location and design of transportation facilities to minimize the exposure of noise on noise-sensitive land uses.
- 2) Employ noise mitigation practices, as necessary, when designing future streets and highways, and when improvements occur along existing road segments. Mitigation measures should emphasize the establishment of natural buffers or setbacks between the arterial roadways and adjoining noise-sensitive areas.
- Require that development generating increased traffic and subsequent increases in the ambient noise level adjacent to noisesensitive land uses provide appropriate mitigation measures.
- 4) Minimize truck traffic through residential neighborhoods.

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Specific policy direction on aircraft noise is provided in the Airport Element.



5) Encourage the development of alternative transportation modes such as bicycle paths and pedestrian walkways to minimize the number of automobile trips and noise.

Actions

- 1) Maintain roadways so that the paving is in good condition to reduce noise-generating cracks, bumps and potholes.
- 2) Use the daily design capacity identified in the General Plan and the posted speed limit to quantify the design noise levels adjacent to transportation routes for mitigation purposes.
- 3) Require evaluation of highway and arterial roadway extensions for potential noise impacts on existing and future land uses.
- 4) Consider the effects of truck routes, truck traffic, posted speed limits and future motor vehicle volumes on noise levels adjacent to transportation routes when planning improvements to the circulation system.
- 5) Work with Caltrans to landscape or install mitigation elements along freeways and highways adjacent to existing residential subdivisions or noise-sensitive uses to beautify the landscape and reduce noise, where appropriate.
- 6) Monitor proposals for future transit systems and require noise control to be considered in the selection of transportation systems that may affect the City.

Non-Transportation-Related Noise Sources

The City currently maintains a diversity of land uses, most of which generate their own noise. Noise from one land use can "spill over" into other uses and can potentially create undesirable noise impacts. Industrial facilities generate noise through various processes that involve the use of heavy equipment and machinery. However, even commercial facilities and residential units can generate noise from the use of heating, ventilating and air conditioning (HVAC) units.

Restaurants, bars and entertainment establishments may use sound amplification equipment that operates well into the night. Residential areas are also subject to noise from the use of landscape maintenance equipment, barking dogs, etc. Mixed-use areas that place residential uses alongside or above commercial uses can present their own challenges. Requiring that the commercial component meet a residential standard could make commercial operations difficult.

Alternatively, applying a commercial standard to a mixed-use project could result in unacceptable noise levels at the residential portion of the structure/site. Still, mixed-use projects offer several advantages from both an air quality and transportation perspective, and should be encouraged.

One major stationary noise generator associated with mining and processing of sand and gravel operations is located southeast of the City's boundary. Noise generated from the gravel pit is produced by the use of vehicles and aggregate processing equipment. Vehicles include bulldozers, loaders and other heavy machinery, as well as heavy trucks used to load finished aggregate products for delivery via public roadways. Low frequency noise source emissions can be reduced by modifying equipment.

Noise emissions from mineral extraction activities are most heavily concentrated within the processing area. A combination of individual point noise sources and a diffuse collection of mobile equipment are the primary cause for the noise observed in the nearest residential neighborhoods north of the sand and gravel operations.

GOAL 7.3

Protect residents from the effects of "spill over" or nuisance noise.

Policies

 Enforce the City's Noise Control Ordinance so that new projects located in commercial or entertainment areas do not exceed stationary-source noise standards at the property line of proximate residential or commercial uses, as appropriate.



- 2) Prohibit new industrial uses from exceeding commercial or residential stationary-source noise standards at the most proximate land uses, as appropriate. (Industrial noise may spill over to proximate industrial uses so long as the combined noise does not exceed the appropriate industrial standards.)
- Require that construction activities employ feasible and practical techniques to minimize noise impacts on adjacent uses.
 Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.
- 4) Require that the hours of truck deliveries to commercial properties abutting residential uses be limited unless there is no feasible alternative or there are overriding transportation benefits by scheduling deliveries at another hour.
- 5) Ensure that buildings are constructed to prevent adverse noise transmission between differing uses located in the same structure and individual residences in multi-family buildings.

Actions

- 1) As a condition of approval, limit non-emergency construction activities adjacent to existing noise-sensitive uses to daylight hours between 7:00 a.m. and 6:00 p.m. Discourage construction on weekends or holidays except in the case of construction proximate to schools where these operations could disturb the classroom environment.
- Ensure that the design and placement of air conditioning units and pool equipment within residential areas is accomplished in a manner that does not intrude upon the peace and quiet of adjacent noise-sensitive uses.
- Encourage the use of portable noise barriers for heavy equipment operations performed within 100 feet of existing residences or make applicant provide evidence as to why the use of such barriers is infeasible.

APPENDIX 5.1:

STUDY AREA PHOTOS



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L1_E 34, 6' 37.840000", 117, 15' 22.190000"



L1_N 34, 6' 37.840000", 117, 15' 22.190000"



L1_S 34, 6' 37.810000", 117, 15' 22.160000"



L1_W 34, 6' 37.790000", 117, 15' 22.160000"



L2_E 34, 6' 36.870000", 117, 14' 55.390000"



L2_N 34, 6' 36.870000", 117, 14' 55.390000"



L2_S 34, 6' 36.870000", 117, 14' 55.390000"



L2_W 34, 6' 36.850000", 117, 14' 55.360000"



L3_E 34, 6' 37.200000", 117, 13' 55.730000"



L3_N 34, 6' 37.070000", 117, 13' 55.810000"



L3_S 34, 6' 37.200000", 117, 13' 55.730000"



L3_W 34, 6' 37.110000", 117, 13' 55.810000"



L4_E 34, 6' 45.890000", 117, 13' 2.230000"



L4_N 34, 6' 45.620000", 117, 13' 2.340000"



L4_S 34, 6' 45.970000", 117, 13' 2.310000"



L4_W 34, 6' 46.030000", 117, 13' 2.420000"



L5_E 34, 6' 36.800000", 117, 13' 1.620000"



L5_N 34, 6' 36.800000", 117, 13' 1.620000"



L5_S 34, 6' 36.770000", 117, 13' 1.680000"



L5_W 34, 6' 36.770000", 117, 13' 1.700000"



L6_E 34, 6' 38.060000", 117, 12' 12.240000"



L6_N 34, 6' 38.060000", 117, 12' 12.240000"



L6_S 34, 6' 38.050000", 117, 12' 12.240000"



L6_W 34, 6' 38.050000", 117, 12' 12.240000"



L7_E 34, 6' 17.570000", 117, 15' 34.830000"



L7_N 34, 6' 17.380000", 117, 15' 35.320000"



L7_S 34, 6' 17.500000", 117, 15' 34.800000"



L7_W 34, 6' 17.490000", 117, 15' 34.830000"



L8_E 34, 6' 37.390000", 117, 15' 40.430000"



L8_N 34, 6' 36.550000", 117, 15' 41.170000"



L8_S 34, 6' 37.470000", 117, 15' 40.400000"



L8_W 34, 6' 37.490000", 117, 15' 40.430000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



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24-Hour Noise Level Measurement Summary																
Date: Project:	Wednesday Airport Gate	v, September eway Specific	09, 2020 : Plan		Location	L1 - Located School at 65	north of the	e Project site a Drive.	in Indian Sp	rings High	Meter:	Piccolo II			JN: Analyst:	13635 P. Mara
							Hourly L _{eq}	dBA Readings	(unadjusted)							
85.0)															
a ^{80.0}																
B 70.0																
65.0 م 60.0 م			_													
≥ 55.0) — 6 —				~~~~	0 0	<u>9</u>	0.000	<u>.</u>	<mark>vv</mark>	<mark> </mark>		<mark>.2 0.8</mark>	• •	<u> </u>	
9 45.0		53.5	23.2	54.	55.					20 20 - 21	20	23.6		28	54.5	22.2
35.0	5 ↓															
	0	1 2	3	4 5	6	7 8	9	10 11	12 1	L3 14	15 16	17	18 19	20	21 22	23
C					140/	100/		HOUR D	eginning	1500/	1000/	1050/	1000/		• //	
Timeframe	Hour				L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		Adj.	Adj. L _{eq}
	1	59.5	60.7	49.5	59.9	59.3	58.0	57.2	53.8	51.8	50.1	49.9	49.6	59.5	10.0	63.5
	2	52.0	55.7	50.5	55.3	55.0	54.2	53.5	52.3	51.6	50.8	50.7	50.5	52.0	10.0	62.0
Night	3	53.2	57.8	50.6	57.4	57.0	56.3	55.8	53.8	52.3	51.0	50.9	50.7	53.2	10.0	63.2
	4	54.3	60.6	51.3	60.1	59.5	58.0	57.1	54.4	53.3	51.9	51.6	51.4	54.3	10.0	64.3
	5	54.7	59.0	52.3	58.6	58.2	57.5	57.1	55.3	54.0	52.9	52.7	52.4	54.7	10.0	64.7
	7	55.2 58.0	67.1	52.3	66.5	66.2	65.4	64.3	55.6	54.3	52.7	52.0	52.4	55.2 58.0	0.0	58.0
	8	58.0	67.4	49.4	67.2	66.9	66.1	64.7	55.4	52.1	49.9	49.7	49.5	58.0	0.0	58.0
	9	57.6	67.2	51.2	66.5	66.1	64.7	63.8	55.6	53.7	51.7	51.5	51.3	57.6	0.0	57.6
	10	58.0	67.2	49.8	66.9	66.4	65.1	64.0	57.5	53.2	50.7	50.3	49.9	58.0	0.0	58.0
	11	58.9	69.2	51.4	68.6	68.2	67.5	66.0	54.5	53.4	52.0	51.8	51.5	58.9	0.0	58.9
Day	12	57.3 57.2	66.2	50.0	65.0	65.3	64 5	63.9	55.8	52.4 53.4	50.7	50.4 51.1	50.1	57.3 57.2	0.0	57.3 57.2
	14	56.5	67.0	48.3	66.2	65.9	65.1	63.5	52.3	50.7	49.0	48.8	48.4	56.5	0.0	56.5
	15	59.2	70.2	48.9	69.9	69.6	67.3	65.1	55.3	52.3	49.7	49.3	49.0	59.2	0.0	59.2
	16	55.1	64.9	47.7	64.3	64.0	62.0	60.1	54.4	51.2	48.6	48.2	47.8	55.1	0.0	55.1
	17	53.6	62.5	47.1	62.1	61.6 70.7	59.9	58.0	53.5	50.5	47.9	47.5	47.2	53.6	0.0	53.6
	10	59.8	66.8	52.9	66.4	66.0	64.2	62.4	58.0	55.5	53.5	53.3	53.0	59.8	5.0	63.2
Evening	20	58.0	63.2	55.8	62.9	62.5	61.5	60.6	58.1	57.0	56.3	56.2	55.9	58.0	5.0	63.0
	21	55.6	60.4	52.1	59.9	59.4	58.5	58.1	56.3	55.0	52.6	52.4	52.2	55.6	5.0	60.6
Night	22	54.8	61.3	51.4	60.7	60.2	59.0	57.8	55.1	53.5	51.9	51.7	51.5	54.8	10.0	64.8
Timeframe	23 Hour	52.2	55.9	49.9	55.3 11%	54.9	54.2	53.8 18%	52.8 1 25%	51.9	50.6	50.3 195%	50.1	52.2	10.0	62.2
nincjranic	Min	53.6	62.5	47.1	62.1	61.6	59.9	58.0	52.3	50.5	47.9	47.5	47.2			
Day	Max	59.8	72.3	52.4	71.8	70.7	67.5	66.0	57.5	54.3	52.9	52.7	52.5	24-Hour	Daytime	Nighttime
Energy	Average	57.7	Av	erage:	66.9	66.4	65.0	63.4	55.1	52.5	50.4	50.1	49.8	56.8	57.7	54.9
Evening	Min	55.6	60.4	52.1	59.9	59.4	58.5	58.1	56.3	55.0	52.6	52.4	52.2	20.0	Hour CNEL 4	(BA)
Energy	Average	57.4	6.8 Av	erage:	63.1	62.6	61.4	60.4	57.5	57.0	56.3	58.2	53.7	24-	HOUF CIVEL (a	DAJ
Nicht	Min	52.0	55.7	49.5	55.3	54.9	54.2	53.5	52.3	51.6	50.1	49.9	49.6	1	62.2	
Night	Max	59.3	68.7	60.3	68.1	67.7	66.8	66.0	62.5	61.3	60.6	60.5	60.4		02.3	
Energy	Average	54.9	Av	erage:	59.6	59.2	58.3	57.6	54.9	53.7	52.5	52.3	52.1			



24-Hour Noise Level Measurement Summary																
Date:Wednesday, September 09, 2020Location:Located north of the Project site on 6th Street nearMeter:Piccolo IIJN:Project:Airport Gateway Specific Planexisting single family residential home at 7891 Bonnie Street.Meter:Piccolo IIAnalyst:														13635 P. Mara		
							Hourly L	dBA Readinas	(unadiusted)							
								ub) (neu anng)	Tanaajasteaj							
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e 70.0																
60.0 ت 60.0					<u> </u>	4.8	<u> </u>	3.6	~ <mark>.</mark>	4.0 4.6	3.2 5.3	4.8	5.7	0	<mark></mark> م	
50.0)	.1	6.2	60.		0 0		≝ <u> </u>	2 <mark>0 0</mark>	0 9		9			- 6 <mark>2</mark> 6	
± 40.0) – 	Q	O													
35.0) +	1 2	3	1 5	6	7 8	<u>م</u>	10 11	12 1	3 1/	15 16	17	18 10	20	21 22	23
	0	1 2	5	ч J	0	, 0	5	Hour Be	eginning	5 14	15 10	17	10 15	20	21 22	25
Timeframe	Hour	L _{eg}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{ea}
	0	56.0	68.8	45.0	68.4	67.5	63.8	60.7	50.3	47.2	45.6	45.4	45.1	56.0	10.0	66.0
	1	55.9	68.7	46.8	68.3	67.3	63.0	59.2	52.0	49.3	47.5	47.2	46.9	55.9	10.0	65.9
NI:-l-+	2	54.1	64.1	49.8	63.8	63.0	59.4	56.6	53.0	51.7	50.4	50.2	50.0	54.1	10.0	64.1
Night	3	56.2	67.7	49.7	67.3	66.5 68.7	63.0 65.0	60.0	53.7	51.8	50.3	50.0	49.7	56.2	10.0	66.2
	5	60.8	72.0	54.1	71.6	70.8	67.4	64.7	58.5	56.7	54.8	54.5	54.2	60.8	10.0	70.8
	6	62.2	73.1	56.2	72.5	71.6	68.1	65.8	60.8	58.8	57.0	56.7	56.3	62.2	10.0	72.2
	7	64.6	75.3	58.3	74.7	73.8	71.0	68.6	63.3	60.9	59.0	58.7	58.3	64.6	0.0	64.6
	8	64.8	73.2	62.2	72.7	71.8	68.8	66.9	64.3	63.5	62.6	62.5	62.3	64.8	0.0	64.8
	9 10	63.0	73.7 79 E	54.7	73.4	72.8	70.2	68.0 70.1	61.0	58.0	55.5	55.2	54.9	63.0	0.0	63.0
	10	63.6	76.1	51.9	75.6	74.7	73.4	68.1	60.4	56.2	52.8	54.0 52.4	52.0	63.6	0.0	63.6
Davis	12	62.2	74.2	52.3	73.8	73.0	69.5	66.7	59.2	55.5	53.2	52.8	52.5	62.2	0.0	62.2
Day	13	64.5	76.9	52.0	76.5	75.6	72.4	69.5	60.5	56.0	52.9	52.5	52.1	64.5	0.0	64.5
	14	64.6	75.8	52.9	75.4	74.7	72.5	70.7	61.3	57.6	54.3	53.7	53.2	64.6	0.0	64.6
	15 16	63.2	75.9	47.3	75.3	74.0	70.4	68.1 70.2	61.0	54.9	48.5	48.0	47.5	63.2	0.0	63.2
	16 17	65.3 64.8	78.5 77 1	47.5	76.7	76.2	72.7	70.2 69.8	62.1	55.7 55.4	48.7 51.0	48.2 50.3	47.7 49.4	65.3 64.8	0.0	64.8
	18	65.2	75.6	54.4	75.2	74.4	71.4	69.6	64.7	61.7	57.1	56.0	54.6	65.2	0.0	65.2
	19	65.7	78.7	53.6	78.1	76.9	72.8	69.6	62.6	59.1	55.0	54.3	53.8	65.7	5.0	70.7
Evening	20	60.6	72.6	48.2	72.2	71.3	68.1	65.6	58.1	52.8	49.2	48.8	48.4	60.6	5.0	65.6
	21	62.0	74.2	51.1	73.7	72.7	69.1	67.1	58.8	54.5	52.0	51.7	51.3	62.0	5.0	67.0
Night	22	58.5	74.1	47.2	73.6	69.1	66.2	63.6	55.8	52.3	48.1	47.7	47.4	58.5	10.0	68.5
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	62.2	73.2	47.3	72.7	71.8	68.8	66.7	59.2	54.9	48.5	48.0	47.5	24-Hour	Davtime	Niahttime
Say	Max	65.8	78.5	62.2	78.1	77.1	73.4	70.7	64.7	63.5	62.6	62.5	62.3			g
Energy	Average	60.6	Ave	48.2	75.4	74.5	/1.3	65.6	61.8 58.1	57.7	54.2 49.2	53.7 48.8	53.2	62.9	64.2	59.1
Evening	Max	65.7	78.7	53.6	78.1	76.9	72.8	69.6	62.6	59.1	55.0	54.3	53.8	24-	Hour CNEL (d	IBA)
Energy	Average	63.3	Ave	rage:	74.7	73.6	70.0	67.4	59.8	55.5	52.1	51.6	51.2			
Night	Min	54.1	64.1	45.0	63.8	63.0	59.4	56.6	50.3	47.2	45.6	45.4	45.1		67 2	
Enorm	Max	62.2	74.1	56.2	73.6	72.8	69.9	67.7	60.8	58.8	57.0	56.7	56.3	-	07.2	
Energy	Average	59.1	AVE	age.	69.5	68.6	65.1	62.2	55.4	52.7	50.4	50.1	49.8			



Date: Project:	Wednesday Airport Gate	r, September eway Specific	09, 2020 c Plan		Location	24-Ho L3 - Located existing sing Street.	ur Noise Lu north of the gle-family res Hourly L _{eq} (evel Measu e Project site sidential hom dBA Readings	urement S on 6th Stree he at 7904 Rc (unadjusted)	ummary et near oberts	Meter:	Piccolo II			JN: Analyst:	13635 P. Mara
80.0 88.0.0 75.0 65.0 b 66.0 b 66.0 b 65.0 c 65.0 c 65.0 c 65.0 c 65.0 c 65.0 c 65.0 c 65.0 c 75.0 c 65.0 c 75.0 c 75.0	2	54.6	53.1	58.2	20.8	60.8 57.3	200 200 200 200 200 200 200 200 200 200	60.5 61.5	50.2 CO	60.3	61.4 62.3	62.1	5 5 6 6 6	61.1	26.8 29.3	57.1
	0	1 2	3	4 5	6	7 8	9 :	10 11 Hour Be	12 1 eginning	.3 14	15 16	17	18 19	20	21 22	23
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	55.5	68.2	43.3	67.7	66.8	63.4	60.4	50.4	45.9	43.9	43.6	43.4	55.5	10.0	65.5
	1	54.6	76.7	45.2	75.3	73.3	68.2	64.2	51.5	47.3	45.8	45.6	45.3	54.6	10.0	64.6
A.Y. J. J.	2	53.7	66.6	44.9	66.2	65.3	61.1	57.1	48.7	46.9	45.5	45.3	45.0	53.7	10.0	63.7
Night	3	53.1	64.0	45.3	63.6	62.9	59.8	57.3	52.2	48.8	46.0	45.7	45.4	53.1	10.0	63.1
	4	58.2	09.8 70.3	51.3	69.3 69.9	69.1	65 Q	63.2	50.3	53.1	51.9	51.7 78.7	51.4	58.2 58.2	10.0	68.2
	6	59.8	70.3	50.0	71.1	70.1	67.0	64.9	57.1	53.5	50.9	50.5	50.1	59.8	10.0	69.8
	7	60.8	72.9	51.2	72.3	71.3	67.9	65.8	58.0	54.2	52.0	51.7	51.3	60.8	0.0	60.8
	8	57.3	69.1	45.8	68.7	67.8	64.8	62.4	55.0	49.7	46.5	46.2	45.9	57.3	0.0	57.3
	9	59.6	70.5	45.3	70.1	69.4	66.9	65.0	58.3	52.5	47.1	46.3	45.4	59.6	0.0	59.6
	10	60.5	73.2	47.1	72.7	71.5	68.0	64.9	57.5	52.5	48.2	47.7	47.2	60.5	0.0	60.5
	11	61.5	71.9	50.0	71.5	70.8	68.6	66.9	60.6	56.2	51.7	51.0	50.2	61.5	0.0	61.5
Day	12	59.2	70.5	47.8	70.0	69.0	66.0	64.0	58.4	53.8	49.3	48.6	48.0	59.2	0.0	59.2
	13	60.3 60.1	/1.9	46.8	/1.3	70.5	67.8	65.6	58.4	53.5	48.5	47.8	46.9	60.3 60.1	0.0	60.3 60.1
	14 15	61.4	72.3	46.0	/1./ 72.4	70.7	68 Q	67.0	57.7	52.4	47.4	40.8 47.7	46.2	60.1 61.4	0.0	61.4
	16	62.3	73.8	45.8	73.1	72.4	70.0	68.2	60.9	53.4	47.3	46.7	46.0	62.3	0.0	62.3
	17	62.1	74.1	44.7	73.6	72.6	69.6	67.5	60.2	52.1	45.9	45.5	44.9	62.1	0.0	62.1
	18	59.4	71.4	43.1	71.0	70.0	67.0	64.9	56.8	48.9	44.3	43.8	43.2	59.4	0.0	59.4
	19	60.9	73.3	45.1	72.7	71.7	68.4	65.8	58.7	52.0	46.2	45.8	45.2	60.9	5.0	65.9
Evening	20	61.1	74.2	44.0	73.8	72.8	69.0	65.4	56.2	49.3	45.1	44.7	44.1	61.1	5.0	66.1
	21	56.8	69.0	43.5	68.5	67.5	64.5	62.2	53.5	48.3	44.5	44.1	43.6	56.8	5.0	61.8
Night	22	59.3	/1.4	44.0	70.9 68.9	70.0	67.2	64.7	56.2	49.3	45.0	44.6	44.2	59.3 57.1	10.0	69.3 67.1
Timeframe	Hour	Log	L	43.0 L min	L1%	L2%	L5%	L8%	L25%	40.0 L50%	L90%	L95%	L99%	57.1	L og (dBA)	07.1
5	Min	57.3	69.1	43.1	68.7	67.8	64.8	62.4	55.0	48.9	44.3	43.8	43.2	24.11	Ey (*)	Alt
Day	Max	62.3	74.1	51.2	73.6	72.6	70.0	68.2	60.9	56.2	52.0	51.7	51.3	24-Hour	Daytime	Nighttime
Energy	Average	60.6	Ave	erage:	71.5	70.6	67.7	65.6	58.4	52.7	48.0	47.5	46.9	59 5	60 5	57 2
Evening	Min	56.8	69.0	43.5	68.5	67.5	64.5	62.2	53.5	48.3	44.5	44.1	43.6			
Eporgu	Max	61.1	74.2	45.1	/3.8	72.8	69.0	65.8	58.7	52.0	46.2	45.8	45.2	24-	Hour CNEL (a	ВАЈ
chergy	Min	52.1	64 0	Δ2 2	63.6	62.9	59.8	57.1	20.2 48.7	49.9	45.3 43.9	44.9	44.3 42.4	-	~ ~ -	
Night	Max	59.8	76.7	51.3	75.3	73.3	68.2	64.9	57.1	53.5	51.9	51.7	51.4		64.7	
Energy	Average	57.2	Ave	erage:	69.2	68.2	64.7	61.8	53.2	49.2	46.9	46.6	46.3			



24-Hour Noise Level Measurement Summary																
Date: Wednesday, September 09, 2020 Location: L4 - Located north of the Project site on Central Avenue near Meter: Piccolo II JN: 13635														13635		
Project:	Airport Gat	eway Specifi	c Plan			the Highland	d Family YM	CA at 7793 C	entral Avenu	ie.					Analyst:	P. Mara
	-								(
							Hourly L _{eq}	dBA Readings	(unadjusted)							
85.0	2															
3 80.0																
B 70.0																
- 60.0		_			- m	<u>ь</u> 6							•			
<u>רא</u> 55.0 ג 50.0		9.		9.7	63.	62. 62.	61.5	8.7	- 00 - 00 - 00 - 00 - 00 - 00 - 00 - 00	<mark>6.9</mark>	0.3 0.8	<mark>8</mark>	65	<mark>0.</mark>		n
P 45.0		51.1		<u></u>				<u>и _ 10</u> _ 1								20
35.0	5															
	0	1 2	3	4 5	6	7 8	9	10 11	12 1	L3 14	15 16	17	18 19	20	21 22	23
								Hour B	eginning							
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	53.5	64.2	47.3	63.9	63.3	60.5	58.0	51.9	48.9	47.6	47.5	47.4	53.5	10.0	63.5
	1	57.6	69.8	49.8	69.2 60.0	68.4	64.5 57.6	62.1	53.9	51.2	50.2	50.0 45.0	49.9	57.6 51.1	10.0	67.6 61.1
Night	3	57.1	68.7	47.8	68.3	67.6	64.8	61.9	54.8	50.4	48.5	43.9	47.9	57.1	10.0	67.1
Ũ	4	59.7	71.4	50.8	71.1	70.4	67.5	64.5	56.4	52.9	51.2	51.0	50.8	59.7	10.0	69.7
	5	61.0	72.2	50.7	71.9	71.3	68.5	65.8	58.7	54.7	51.6	51.2	50.8	61.0	10.0	71.0
	6	63.3	75.5	50.1	75.0	73.9	71.4	68.4	59.8	55.9	51.2	50.8	50.2	63.3	10.0	73.3
	/	62.5 62.0	73.9	52.2	73.6	/3.0	70.0 70.4	67.1 67.7	60.3 60.8	56.2	53.1	52.8 40.8	52.4	62.5 62.9	0.0	62.5 62.9
	9	61.5	74.0	47.1	74.3	70.9	68.9	67.2	60.9	54.3	48.6	49.8	47.3	61.5	0.0	61.5
	10	59.8	71.6	46.7	71.2	70.3	67.3	64.7	57.7	51.7	47.7	47.2	46.8	59.8	0.0	59.8
	11	58.7	69.4	46.2	69.1	68.3	65.7	63.9	57.9	52.4	47.1	46.7	46.3	58.7	0.0	58.7
Day	12	60.9	72.8	44.7	72.4	71.5	68.3	65.7	59.4	52.7	46.1	45.5	44.9	60.9	0.0	60.9
,	13	59.9	71.3	45.3	70.8	70.1	67.2	65.0	58.5	51.9	46.4	45.9	45.5	59.9	0.0	59.9
	14 15	58.9 60.3	70.2	45.7	70.2	69.0 69.5	67.1	65 1	59.8	52.0	40.8	40.2 51.7	45.8	58.9 60.3	0.0	58.9 60.3
	16	60.8	72.5	47.0	72.0	71.0	67.5	65.7	59.7	54.2	48.5	47.8	47.2	60.8	0.0	60.8
	17	63.9	74.8	46.3	74.5	74.0	72.0	69.7	61.7	56.1	48.1	47.2	46.5	63.9	0.0	63.9
	18	61.0	72.6	46.0	72.1	71.1	68.3	65.8	59.7	54.3	48.0	47.0	46.2	61.0	0.0	61.0
E uranian	19	65.6	79.2	47.6	78.8	77.8	73.3	69.3	59.3	54.2	49.3	48.6	47.8	65.6	5.0	70.6
Evening	20	59.0	70.9	44.3	70.5	69.6 68.9	66.5 66.2	64.1 63.4	56.6 57.1	51.1	45.7	45.0 46.6	44.5	59.0 58.6	5.0	64.0 63.6
	22	55.7	66.6	44.8	66.2	65.6	62.9	61.2	53.9	49.3	45.9	45.5	44.9	55.7	10.0	65.7
Night	23	56.3	68.8	44.4	68.3	67.5	64.6	61.1	50.7	47.7	45.1	44.8	44.5	56.3	10.0	66.3
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	58.7	69.4	44.7	69.1	68.3	65.7	63.9	57.7	51.7	46.1	45.5	44.9	24-Hour	Daytime	Nighttime
Energy		63.9	/4.8 Δνε	52.2	74.5	74.0	72.0 68.2	69.7	61.7 50 5	56.2	53.1 48.6	52.8 48.0	52.4			
Elicity	Min	58.6	70.0	44.3	69.6	68.9	66.2	63.4	56.6	51.1	45.7	45.0	44.5	60.6	61.4	58.6
Evening	Max	65.6	79.2	47.6	78.8	77.8	73.3	69.3	59.3	54.2	49.3	48.6	47.8	24-	Hour CNEL (a	IBA)
Energy	Average	62.3	Ave	erage:	72.9	72.1	68.7	65.6	57.7	52.2	47.4	46.8	46.1			
Night	Min	51.1	61.2	44.4	60.9	60.2	57.6	55.6	49.4	47.6	45.1	44.8	44.5		66.1	
Energy	Max	58.6	/5.5 Ave	50.8 Prage:	75.0 68.3	73.9	/1.4	62.1	59.8	55.9	51.6	51.2 48.3	50.8 48.0		UU .1	
2110169		50.0	////		00.5	07.0	07.7	02.1	7.7	51.0	40.0	-0.5	-0.0	<u>4</u>		



24-Hour Noise Level Measurement Summary																
Date: Project:	Wednesday Airport Gate	 v, September eway Specific 	09, 2020 : Plan		Location	L5 - Located Library at 78	north of the 363 Central A	e Project site Avenue.	by the Highl	and Branch	Meter:	Piccolo II			JN: Analyst:	13635 P. Mara
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0	0								,							
₹ 80.0	Õ –															
g 75.0	0															
ے 65.0 100 سے 60.0																
≥ 55.0	Õ –															
p 45.0	4 .7	8.0 4.6	7.1	0.3	1.0	1.2 1.9	24.9	0.0 1.6	0.3 0.3	0.9 0.1	2.3 3.1	1.9	2.6 54.5	8.6	0.3	6.2
- 40.0		4 4	4	- m - 4 -		<u> </u>				<u>מ מ</u>				-	4 - 0 -	- 7
	0	1 2	3	4 5	6	7 8	9 2	10 11	12 1	.3 14	15 16	17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	44.7	51.2	41.4	50.8	50.3	49.0	47.8	44.8	43.4	42.0	41.8	41.5	44.7	10.0	54.7
		48.0	57.1	42.7	56.8 ⊿9.9	56.2	54.1 18.2	52.2 A7 A	47.2	45.0	43.4	43.1 //1 9	42.8	48.0 44.6	10.0	58.0 54.6
Night	3	47.1	54.5	41.5	49.9 54.0	53.5	52.1	51.2	47.8	44.7	42.2	42.2	41.9	47.1	10.0	57.1
	4	50.3	61.5	42.0	61.1	60.4	57.9	54.3	48.1	44.9	42.7	42.4	42.1	50.3	10.0	60.3
	5	48.7	56.2	43.9	55.8	55.5	54.1	52.7	49.0	46.6	44.7	44.4	44.0	48.7	10.0	58.7
	6	51.0	60.1	44.9	59.8	59.0	57.4	55.5	50.4	47.8	45.7	45.4	45.0	51.0	10.0	61.0
	7	51.2	59.8	46.4	59.2	58.7	56.7	54.9	50.9	49.0	47.1	46.8	46.5	51.2	0.0	51.2
	8 Q	51.9	70.6 62.7	46.1	69.9 62.4	68.9	61.1	60.8	61.4 56.0	58.4 49 7	47.9	46.7 45 3	46.3	51.9 54.9	0.0	51.9 54.9
	10	50.0	59.3	44.8	58.7	57.8	55.7	53.9	49.7	47.5	45.6	45.2	44.9	50.0	0.0	50.0
	11	51.6	58.9	46.5	58.4	57.8	56.4	55.4	52.0	49.7	47.4	47.0	46.6	51.6	0.0	51.6
Dav	12	49.3	58.0	43.7	57.5	56.9	55.1	53.4	49.2	46.5	44.4	44.1	43.9	49.3	0.0	49.3
Duy	13	50.9	61.9	43.5	61.2	60.5	58.2	56.5	48.4	46.1	44.1	43.9	43.6	50.9	0.0	50.9
	14	50.1	58.4	45.1	58.0	57.4	55.8	53.9	50.2	48.0	45.8	45.5	45.2	50.1	0.0	50.1
	15	52.5	61.9	45.0	61.4 61.1	60.6	58.5 59.1	57.5	52.Z 53.5	48.2	45.8 45.4	45.4 45.1	45.1	52.5 53.1	0.0	52.5 53.1
	17	51.9	60.2	44.3	59.8	59.2	57.7	56.6	52.3	48.6	45.1	44.7	44.4	51.9	0.0	51.9
	18	52.6	61.2	43.3	60.9	60.5	59.1	57.4	53.4	48.7	44.0	43.7	43.4	52.6	0.0	52.6
	19	54.5	66.2	44.3	65.9	65.4	62.2	58.5	51.7	49.1	45.1	44.7	44.4	54.5	5.0	59.5
Evening	20	49.8	58.5	40.6	58.1	57.8	56.7	55.6	49.2	45.2	41.5	41.1	40.7	49.8	5.0	54.8
	21	47.9	56.8	40.6	56.5	55.9	53.8	52.0	47.9	45.0	41.8	41.3	40.8	47.9	5.0	52.9
Night	22	46.2	54.2	40.3	53.7	53.1	51.9	50.5	47.5	44.4	41.3	40.9	40.7	46.2	10.0	56.2
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	-	L _{eq} (dBA)	
Day	Min	49.3	58.0	43.3	57.5	56.9	55.1	53.4	48.4	46.1	44.0	43.7	43.4	24-Hour	Daytime	Nighttime
Energy	Max	54.9	/0.6	46.5	69.9	68.9	68.1	66.8 57.1	61.4 52.4	58.4	47.9	47.0	46.6			
Lifergy	Min	47.9	56.8	40.6	56.5	55.9	53.8	52.0	47.9	45.0	41.5	45.5	44.9	50.9	51.9	48.4
Evening	Max	54.5	66.2	44.3	65.9	65.4	62.2	58.5	51.7	49.1	45.1	44.7	44.4	24-	Hour CNEL (d	BA)
Energy	Average	51.7	Av	erage:	60.2	59.7	57.6	55.4	49.6	46.4	42.8	42.4	42.0			
Night	Min	44.6	50.3	40.4	49.9	49.5	48.2	47.4	44.8	43.4	41.3	40.9	40.5		56.0	
Energy	Average	48.4	AV	erage:	55.7	55.2	53.6	52.0	47.4	47.8	43.7	45.4	45.0	1		



Hourly L _{eq} dBA Readings (unadjusted)			
g 65.0			
	23 1	2 24	 2
35.0 + + + + + + + + + + + + + + + + + + +			
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	19 20	21 22	23
Hour Beginning			
Timeframe Hour L _{eq} L _{max} L _{min} L1% L2% L5% L8% L25% L50% L90% L95% L9	9% L _{eq}	Adj.	Adj. L _{eq}
0 52.4 61.3 47.5 60.9 60.0 57.3 55.6 52.2 50.5 48.2 47.9 4	7.6 52.4	10.0	62.4
	3.6 52.9	10.0	62.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	L.Z 55.5	10.0	65.5
Might 3 50.3 50.0 65.0 64.4 62.7 61.0 55.9 53.5 51.0 50.0 5	0.1 50.3 2.6 59.6	10.0	69.6
4 55.0 70.7 52.5 70.2 65.0 65.4 64.0 57.2 55.2 55.5 52	5.9 58.7	10.0	68.7
6 60.1 67.3 56.5 66.8 65.8 63.7 62.5 60.5 59.1 57.3 56.9 5	6.6 60.1	10.0	70.1
7 60.0 68.7 56.2 68.4 67.6 64.7 62.9 59.6 58.3 56.8 56.5 5	6.3 60.0	0.0	60.0
8 60.8 70.8 49.4 70.4 70.0 68.7 67.6 58.4 52.3 50.0 49.8 49.8	9.5 60.8	0.0	60.8
9 62.3 72.8 46.7 72.4 71.9 70.1 68.1 60.6 53.8 47.5 47.2 47.2	6.8 62.3	0.0	62.3
10 53.9 66.1 44.1 65.6 64.8 61.5 58.4 50.1 47.0 44.8 44.5 4	1.2 53.9	0.0	53.9
11 56.9 66.7 45.6 66.2 65.5 62.9 61.2 57.2 53.8 46.6 46.1 46.4	5.7 56.9	0.0	56.9
Day 12 56.3 67.4 45.6 67.0 66.1 63.3 60.7 55.2 51.6 47.1 46.1 4	56.3	0.0	56.3
13 52.9 63.2 40.6 62.7 61.9 59.4 50.9 51.6 49.4 47.4 47.1 4 14 59.9 72.1 46.6 71.9 71.3 68.4 64.4 55.3 51.2 47.7 47.3	5.8 50.0	0.0	52.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5.7 57.2	0.0	57.2
16 56.5 66.3 48.7 65.9 65.2 63.1 61.3 55.8 52.0 49.5 49.2 4	3.8 56.5	0.0	56.5
17 57.1 65.8 48.1 65.5 64.9 63.2 62.0 57.7 53.6 49.0 48.7 4	3.2 57.1	0.0	57.1
18 62.3 75.7 48.0 75.2 74.0 70.6 66.8 56.4 51.6 48.9 48.6 48.6	3.1 62.3	0.0	62.3
19 58.6 66.6 54.9 66.2 65.3 63.2 61.9 58.7 56.9 55.5 55.3 55.3	5.0 58.6	5.0	63.6
Evening 20 53.8 63.9 48.0 63.2 62.6 59.7 57.4 53.5 50.7 48.8 48.5 44.5	3.1 53.8	5.0	58.8
	7.3 54.4	5.0	59.4
Night 22 50.2 67.8 40.3 67.5 67.1 63.8 60.3 52.9 49.5 47.2 40.8 24 Night 23 55.0 65.6 48.7 65.1 63.9 60.8 58.5 54.3 52.1 49.5 49.1 40.4	29 55 0	10.0	65.0
Timeframe Hour L en L max L min L1% L2% L5% L8% L25% L50% L90% L95% L5	9%	L _{eg} (dBA)	05.0
Min 52.9 63.2 44.1 62.7 61.9 59.4 56.9 50.1 47.0 44.8 44.5 4	1.2		
Day Max 62.3 75.7 56.2 75.2 74.0 70.6 68.1 60.6 58.3 56.8 56.5 5	5.3 24-Hour	Daytime	Nighttime
Energy Average 58.9 Average: 68.1 67.4 65.0 62.7 56.3 52.2 48.6 48.2 48.2	^{7.8} 59 0	585	571
Evening Min 53.8 63.9 47.2 63.2 62.6 59.7 57.4 53.5 50.3 48.2 47.7 4	7.3 50.0	,	57.1
Max 58.6 66.6 54.9 66.2 65.3 63.2 61.9 58.7 56.9 55.5 55.3 5	5.0 2	4-Hour CNEL (a	IBA)
Energy Average 56.2 Average: 64.5 63.7 61.2 59.3 55.4 52.7 50.8 50.5 50.5 Min F2.4 F0.7 46.2 F0.4 F2.7 50.8 50.5	5.4		
Night Max 60.1 70.7 56.5 70.2 69.0 65.4 64.0 60.5 59.1 56.0 52.2 49.5 47.2 46.8 22.4	5.4	63.9	
Energy Average 57.1 Average: 64.4 63.7 61.4 59.8 55.7 53.7 51.6 51.2 51.2).9		



24-Hour Noise Level Measurement Summary																
Date: Project:	Wednesday Airport Gate	v, September eway Specific	09, 2020 : Plan		Location:	L7 - Located Avenue acro 8174 Tipped	southwest o oss from Trin anoe Avenu	of the Project hity Christian e.	t site on Tipp Fellowship C	ecanoe hurch at	Meter:	Piccolo II			JN: Analyst:	13635 P. Mara
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0)															
₹ 80.0																
B 70.0				m						• <u>v</u>	9					
00.0 0.0 ل		6.2	69.1	38.2		70.1 69.5	<mark> 7</mark>	<mark>68.8</mark>		2 <mark>2</mark>		<mark>3</mark>	<mark>70</mark>	<mark>0.69</mark>	69.2	
1 50.0	$i \in \mathbf{V}$	<u> </u>					\square									6!
H 45.0							+ $+$					\rightarrow				
35.0) ++	1 2	3	4 5	6	7 8	9 1	10 11	12 1	3 14	15 16	17	18 19	20	21 22	23
	U	1 2	5	- 5	U	, 0	5	Hour Be	eginning	5 14	15 10	17	10 15	20		25
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	67.4	79.5	53.6	79.0	78.1	75.1	72.2	64.8	59.5	54.9	54.2	53.8	67.4	10.0	77.4
	1	66.2	77.0	55.5	76.3 75.6	75.5	73.3	71.4	65.5	60.6	56.4	56.0	55.6	66.2	10.0	76.2
Night	2	69.1	81.0	57.2	80.5	74.9	76.5	74.2	66.2	62.1	57.5	57.8	57.3	69.1	10.0	75.5
J. J	4	68.2	78.3	59.0	77.8	77.0	74.7	72.8	67.8	64.1	60.2	59.6	59.1	68.2	10.0	78.2
	5	72.3	84.6	60.2	84.1	83.0	79.5	76.7	69.2	65.4	61.4	61.0	60.4	72.3	10.0	82.3
	6 7	70.4	80.8 80.0	61.0 60.7	80.3 79.5	79.7	76.9	74.6	69.9 70.3	66.7 66.3	62.3 62.0	61.6	61.1	70.4	10.0	80.4
	8	69.5	79.7	58.7	79.3	78.6	76.2	74.2	68.8	65.4	60.4	59.6	58.8	69.5	0.0	69.5
	9	71.1	82.5	56.9	82.3	81.7	79.1	75.9	68.7	63.8	58.5	57.7	57.1	71.1	0.0	71.1
	10	68.8	79.0	57.7	78.5	77.6	75.4	73.7	68.6	64.3	59.5	58.7	57.9	68.8	0.0	68.8
	11 12	68.7 68.5	79.3 79.2	57.4	78.9 78.8	78.0 77 9	75.1 75.3	/3.3 73 3	68.3 67.9	64.0 63.5	59.3 58.9	58.3 57 7	57.5 57.0	68.7 68.5	0.0	68.7 68.5
Day	13	70.4	82.2	57.4	81.4	80.3	77.1	74.8	69.6	64.7	59.1	58.3	57.6	70.4	0.0	70.4
	14	72.5	85.4	57.6	84.9	83.8	79.9	76.4	69.7	65.0	59.2	58.4	57.8	72.5	0.0	72.5
	15	69.9	79.3	58.5	78.9	78.2	76.5	75.1	70.1	65.9	60.3	59.5	58.7	69.9	0.0	69.9
	16 17	71.6	83.1 86.7	59.6 58.7	82.4 86 3	81.4 85.3	78.2 81.2	75.9 77 5	70.8	65.9	61.6 60.6	60.7 59.8	59.8 58.9	71.6 73.7	0.0	71.6 73.7
	18	70.5	81.9	58.8	81.1	80.0	77.2	75.1	69.7	65.3	60.3	59.5	58.9	70.5	0.0	70.5
	19	72.0	84.1	59.4	83.7	82.6	79.3	76.6	69.6	65.9	60.9	60.2	59.6	72.0	5.0	77.0
Evening	20	69.0	79.7	58.1	79.3 78 7	78.5	76.2	74.1	67.6	63.7	59.4	58.8	58.3	69.0	5.0 5.0	74.0 72.2
	21	69.2	80.7	57.1	80.4	79.6	75.5	74.1	66.2	62.9	58.8	59.2	57.4	69.2	10.0	79.2
Night	23	65.3	75.9	55.4	75.4	74.5	71.8	70.2	64.8	60.4	56.6	56.1	55.6	65.3	10.0	75.3
Timeframe	Hour		L_{max}		L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Max	73.7	79.0 86.7	60.7	78.5 86.3	85.3	81.2	73.3	70.8	66.9	58.5 62.0	61.3	60.8	24-Hour	Daytime	Nighttime
Energy	Average	70.8	Ave	rage:	81.0	80.2	77.3	75.1	69.4	65.1	60.0	59.1	58.4	70.0	70 6	60 0
Evening	Min	68.3	79.2	58.1	78.7	77.7	75.3	73.4	66.7	62.9	59.4	58.8	58.3	70.0		00.0
Energy	Max	72.0	84.1 Ave	59.4 rage:	83.7	82.6	79.3	76.6 74 7	69.6 67.9	65.9 64.2	60.9 60.0	60.2 59.4	59.6	24-1	Hour CNEL (d	ВАЈ
Niekt	Min	65.3	75.9	53.6	75.4	74.5	71.8	70.2	63.4	59.5	54.9	54.2	53.8	1	75 0	
Night	Max	72.3	84.6	61.0	84.1	83.0	79.5	76.7	69.9	66.7	62.3	61.6	61.1	1	/J.Ŏ	
Energy	Average	68.8	Ave	rage:	78.8	78.0	75.3	73.0	66.4	62.3	58.5	57.9	57.4			


Date: Wednesday, September 09, 2020 Priord: Airport Gateway Specific Plan Location, IL8-Located northwest of the Project site on 6th Street and Tippecance Avenue. Meter: Piccolo II Mete		24-Hour Noise Level Measurement Summary															
Hourly L., dBA Readings (undijustei) Undijustei) Undiju	Date: Project:	Wednesday Airport Gate	, September eway Specific	09, 2020 c Plan		Location	L8 - Located Tippecanoe	l northwest o Avenue.	of the Project	t site on 6th :	Street and	Meter:	Piccolo II			JN: Analyst:	13635 P. Mara
Vincing to the second s								Hourly L eq 0	dBA Readings	(unadjusted)							
V V								у су -	<u></u>								
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	85.0	0															
Vight Vight <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																	
v model <	g 65.0	ŏ															
9 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 Timeframe Hour Law Law Li%	→ 55.0	0			2.1	2.7	<mark>3.6</mark>	3.9	34.2 3.6	3.3	54.6	3.8 3.8	3.9	2.0		3.7	
± 40.0 ± 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 Timefram: Hour Log Log Log Log Log Log Log Log Adj 1 575 69.2 47.4 663.8 663.1 65.0 62.1 56.6 52.1 48.4 48.0 47.6 59.1 100 2 60.0 70.8 49.5 70.5 70.1 67.9 65.8 56.6 52.1 48.4 48.2 47.8 57.5 10.0 10	<u>50.0</u>	00	60		<u> </u>	<u> </u>				9)					<mark></mark>		
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 Timeframe Hour Lew Lew List L2% L5% L5% L5% L9% Lost Adj 1 57.5 69.2 47.7 68.8 68.1 65.0 65.2 54.6 51.2 48.4 48.2 47.8 57.5 10.0 2 60.0 70.8 49.5 70.5 66.4 65.4 65.4 56.7 53.3 50.0 49.5 58.2 10.0 10 10 60.6 60.0 10.0 60.6 71.4 49.9 71.2 70.7 68.6 65.4 65.4 56.7 53.4 50.3 50.0 49.6 60.6 60.0 10.0 60.6 60.7 71.8 52.7 10.0 60.7 58.6 65.1																	
Hour beam Hour beam Hour beam Timicform Hour Lev Lmm L1% L2% L5% L5% L5% L9% L9% <thl9%< th=""> <thl10< th=""></thl10<></thl9%<>		0	1 2	3	4 5	6	7 8	9 1	10 11	12 1	.3 14	15 16	17	18 19	20	21 22	23
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $									Hour Be	eginning							
0 59.1 69.7 47.4 69.3 68.8 67.0 65.1 56.6 52.1 48.4 48.0 47.6 59.1 100 1 57.5 69.2 47.7 68.8 66.1 65.2 54.6 51.2 48.4 48.2 47.8 57.5 100 3 58.2 66.1 49.5 70.5 70.1 67.9 65.8 56.7 53.3 50.3 50.0 49.6 60.0 10.0 5 62.1 73.8 51.2 73.3 72.3 69.5 67.2 59.9 55.4 52.1 51.7 51.3 62.7 10.0 6 62.7 73.0 51.4 72.7 73.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 59.9 69.4 0.0 55.4 54.9 60.9 0.0 60.9 0.0 60.9 0.0 65.9 55.3 54.7 65.9 65.9 55.3 54.7	Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
Index 1 57.5 69.2 47.7 68.8 68.1 65.0 62.2 54.6 51.2 48.4 48.2 47.8 57.5 10.0 Night 3 58.2 66.1 49.4 67.8 67.4 65.4 63.8 56.7 53.3 50.0 49.5 60.0 60.0 10.0 4 60.6 71.4 49.9 71.2 70.7 68.6 65.4 58.6 54.6 51.1 51.1 61.1 60.6 10.0 6 6 62.7 73.0 51.4 72.7 72.3 70.1 67.8 61.7 57.1 52.1 51.5 62.7 10.0 6 62.7 73.0 51.4 73.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 55.9 69.4 0.0 65.7 58.6 57.7 55.9 69.4 0.0 69 63.9 73.3 73.7 71.2 69.3 63.3		0	59.1	69.7	47.4	69.3	68.8	67.0	65.1	56.6	52.1	48.4	48.0	47.6	59.1	10.0	69.1
Night 3 58.2 68.1 49.4 67.8 67.4 65.4 65.8 56.7 53.3 50.3 50.0 49.5 60.0 10.0 4 60.6 71.4 49.9 71.2 70.7 68.6 65.4 58.6 51.2 50.6 50.0 60.6 10.0 6 62.7 73.0 51.4 72.7 72.3 70.1 67.8 61.7 57.1 52.5 52.0 51.3 62.1 10.0 6 62.7 73.0 51.4 72.7 72.3 70.1 67.8 61.7 57.1 52.5 52.0 51.5 62.7 10.0 9 63.9 78.5 56.7 78.3 77.9 76.2 74.6 69.4 66.7 58.6 57.7 55.9 63.3 63.3 53.1 64.2 60.0 63.3 56.0 55.9 55.3 54.7 63.6 0.0 63.3 0.0 63.3 50.0 54.8<		1	57.5	69.2	47.7	68.8	68.1	65.0	62.2	54.6	51.2	48.4	48.2	47.8	57.5	10.0	67.5
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Night	2	60.0	/0.8	49.5	/0.5	/0.1	67.9	65.8	56.7	53.3	50.3	50.0	49.6	60.0	10.0	/0.0
5 62.1 73.8 51.2 73.3 72.3 69.5 67.2 59.9 55.4 52.1 51.7 51.3 62.1 100 7 63.6 71.7 73.0 51.4 72.7 72.3 70.1 67.8 61.7 57.1 52.5 52.0 51.5 62.7 10.0 7 63.6 71.7 53.1 71.3 71.0 69.7 68.6 64.5 60.1 54.3 53.7 55.9 63.4 0.0 9 63.9 73.8 54.7 73.3 72.7 70.4 68.1 64.0 60.3 56.0 55.4 53.8 53.1 64.2 0.0 10 64.2 74.9 52.9 74.4 73.7 71.2 69.3 63.2 59.6 55.9 55.3 54.7 63.6 0.0 11 63.6 73.3 54.6 74.2 73.5 71.5 69.8 64.2 65.5 59.9 55.3	i vigitt	4	60.6	71.4	49.9	71.2	70.7	68.6	65.4	58.6	54.6	51.2	50.6	50.0	60.6	10.0	70.6
6 62.7 73.0 51.4 72.7 72.3 70.1 67.8 61.7 57.1 52.5 52.0 51.5 62.7 10.0 R 6 69.4 71.7 53.1 71.3 71.0 69.7 68.6 64.5 60.1 54.3 53.7 53.3 63.6 0.0 63.6 9 63.9 73.8 54.7 73.3 72.7 70.4 68.1 64.0 60.3 55.0 55.3 54.7 63.6 0.0 10 64.2 74.9 52.9 74.4 73.7 70.2 68.1 64.0 60.3 55.0 55.3 54.7 63.6 0.0 11 63.6 73.3 53.4 73.1 72.5 70.2 68.1 62.5 59.0 54.9 53.3 54.7 63.8 0.0 12 63.3 73.5 53.4 73.1 71.6 69.8 63.7 59.7 55.3 54.8 54.2		5	62.1	73.8	51.2	73.3	72.3	69.5	67.2	59.9	55.4	52.1	51.7	51.3	62.1	10.0	72.1
7 63.6 71.7 53.1 71.3 71.0 69.7 68.6 64.5 60.1 54.3 53.7 53.3 63.6 0.0 8 69.4 78.5 56.7 78.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 56.9 69.4 0.0 9 63.9 73.8 54.7 73.3 72.7 70.4 68.1 64.0 60.3 56.0 55.4 53.8 63.6 0.0 10 64.2 74.9 52.9 74.4 73.7 71.2 69.3 63.3 58.9 54.6 53.8 53.1 64.2 0.0 11 63.6 73.3 53.4 73.1 72.5 70.2 68.1 62.5 59.0 54.3 53.5 63.3 0.0 12 63.3 73.5 53.4 74.2 73.7 71.6 69.8 63.7 59.7 55.3 54.7 64.5 0.0		6	62.7	73.0	51.4	72.7	72.3	70.1	67.8	61.7	57.1	52.5	52.0	51.5	62.7	10.0	72.7
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		7	63.6	71.7	53.1	71.3	71.0	69.7	68.6	64.5	60.1	54.3	53.7	53.3	63.6	0.0	63.6
b 0 0.0.3 7.0.3 7.0.7 70.7 00.1 00.0 0		8	69.4 63.9	/8.5 73.8	56.7 54.7	/8.3 73.3	77.9	76.2	/4.6 68 1	69.4 64.0	65.7 60.3	58.6 56.0	57.7	56.9	69.4 63.9	0.0	69.4 63.9
11 63.6 73.3 54.6 72.9 72.3 70.5 68.7 63.2 59.6 55.9 55.3 54.7 63.6 0.0 Day 12 63.3 73.5 53.4 73.1 72.5 70.2 68.1 62.5 59.0 54.9 54.2 53.5 63.3 0.0 13 64.7 74.8 54.6 74.2 73.5 71.5 69.8 64.2 60.5 55.9 55.3 54.7 64.6 0.0 14 64.6 75.0 53.5 74.7 73.7 71.6 69.8 63.7 59.7 55.3 54.8 54.2 64.5 0.0 15 64.5 74.8 54.0 74.4 73.7 71.6 69.8 63.7 59.7 55.3 54.8 54.2 63.5 63.8 0.0 16 63.8 72.0 73.2 72.7 70.8 68.9 64.1 59.4 53.2 51.2 50.4		10	64.2	74.9	52.9	73.3	73.7	70.4	69.3	63.3	58.9	54.6	53.8	53.1	64.2	0.0	64.2
Day 12 63.3 73.5 53.4 73.1 72.5 70.2 68.1 62.5 59.0 54.9 54.2 53.5 63.3 0.0 13 64.7 74.8 54.6 74.2 73.5 71.5 69.8 64.2 60.5 55.9 55.3 54.7 64.7 0.0 14 64.6 75.0 53.5 74.5 73.9 71.6 69.8 63.7 59.7 55.3 54.8 54.2 64.5 0.0 15 64.5 74.8 54.0 74.4 73.7 71.6 69.8 63.7 59.7 55.3 54.8 54.2 63.8 0.0 16 63.8 72.9 53.3 72.6 72.0 70.2 68.6 64.0 60.0 54.9 54.2 53.5 63.8 0.0 17 63.9 73.6 52.6 73.2 72.7 70.8 68.9 64.1 50.0 53.3 52.8 63.9		11	63.6	73.3	54.6	72.9	72.3	70.5	68.7	63.2	59.6	55.9	55.3	54.7	63.6	0.0	63.6
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Dav	12	63.3	73.5	53.4	73.1	72.5	70.2	68.1	62.5	59.0	54.9	54.2	53.5	63.3	0.0	63.3
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	201	13	64.7	74.8	54.6	74.2	73.5	71.5	69.8	64.2	60.5	55.9	55.3	54.7	64.7	0.0	64.7
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		14	64.6	75.0 74.8	53.5	74.5 74.4	73.9 73.7	/1.6 71.6	70.2 69.8	63.8 63.7	58.7 59.7	54.8	54.2 54.8	53.6	64.6 64.5	0.0	64.6
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		16	63.8	74.8	53.3	74.4	72.0	70.2	68.6	64.0	60.0	54.9	54.2	53.5	63.8	0.0	63.8
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		17	63.9	73.6	52.6	73.2	72.7	70.8	68.9	64.1	59.4	54.0	53.3	52.8	63.9	0.0	63.9
19 62.0 72.0 50.7 71.6 70.8 69.0 67.4 61.7 57.3 52.4 51.7 51.0 62.0 5.0 Evening 20 61.4 71.9 48.4 71.6 71.0 68.8 67.0 60.8 55.0 49.9 49.2 48.5 61.4 5.0 21 62.5 72.2 51.8 71.8 71.3 69.2 67.6 62.6 57.3 52.7 52.3 51.9 62.5 5.0 Night 22 63.7 75.3 48.3 74.9 74.2 72.5 70.0 59.3 53.9 49.7 49.0 48.5 63.7 10.0 Night 23 64.7 79.1 47.9 78.1 76.8 71.9 67.9 57.8 53.4 49.1 48.5 48.1 64.7 10.0 Timeframe Hour Leq Lmax L2% L5% L8% L25% L90% L95% L99% Leq (dBA) Day Min 63.3 71.7 50.2 71.3<		18	64.1	75.1	50.2	74.5	73.9	71.5	69.3	63.0	58.0	52.3	51.2	50.4	64.1	0.0	64.1
Evening 20 61.4 71.9 48.4 71.6 71.0 68.8 67.0 60.8 55.0 49.9 49.2 48.5 61.4 5.0 21 62.5 72.2 51.8 71.8 71.3 69.2 67.6 62.6 57.3 52.7 52.3 51.9 62.5 5.0 62.5 5.0 61.4 5.0 50.4 5	E contra a	19	62.0	72.0	50.7	71.6	70.8	69.0	67.4	61.7	57.3	52.4	51.7	51.0	62.0	5.0	67.0
Night 21 62.3 72.2 51.8 71.8 71.3 65.2 67.6 62.6 57.3 52.7 51.3 51.3 602.3 51.6 Night 22 63.7 75.3 48.3 74.9 74.2 72.5 70.0 59.3 53.9 49.7 49.0 48.5 63.7 10.0 <	Evening	20	61.4 62.5	/1.9	48.4	/1.6 71.8	/1.0	68.8 69.2	67.0 67.6	60.8 62.6	55.0 57.3	49.9	49.2	48.5	61.4 62.5	5.0	66.4 67.5
Night 23 64.7 79.1 47.9 78.1 76.8 71.9 67.9 57.8 53.4 49.1 48.5 48.1 64.7 10.0 Timeframe Hour Leq Lmax Lmin L1% L2% L5% L8% L25% L50% L90% L95% L99% L9% Leq (dBA) Day Min Max 69.4 78.5 56.7 78.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 50.4 24-Hour Daytime Energy Average 64.8 Average: 73.9 73.3 71.3 69.5 64.1 60.0 55.1 54.4 53.8 63.5 64.4		22	63.7	75.3	48.3	74.9	74.2	72.5	70.0	59.3	53.9	49.7	49.0	48.5	63.7	10.0	73.7
Timeframe Hour Leq Lmax Lmin L1% L2% L5% L25% L50% L90% L99% L99% Leq (dBA) Day Min 63.3 71.7 50.2 71.3 71.0 69.7 68.1 62.5 58.0 52.3 51.2 50.4 24-Hour Daytime Daytime Daytime 64.8 Average 64.8 Average 73.9 73.3 71.3 69.5 64.1 60.0 55.1 54.4 53.8 63.5 64.4 64.8 65.7 56.1 54.4 53.8 63.5 64.4 64.4 53.8 63.5 64.4 64.4 53.8 63.5 64.4 64.4 64.4 53.8 63.5 64.4 64.4 64.4 53.8 63.5 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64.4 64	Night	23	64.7	79.1	47.9	78.1	76.8	71.9	67.9	57.8	53.4	49.1	48.5	48.1	64.7	10.0	74.7
Day Min 63.3 71.7 50.2 71.3 71.0 69.7 68.1 62.5 58.0 52.3 51.2 50.4 24-Hour Daytime Daytime Max 69.4 78.5 56.7 78.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 56.9 24-Hour Daytime Daytime </td <td>Timeframe</td> <td>Hour</td> <td>L _{eq}</td> <td>L _{max}</td> <td>L _{min}</td> <td>L1%</td> <td>L2%</td> <td>L5%</td> <td>L8%</td> <td>L25%</td> <td>L50%</td> <td>L90%</td> <td>L95%</td> <td>L99%</td> <td></td> <td>L _{eq} (dBA)</td> <td></td>	Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Max 69.4 78.5 56.7 78.3 77.9 76.2 74.6 69.4 65.7 58.6 57.7 56.9 Energy Average 64.8 Average: 73.9 73.3 71.3 69.5 64.1 60.0 55.1 54.4 53.8 63.5 64.4 63.7 63.6 64.4 53.8 63.5 64.4 65.7 54.4 53.8 63.5 64.4 65.7 54.4 53.8 63.5 64.4 65.7 54.4 53.8 63.5 64.4 65.7 55.1 54.4 53.8 63.5 64.4 65.7 55.1 54.4 53.8 63.5 64.4 65.7 55.1 54.4 53.8 63.5 64.4 65.7 55.1 54.4 53.8 63.5 64.4 65.7 55.1 54.4 55.7 55.8 63.5 64.4 65.7 55.1 54.4 55.7 55.8 65.7 55.7 55.7 55.8 57.7 55.8 57.7	Day	Min	63.3	71.7	50.2	71.3	71.0	69.7 76.2	68.1	62.5	58.0	52.3	51.2	50.4	24-Hour	Daytime	Nighttime
	Energy		69.4 64.8	78.5 Ave	56.7 grage:	78.3	77.9	76.2	74.6 69.5	69.4 64.1	60.0	58.0	57.7	53.8	<u> </u>		
Min 61.4 71.9 48.4 71.6 70.8 68.8 67.0 60.8 55.0 49.9 49.2 48.5 0.7.7	Eucerine	Min	61.4	71.9	48.4	71.6	70.8	68.8	67.0	60.8	55.0	49.9	49.2	48.5	63.5	64.4	61.6
Lverning Max 62.5 72.2 51.8 71.3 69.2 67.6 62.6 57.3 52.7 52.3 51.9 24-Hour CNEL (dB)	Evening	Max	62.5	72.2	51.8	71.8	71.3	69.2	67.6	62.6	57.3	52.7	52.3	51.9	24-	Hour CNEL (d	BA)
Energy Average 62.0 Average: 71.6 71.0 69.0 67.3 61.7 56.5 51.7 51.0 50.5	Energy	Average	62.0	Ave	rage:	71.6	71.0	69.0	67.3	61.7	56.5	51.7	51.0	50.5			
Night Min 57.5 68.1 47.4 67.8 67.4 65.0 62.2 54.6 51.2 48.4 48.0 47.6 68.8 Night Max 64.7 79.1 51.4 78.1 76.8 72.5 70.0 61.7 57.1 52.5 52.0 51.5 68.8	Night	Min Max	57.5	68.1 79.1	47.4	67.8 78 1	67.4 76.8	65.0 72 5	62.2	54.6 61.7	51.2	48.4	48.0	47.6		68.8	
Energy Average 61.6 Average: 71.8 71.2 68.7 66.1 58.0 53.8 50.2 49.8 49.3	Energy	Average	61.6	Ave	rage:	71.8	71.2	68.7	66.1	58.0	53.8	50.2	49.8	49.3			



APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE P	REDICTIO	ON MODE	L		
Scenai Road Nan Road Segme	rio: Existing ne: Waterman nt: Baseline S	eet			Project N Job Nu	lame: Air mber: 136	oort Gateway	Specif	fic P	
SITE	SPECIFIC II	NPUT DATA				N	DISE MO	DEL INPUT	s	
Highway Data				Si	ite Cor	nditions (l	Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	25,741 vehicle	s				Au	tos: 15		
Peak Hour	Percentage:	10.00%			Me	aium Truc	CKS (2 AXI	es): 15		
Peak F	lour Volume:	2,574 vehicle	s		He	eavy Truck	(S (3+ AXI	es): 15		
Ve	hicle Speed:	40 mph		V	ehicle	Mix				
Near/Far La	ane Distance:	27 feet			Veh	nicleType	Da	y Evening	Nigh	nt Daily
Site Data						A	utos: 77	.5% 12.9%	9.0	6% 97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 84	.8% 4.9%	10.3	3% 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 86	.5% 2.7%	10.0	8% 0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations (i	n feet)		
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet					Autos	0.000)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					m Trucks	2.297	7		
Observer Height	bserver Height (Above Pad): 5.0 feet					vv Trucks:	8.006	Grade Ad	ljustm	ent: 0.0
P	Pad Elevation: 0.0 feet									
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	48.402	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219	9		
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	7		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier At	ten l	Berm Atten
Autos:	66.51	2.69		0.11		-1.20	-4.	65 O.	000	0.000
Medium Trucks:	77.72	-16.15		0.13		-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	82.99	-17.87		0.13		-1.20	-5.	43 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	/ 1	Leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	68	3.1	66.2		64.4		58.4	67.	0	67.6
Medium Trucks:	Medium Trucks: 60.5 59.				52.6		51.1	59.	5	59.8
Heavy Trucks:	Heavy Trucks: 64.0 62.				53.6	i	54.8	63.	2	63.3
Vehicle Noise:	Vehicle Noise: 70.1 68.				65.0)	60.5	69.	0	69.5
Centerline Distan	enterline Distance to Noise Contour (in feet)									
				70 dE	BA	65 d	BA	60 dBA		55 dBA
	Ldn:		43		93		200		431	
	CNEL:					99		214		462

	FHW	A-RD-77-108 H	IGHW,	AY NO		REDICTIC					
Scenario	p: Existing					Project N	lame: I	Airport	Gateway	Specific	P
Road Name	e: Tippecanoe /	Avenue				Job Nu	mber: '	3635			
Road Segmen	t: Baseline Stre	et to 6th Street									
SITE S	SPECIFIC INP	UT DATA				N	DISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (l	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 12	006 vehicles					/	Autos:	15		
Peak Hour I	Percentage: 1	0.00%			Med	dium Truc	cks (2 A	xles):	15		
Peak Ho	our Volume: 1	,201 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Vel	nicle Speed:	45 mph		V	ehicle N	lix					
Near/Far Lar	e Distance:	24 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	44.0 feet		N	nise So	urco Elo	vation	in f	oof		
Centerline Dist. t	o Observer:	44.0 feet			0136 00	Autos	0.0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediun	n Trucks	2:	997			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	liustment	: 0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent l	Distand	e (in	feet)		
F	Road Grade:	0.0%				Autos:	42.0	526			
	Left View:	-90.0 degrees			Mediun	n Trucks:	42.4	118			
	Right View:	90.0 degrees			Heav	y Trucks:	42.4	139			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresn	el	Barrier Att	ten Ber	m Atten
Autos:	68.46	-1.14		0.94		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.97		0.97		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.70		0.96		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (withou	it Topo and ba	rrier a	ttenu	ation)						
VehicleType	Leq Peak Hour	Leq Day	Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	67.1	65	.2		63.4		57.3		66.0	0	66
Medium Trucks:	59.2	57	.7		51.4		49.8		58.3	3	58
Heavy Trucks:	Heavy Trucks: 62.3 60.9						53.1		61.	5	61
Vehicle Noise:	68.8	67	.1		63.9		59.3		67.8	8	68
Centerline Distanc	e to Noise Con	tour (in feet)									
				70 dE	BA	65 di	BA	6	60 dBA	55	dBA
		Lo	n:	31		68			146	3	514
CNEL:			- 34		72			156		537	

Thursday, November 19, 2020

	FH1	WA-RD-77-10	B HIGHW	VAY NO	DISE PI	REDICTIC	ON MOD	DEL			
Scenari Road Nam Road Segmer	o: Existing e: Waterman nt: 5th Street I	Avenue to 3rd Street				Project N Job Nu	lame: A mber: 1	Airport 3635	Gateway §	Specific F	5
SITES	SPECIFIC IN	NPUT DATA				NC	DISE N	IODE	L INPUT	5	
Highway Data				Si	ite Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	27,528 vehicle 10.00%	s		Me	dium Truc	A ks (2 A	lutos: xles):	15 15		
Peak H	our Volume:	2,753 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Vel	hicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far Lar	ne Distance:	67 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht [.]	0.0 feet			M	edium Tru	cks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	in fe	eet)		
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet					Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (. Pa	Above Pad): ad Elevation:	5.0 feet			Heav	y Trucks:	8.0	06	Grade Adj	ustment.	0.0
Roa	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos:	37.4	53			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	37.2	216			
	Right View:	90.0 degre	es		Heav	y Trucks:	37.2	240			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	66.51	2.98		1.78		-1.20	-	4.65	0.0	000	0.000
Medium Trucks:	77.72	-15.86		1.82		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	82.99	-17.58		1.82		-1.20		5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	leq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	70	0.1	68.2		66.4		60.3		69.0)	69.6
Medium Trucks:	62	2.5	61.0		54.6		53.1		61.5	5	61.8
Heavy Trucks:	66	5.0	64.6		55.6		56.8		65.2	2	65.3
Vehicle Noise:	72	2.0	70.3		67.0		62.5		71.0)	71.4
Centerline Distance	e to Noise C	ontour (in fee	t)					-			
	7			70 dE	BA	65 di	BA	6	i0 dBA	55	dBA
	Ldn:			58		126	3		271	5	83
	CNEL:					135	Ď		290	6	25

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE P	REDICTI	ON MO	DEL			
Scenari	o: Existing					Project	Name: I	Airport	Gateway	Specific	сP
Road Nam	e: Tippecanoe	e Avenue				Job Ni	imber:	13635			
Road Segmer	nt: 6th Street to	o 3rd Street									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				5	Site Cor	nditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	14,330 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	cks (2 A	(xles)	15		
Peak H	our Volume:	1,433 vehicle	s		He	avy Truc	ks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	24 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data				-		A	utos:	77.5%	12.9%	9.6	% 97.86%
Bai	rior Hoight	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	% 1.28%
Barrier Type (0-W	all. 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8	% 0.86%
Centerline Dis	st. to Barrier:	44.0 feet			Voico S	ourco Ek	wation	e (in f	nof)		
Centerline Dist.	to Observer:	44.0 feet		<i>'</i>	voise 3	Autoo	vauon	s (III 10	eelj		
Barrier Distance	to Observer:		Madiu	Autos	. 0.1	207					
Observer Height (Above Pad):			Hear	III TIUCKS	. 2.	201	Grade Ac	liustmei	nt: 0.0	
Pá	ad Elevation:	0.0 feet			nea	vy mucks	. 0.1	500	0,000,10	Juotinioi	A. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in i	feet)		
I	Road Grade:	0.0%				Autos	: 42.	626			
	Left View:	-90.0 degre	es		Mediu	m Trucks	42.	418			
	Right View:	90.0 degre	es		Hea	vy Trucks	42.	439			
EHWA Noise Mode	Calculation	c .									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier At	ten B	erm Atten
Autos:	68.46	-0.37		0.94	4	-1.20		-4.61	0.	000	0.000
Medium Trucks:	79.45	-19.20		0.97	7	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-20.93		0.96	3	-1.20		-5.50	0.	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leg Peak Hou	Ir Leq Day	/	Leg Ev	/ening	Leg I	Vight		Ldn	(CNEL
Autos:	67	.8	65.9		64.2		58.1		66.	7	67.3
Medium Trucks:	60	.0	58.5		52.1		50.6	6	59.	1	59.3
Heavy Trucks:	63	.1	61.7		52.6		53.9)	62.	2	62.4
Vehicle Noise:	69	.6	67.8		64.7		60.0)	68.	6	69.0
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 a	iBA	65 c	IBA	e	60 dBA	5	i5 dBA
	Ldn:			3	5	70	6		164		353
CNEL:					В	8	2		176		379

Thursday, November 19, 2020

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MOI	DEL			
Scenai Road Nan Road Segme	rio: Existing ne: Tippecano nt: 3rd Street t				Project Job N	Name: / umber: ^	Airpor 13635	t Gateway S	Specific	Ρ	
SITE	SPECIFIC IN	NPUT DATA				N	IOISE N	IODE	L INPUT	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	28,362 vehicle 10.00%	s		Me	edium Tru) ucks (2 A cks (3+ 4	Autos (xles)	: 15 : 15		
r cak r	hicle Speed	2,000 verificie	5		110	avy ma	x 101 x	ixic3)	. 10		
Near/Ear La	ne Distance:	43 mpn		V	ehicle	Mix					
Nedi/Fdi La	ine Distance.	67 Teel			Veh	icleType		Day	Evening	Night	Daily
Site Data						1	Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	edium Ti	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	Centerline Dist. to Barrier: 50.0 feet				oise Si	ource El	evation	: (in f	eet)		
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet					Auto	s [.] 0 (000			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					m Truck	s. 0.0	007			
Observer Height	(Above Pad):	5.0 feet			Heat	N Truck	s. 2.2 e 8(106	Grade Adi	ustmen	t· 0.0
P	Pad Elevation: 0.0 feet					ry maon	3. 0.0	000	0/000/10/	aoumon	0.0
Ro	Road Elevation: 0.0 feet					uivalent	Distanc	e (in:	feet)		
	Road Grade:	0.0%				Auto	s: 37.4	453			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 37.2	216			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 37.2	240			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	2.60		1.78		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	79.45	-16.24		1.82		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-17.97		1.82		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	′ L	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	71	1.6	69.7		68.0		61.9		70.5		71.1
Medium Trucks:	63	3.8	62.3		56.0		54.4		62.9		63.1
Heavy Trucks:	Heavy Trucks: 66.9 6				56.4		57.7		66.1		66.2
Vehicle Noise:	Vehicle Noise: 73.4 71				68.5		63.8		72.4		72.8
Centerline Distan	enterline Distance to Noise Contour (in feet)										
	· · ·			70 dE	ЗA	65	dBA		60 dBA	55	6 dBA
Ldn:		Ldn:	72		1	55	-	334		720	
				77		1	66		359		773

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PF	REDICTI					
Scenari	io: Existing					Project	Name: A	Airport	Gateway	Specific F	2
Road Nam	e: Tippecanoe	Avenue				Job Ni	imber: 1	3635			
Road Segmer	nt: Orange Sho	ow Road/ San	Bernai	rdino Av	enue to	Harrima	n Place /	/ I-10 \	NB Ramps	6	
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				s	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 2	25,471 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	2,547 vehicle	s		Hea	avy Truc	ks (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		v	ehicle N	lix					
Near/Far La	ne Distance:	67 feet			Vehi	cleType	1	Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bar	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet			laisa Sa	urco El	wations	(in fo	of		
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet						vauons	000	er)		
Barrier Distance	arrier Distance to Observer: 0.0 feet						. 0.0	00			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	· 2.2	06	Grade Ad	iustment	. 0 0
Pa	ad Elevation:	0.0 feet			neav	y macks	. 0.0	000	0/000/10	dounoni.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos	: 37.4	153			
	Left View:	-90.0 degree	es		Mediur	n Trucks	: 37.2	216			
	Right View:	90.0 degree	es		Heav	y Trucks	: 37.2	240			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Att	en Ben	m Atten
Autos:	68.46	2.13		1.78		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-16.70		1.82		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.43		1.82		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq I	light		Ldn	CI	VEL
Autos:	71	.2	69.3		67.5		61.4		70.1	1	70.
Medium Trucks:	63	.4	61.9		55.5		54.0		62.4	1	62.
Heavy Trucks:	66	.4	65.0		56.0		57.2		65.6	j.	65.
Vehicle Noise:	72	.9	71.2		68.0		63.4		71.9	9	72.4
Centerline Distanc	ce to Noise Co	ntour (in feet)	70 4	04	65.	DA		0 -0 4		-10.4
				70 a	ва	65 0	BA	6	и авА	55	авя
			I day	07	,		4		211	~	70
		0	Ldn:	67	,	14	4		311	6	10

	FH	WA-RD-77-10	BHIGH	WAY N	DISE PI	REDICTIO	N MODEL			
Scenar	io: Existing					Project N	lame: Airpo	ort Gateway	Specific F	>
Road Nam	e: Tippecano	e Avenue	_			Job Nur	mber: 1363	35		
Road Segme	nt: Mill Street	to Orange Sho	w Road	1/San B	ernardi	no Avenue	•			
SITE	SPECIFIC I	NPUT DATA				NC	DISE MOD	EL INPUT	s	
Highway Data				S	ite Con	ditions (F	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	32,591 vehicle	s				Auto	s: 15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 Axles	s): 15		
Peak H	lour Volume:	3,259 vehicle	s		He	avy Truck	s (3+ Axles	s): 15		
Ve	hicle Speed:	45 mph		v	ehicle l	Mix				
Near/Far La	ne Distance:	27 feet			Veh	icleType	Day	Evening	Night	Daily
Site Data						Au	itos: 77.5	5% 12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			M	edium Tru	cks: 84.8	4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 86.5	5% 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	oise So	ource Elev	vations (in	feet)		-
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet					Autos:	0.000			
Barrier Distance	Barrier Distance to Observer: 0.0 fe				Mediu	m Trucks:	2.297			
Observer Height	Above Pad):	5.0 feet			Heav	y Trucks:	8.006	Grade Ad	justment:	0.0
P	ad Elevation:	0.0 feet								
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	vistance (i	n feet)		
	Road Grade:	0.0%				Autos:	48.402			
	Left View:	-90.0 degre	es		Meaiui	m Trucks:	48.219			
	Right View:	90.0 degre	es		Heav	y Trucks:	48.237			
FHWA Noise Mod	el Calculatior	ıs								
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier Att	en Beri	m Atten
Autos:	68.46	3.20		0.11		-1.20	-4.6	5 0.0	000	0.000
Medium Trucks:	79.45	-15.63		0.13		-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	84.25	-17.36		0.13		-1.20	-5.4	3 0.0	000	0.000
Unmitigated Noise	e Levels (with	nout Topo and	barrie	r attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Ev	ening	Leq N	ight	Ldn	CI	JEL
Autos:	//	J.6	68.7		66.9		60.8	69.	2	70.1
Medium Trucks:	6.	2.7	01.2		54.9		53.3	01.0	5	62.0
Heavy Trucks:	0	5.8	04.4		55.4		0.00	0.00)	05.1
venicie ivoise.	1.	2.3	70.6		67.4		02.8	71.	3	/1.8
Centerline Distant	ce to Noise C	ontour (in fee	0	70 d	RA	65 de	RA	60 dB4	55	dBA
	Ldn:		,0 0		132)	284	6	11	
	CNEL:			66		141	-	304	6	55
	CNEL:									

	FH	WA-RD-77-108	BHIGHV	VAY N	OISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	<i>io:</i> Existing ne: Del Rosa [nt: SR-210 EE	Drive 8 Ramps to Hig	hland A	venue		Project Job Ni	Name: I umber:	Airpor 13635	t Gateway s	Specif	ic P
SITE	SPECIFIC I	NPUT DATA				N	OISE N	NODE	EL INPUT	s	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	23,780 vehicle 10.00%	s		Ме	dium Tru	, icks (2 A	Autos Axles)	: 15 : 15		
Peak H	our Volume:	2.378 vehicle	s		He	avy Truc	ks (3+ A	Axles)	: 15		
Ve	hicle Speed:	45 mph						-			
Near/Far La	ne Distance:	27 feet		V	enicie			_			
Sito Data				_	ven	icie i ype	utos	Day 77.5%	Evening	Nigh	t Dally
Sile Dala					м	۔ edium Tr	ucks:	84.8%	6 49%	10.3	3% 1.28%
Ba.	rrier Height:	0.0 feet				Heavy Tr	ucks:	86.5%	6 2.7%	10.0	N 0.86%
Barrier Type (0-W	int to Berrier	0.0 50.0 feet				.001)	aono.	00.07	2.1.70	10.0	
Centerline Di	to Observer	50.0 feet		Ν	loise So	ource Ele	evation	s (in f	ieet)		
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.0	000			
Observer Height	(Above Ded):	0.0 feet			Mediu	m Trucks	: 2.1	297			
Diserver neight	ad Elevation:	0.0 feet			Hear	/y Trucks	:: 8.0	006	Grade Ad	justme	ent: 0.0
Po	ad Elevation:	0.0 feet		1	ane Fo	uivalent	Distan	re (in	feet)		
NO.	Bood Grade:	0.0 1001		-	une 24	Autos	. 48	402	1000		
	Left View:	0.0%	~~		Mediu	m Trucks	. 40.	210			
	Right View:	-90.0 degre	es		Heat	N Trucks	. 40.	213			
	ragin view.	50.0 degre	63		11001	<i>, , , , , , , , , ,</i>	. 40.	207			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en E	Berm Atten
Autos:	68.46	1.83		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-17.00		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.73		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	V I	Leq Ev	ening	Leq I	Vight		Ldn		CNEL
Autos:	69	9.2	67.3		65.5		59.5	5	68.1	1	68.7
Medium Trucks:	61	1.4	59.9		53.5		52.0)	60.4	1	60.7
Heavy Trucks:	64	4.5	63.0		54.0		55.2	2	63.6	3	63.7
Vehicle Noise:	71	1.0	69.2		66.1		61.4	ŀ	69.9	9	70.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 0	1BA		60 dBA		55 dBA
			Ldn:	50)	10)7		230		495
		С	NEL:	53	3	11	4		247		531

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	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MO	DEL		_	
Scenai Road Nan Road Segme	rio: Existing ne: Del Rosa E nt: Highland A	c Street			Project Job N	Name: I umber:	Airpor 13635	t Gateway S	Specific	P	
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODI	EL INPUT	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	17,645 vehicle 10.00%	s		Ме	dium Tri	ucks (2 A	Autos Axles)	: 15 : 15		
Peak H	our Volume:	1.765 vehicle	s		He	avv Tru	cks (3+ A	(xles)	: 15		
Ve	hicle Speed:	35 mph					(.	,			
Near/Far La	ne Distance	14 feet		V	ehicle	Mix					
ittodiiri di 20	no Blotanoo.	111000			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	§ 97.86%
Ba	rrier Height:	0.0 feet			М	eaium Ti	rucks:	84.8%	6 4.9%	10.3%	6 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	6 0.86%
Centerline D	ist. to Barrier:	33.0 feet		N	oise S	ource El	evation	s (in f	eet)		
Centerline Dist.	Centerline Dist. to Observer: 33.0 feet					Auto	s' 0.0	100			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					m Truck	s 21	297			
Observer Height	(Above Pad):	5.0 feet			Heat	v Truck	s: 81	106	Grade Adi	ustmen	t: 0.0
P	Pad Elevation: 0.0 feet					<i>, , , , , , , , , ,</i>	0. 0.1		,		
Ro	Road Elevation: 0.0 feet				ane Eq	uivalent	Distant	ce (in	feet)		
	Road Grade:	0.0%				Auto:	s: 32.	634			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 32.	362			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 32.	389			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	e/	Barrier Atte	en Be	rm Atten
Autos:	64.30	1.63		2.68		-1.20		-4.52	0.0	00	0.000
Medium Trucks:	75.75	-17.21		2.73		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	81.57	-18.93		2.73		-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ Le	eq Eve	ening	Leq	Night		Ldn	0	NEL
Autos:	67	7.4	65.5		63.7		57.7		66.3	3	66.9
Medium Trucks:	60).1	58.6		52.2		50.7		59.1		59.4
Heavy Trucks:	Heavy Trucks: 64.2 62				53.7		54.9)	63.3	}	63.4
Vehicle Noise:	Vehicle Noise: 69.6 67				64.4		60.1		68.6	6	69.0
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 dE	BA	65	dBA		60 dBA	55	5 dBA
	Ldn:		Ldn:	27		5	57		123		266
	CA			28		6	51		132		284

Scenari	o: Existing					Project	Name:	Airport	Gateway	Specific I	Þ
Road Nam	e: Del Rosa Di	ive				Job N	umber:	13635			
Road Segmer	t: Baseline Str	eet to 9th Stre	et								
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	NODE	L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	9,963 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	ıcks (2 i	Axles):	15		
Peak H	our Volume:	996 vehicles	5		He	avy Truc	cks (3+)	Axles):	15		
Vei	nicle Speed:	45 mph		-	Vehicle I	Mix					
Near/Far La	ne Distance:	27 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.869
Centerline Dis	t. to Barrier:	50.0 feet		-	Noise Sc	urce El	ovation	e (in fa	ant)		
Centerline Dist.	o Observer:	50.0 feet		-	10130 00	Auto	evanon	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s. 0. e 2	207			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s. 2. s. 8	006	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			nour	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. 0.	000		,	
Roa	d Elevation:	0.0 feet		-	Lane Eq	uivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	s: 48.	402			
	Left View:	-90.0 degree	es		Mediu	n Truck	s: 48.	219			
	Right View:	90.0 degree	es		Heav	y Truck	s: 48.	237			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.95		0.1	1	-1.20		-4.65	0.	000	0.00
Medium Trucks:	79.45	-20.78		0.1	3	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-22.51		0.1	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and	barri	er atter	uation)						
VehicleType	Leq Peak Hou	· Leq Day		Leq E	vening	Leq	Night		Ldn	CI	NEL
Autos:	65.	4	63.5		61.8		55.	7	64.	3	64.
Medium Trucks:	57.	6	56.1		49.7		48.2	2	56.	5	56.
Heavy Trucks:	60.	7	59.3		50.2		51.5	5	59.	8	59.
Vehicle Noise:	67.	2	65.4		62.3		57.6	5	66.	2	66.
Centerline Distanc	e to Noise Co	ntour (in feet))	70	dD A	65		6	O dBA	55	dDA
			I dn'	101		001	0		120	1 35	UDA 77
		~		4	0	0	4		129		
		CI	*	3		0	-		100	2	

	FH\	NA-RD-77-108	HIGH	WAY N	NOISE PF	REDICTIO		DEL				
Scenar Road Nam Road Segme	io: Existing ne: Del Rosa D nt: Pacific Stre	Prive set to Baseline \$	Street			Project I Job Nu	Name: A Imber: 1	Airport 13635	t Gateway	Speci	ific P	
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE		s		
Highway Data					Site Con	ditions (Hard =	10, So	oft = 15)	-		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	12,318 vehicles 10.00% 1,232 vehicles	5		Me He	dium Tru avy Truci	A cks (2 A ks (3+ A	Autos: xles): xles):	15 15 15			
Ve	hicle Speed:	45 mph		H	Vehiele	Mise						
Near/Far La	ne Distance:	27 feet		-	Venicie i Vehi	icleTvne		Dav	Evening	Nia	ht	Daily
Site Data				-	veni	cie i ype A	utos	77 5%	L 12 9%	nigi 9	6%	97 86%
one puta		0.0.6			Me	edium Tri	icks:	84.8%	6 <u>12</u> .0%	10	3%	1.28%
Barrier Turne (0.14	rrier Height:	0.0 feet			F	leavy Tri	icks:	86.5%	6 2.7%	10	8%	0.86%
Centerline Di	all, 1-Delli).	0.0 50.0 foot				,						
Centerline Dist	to Observer	50.0 feet		4	Noise So	ource Ele	vations	in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.0	000				
Observer Height	Distance to Observer: 0.0 reet bserver Height (Above Pad): 5.0 feet				Mediur	n Trucks	: 2.2	297				
P	bserver Height (Above Pad): 5.0 feet					y Trucks	: 8.0	006	Grade Ad	ljustm	ent:	0.0
Ro	ad Elevation:	0.0 feet			Lane Equ	uivalent	Distanc	e (in	feet)			
	Road Grade:	0.0%		Ē		Autos	: 48.4	102	,			
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 48.2	219				
	Right View:	90.0 degree	s		Heav	y Trucks	48.2	237				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier At	ten	Berm	Atten
Autos:	68.46	-1.03		0.1	1	-1.20		4.65	0.	000		0.00
Medium Trucks:	79.45	-19.86		0.1	3	-1.20		4.87	0.	000		0.00
Heavy Trucks:	84.25	-21.59		0.1	3	-1.20		-5.43	0.	000		0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)							
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq N	light		Ldn		CN	EL
Autos:	66	5.3	64.4		62.7		56.6		65.	2		65.9
Medium Trucks:	58	1.5	57.0		50.7		49.1		57.	6		57.0
Heavy Trucks:	61	.6	60.2		51.1		52.4		60.	7		60.9
Vehicle Noise:	68	3.1	66.4		63.2		58.5		67.	1		67.
Centerline Distant	ce to Noise Co	ontour (in feet)										
				70	dBA	65 d	BA	6	60 dBA		55 d	BA
	Ldn:			3	2	69	9		148		31	9
	CNEL:				14	74	1		159		34	3

	FH'	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIO		DEL			
Scenar Road Nam Road Segme	Scenario: Existing Road Name: Del Rosa Drive Road Segment: 9th Street to 6th Street						Vame: /	Airpor 13635	t Gateway	Specific	P
SITE	SPECIFIC I	NPUT DATA				N	DISE N	IODI	EL INPUT	s	
Highway Data				S	ite Cor	nditions (Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	9,871 vehicle 10.00%	s		Ме	edium True) cks (2 A	Autos Axles)	: 15 : 15		
Peak H	lour Volume:	987 vehicle	s		He	eavy Truck	ks (3+ A	(xles	: 15		
Ve	hicle Speed:	45 mph		v	ehicle	Mix					-
Near/Far La	ne Distance:	27 feet			Veh	nicleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	77.59	6 12.9%	9.6	% 97.86%
Ba	rrier Height	0.0 feet			М	ledium Tru	icks:	84.89	6 4.9%	10.39	% 1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0				Heavy Tru	icks:	86.5%	6 2.7%	10.89	% 0.86%
Centerline Di	st. to Barrier:	50.0 feet		A	oico S	ourco Elo	vation	in f	foot		
Centerline Dist.	to Observer:	50.0 feet		~	0136 3	Autor	vauona	200	eeŋ		-
Barrier Distance	to Observer:	0.0 feet			Madiu	Autos.	. 0.0	000			
Observer Height	(Above Pad):	5.0 feet			Weulu	m Trucks.	. 2.4	201	Grade Ad	iustmai	nt: 0.0
P	ad Elevation:	0.0 feet			пеа	vy mucks.	. 0.0	000	Orade Hu	Justinei	<i>n</i> . 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	48.4	402			
	Left View:	-90.0 degre	es		Mediu	m Trucks.	48.	219			
	Right View:	90.0 degre	es		Hea	vy Trucks	48.	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	68.46	-1.99		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-20.82		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.55		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	′ L	eq Ev	ening	Leq N	light		Ldn	(CNEL
Autos:	65	5.4	63.5		61.7		55.7		64.3	3	64.9
Medium Trucks:	57	7.6	56.1		49.7		48.1		56.0	6	56.8
Heavy Trucks:	60).6	59.2		50.2	2	51.4		59.8	3	59.9
Vehicle Noise:	67	7.1	65.4		62.3	5	57.6		66.	1	66.6
Centerline Distant	ce to Noise C	ontour (in fee)								
		-		70 dl	BA	65 d	BA		60 dBA	5	5 dBA
			Ldn:	28		59)		128		275
		С	NEL:	30		64	Ļ		137		296

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE P	REDICTIC	ON MODE	EL			
Scenai Road Nan Road Segme	Scenario: Existing Road Name: Del Rosa Drive Road Segment: 6th Street to 3rd Street					Project N Job Nu	<i>lame:</i> Air mber: 13	rport Gatewa 635	ay Spe	cific P	
SITE	SPECIFIC IN	IPUT DATA				N	DISE MO	DEL INPL	JTS		
Highway Data				Si	ite Cor	nditions (I	Hard = 10), Soft = 15)			
Average Daily	Traffic (Adt):	9,576 vehicle	s				Au	itos: 15			
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Axi	les): 15			
Peak H	lour Volume:	958 vehicle	s		He	avy Truck	s (3+ Axi	les): 15			
Ve	hicle Speed:	45 mph		14	ohiclo	Mix					
Near/Far La	ne Distance:	27 feet			Veł	nicleType	Di	av Evenin	a Nie	aht	Dailv
Site Data						AL	itos: 77	7.5% 12.9	% 9	9.6% 9	7.86%
Ba	rrier Height	0.0 feet			М	ledium Tru	cks: 84	4.8% 4.9	% 10	0.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	cks: 86	6.5% 2.7	% 10	0.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations ((in feet)			
Centerline Dist.	to Observer:	50.0 feet		-		Autos	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks:	8.00	6 Grade	Adjusti	nent: 0	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	48.40	2			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.21	9			
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	7			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier J	Atten	Berm	Atten
Autos:	68.46	-2.12		0.11		-1.20	-4	.65	0.000		0.000
Medium Trucks:	79.45	-20.95		0.13		-1.20	-4	.87	0.000		0.000
Heavy Trucks:	84.25	-22.68		0.13		-1.20	-5	.43	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ 1	Leq Eve	ening	Leq N	light	Ldn		CNE	L
Autos:	65	5.2	63.4		61.6	i	55.5	6	4.2		64.8
Medium Trucks:	57	7.4	55.9		49.6		48.0	5	6.5		56.7
Heavy Trucks:	60).5	59.1		50.0	1	51.3	5	9.6		59.8
Vehicle Noise:	67	7.0	65.3		62.1		57.4	6	6.0		66.4
Centerline Distan	ce to Noise C	ontour (in fee)								
			L	70 dE	ЗA	65 di	BA	60 dBA		55 dE	BA
			Lan:	27	27 58 125			125	270		
		C	NEL:	29		62		134		290	J

Scenari	o: Existing					Projec	t Name:	Airpor	t Gateway	Specific	Р
Road Nam	e: Sterling Ave	nue				Job N	lumber:	13635			
Road Segmer	t: 9th Street to	6th Street									
SITE	SPECIFIC IN	PUT DATA					NOISE	NODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	0,609 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2)	Axles):	15		
Peak H	our Volume:	1,061 vehicles			He	avy Tru	cks (3+)	Axles):	15		
Vel	nicle Speed:	40 mph		١	/ehicle l	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Bar	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	5 2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	50.0 feet			loise Sc	urce F	levation	s (in fi	eef)		
Centerline Dist. I	to Observer:	50.0 feet		-		Auto	is' 0	000			
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Truck	(s: 2	297			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		1	ane Eq	uivalen	t Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 48.	402			
	Left View:	-90.0 degree	s		Mediui	m Truck	(S. 48.	219			
	Right View:	90.0 degree	s		Heav	у тиск	(S. 48.	237			
FHWA Noise Mode	l Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	66.51	-1.16		0.11		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-20.00		0.13	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-21.72		0.13	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and I	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	64.	3 (62.4		60.6		54.5	5	63.3	2	63
Medium Trucks:	56.	7 !	55.1		48.8		47.2	2	55.	7	55
Heavy Trucks:	60.	2 (8.8		49.7		51.0)	59.3	3	59
Vehicle Noise:	66.	2 (64.5		61.2		56.	7	65.3	2	65
Centerline Distanc	e to Noise Co	ntour (in feet)									
			_ L	70 d	BA	65	dBA	(50 dBA	55	dBA
			.dn:	24	ļ	-	51		111	2	239
		616									

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PF	REDICT	ION MC	DEL				
Scenar	io: Existing					Project	Name:	Airpor	Gateway	Spec	cific F	,
Road Nam	ne: Sterling Ave	enue				Job N	umber:	13635	,			
Road Segme	nt: Base Line t	o 9th Street										
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			-
Average Daily	Traffic (Adt): 1	13,368 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles).	15			
Peak H	lour Volume:	1,337 vehicles			He	avy Tru	cks (3+ .	Axles).	15			
Ve	hicle Speed:	40 mph		L.	ahicle I	Nix						
Near/Far La	ne Distance:	27 feet		-	Vehi	cleTvpe		Dav	Evenina	Nic	aht	Dailv
Site Data						, , , , ,	Autos:	77.5%	12.9%	9).6%	97.86%
Ba	rrier Height	0.0 feet			Me	dium T	rucks:	84.8%	4.9%	10).3%	1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0			F	leavy T	rucks:	86.5%	5 2.7%	10	.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet			loiso Sa	urco El	ovation	e (in f	0.04)			
Centerline Dist.	to Observer:	50.0 feet		-	10/36 30	Auto	evauon	000	eeŋ			
Barrier Distance	to Observer:	0.0 feet			Madiu	Auto Truck	s. U.	207				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	ο. 2. ο. 9	006	Grade Ad	diustr	nent [.]	0.0
P	ad Elevation:	0.0 feet			Tieav	y much	5. 0.	.000	0/440/10	ijaoti		0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 48	.402				
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 48	.219				
	Right View:	90.0 degree	s		Heav	y Truck	s: 48	.237				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier At	ten	Berr	n Atten
Autos:	66.51	-0.16		0.11	ĺ	-1.20		-4.65	0.	000		0.00
Medium Trucks:	77.72	-18.99		0.13	5	-1.20		-4.87	0.	000		0.00
Heavy Trucks:	82.99	-20.72		0.13	5	-1.20		-5.43	0.	000		0.00
Unmitigated Noise	e Levels (with	out Topo and I	arrier	attenı	uation)							-
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	65	.3 6	3.4		61.6		55.	5	64.	.2		64.
Medium Trucks:	57	.7 5	6.1		49.8		48.	2	56	.7		56.9
Heavy Trucks:	61	.2 5	9.8		50.7		52.	0	60.	.4		60.
Vehicle Noise:	67	.2 (5.5		62.2		57.	7	66	2		66.
Centerline Distant	ce to Noise Co	ontour (in feet)										-
				70 d	BA	65	dBA	1	60 dBA		55	dBA
		l	.dn:	28	3	6	0		129		2	79
		CA	EL:	30)	e	4		138		2	98

	FH	WA-RD-77-10	B HIGH	WAY N	IOISE P	REDICTIC	N MODE	L		
Scenal Road Nan Road Segme	Scenario: Existing Road Name: Sterling Avenue Road Segment: 6th Street to 3rd Street						lame: Airp mber: 136	oort Gateway 9 35	Specifi	сР
SITE	SPECIFIC II	NPUT DATA				NC	DISE MO	DEL INPUT	s	
Highway Data				5	Site Cor	ditions (H	lard = 10,	Soft = 15)	-	
Average Daily	Traffic (Adt):	6,984 vehicle	s				Aut	os: 15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	:ks (2 Axle	es): 15		
Peak H	lour Volume:	698 vehicle	s		He	avy Truck	s (3+ Axle	es): 15		
Vé	ehicle Speed:	40 mph		1	/ehicle	Mix				
Near/Far La	ane Distance:	27 feet			Veh	icleType	Da	y Evening	Night	t Daily
Site Data						Au	itos: 77	.5% 12.9%	9.6	% 97.86%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 84	.8% 4.9%	10.3	% 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	cks: 86	.5% 2.7%	10.8	% 0.86%
Centerline D	ist. to Barrier:	50.0 feet		1	Voise S	ource Elev	vations (i	n feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.000)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297	,		
Observer Height	(Above Pad):	5.0 feet			Hea	y Trucks:	8.006	Grade Ad	justme	nt: 0.0
P	ad Elevation:	0.0 feet		-	_					
Ro	ad Elevation:	0.0 feet		1	ane Eq	uivalent L	Jistance (in feet)		
	Road Grade:	0.0%				Autos:	48.402	<u>'</u>		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219	9		
	Right View:	90.0 degre	es		неа	/y Trucks:	48.237	, ,		
FHWA Noise Mod	el Calculation	IS							-	
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier Att	en B	erm Atten
Autos:	66.51	-2.98		0.11	1	-1.20	-4.	65 0.0	000	0.000
Medium Trucks:	77.72	-21.81		0.13	3	-1.20	-4.	87 0.0	000	0.000
Heavy Trucks:	82.99	-23.54		0.13	3	-1.20	-5.	43 0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)				-	
VehicleType	Leq Peak Ho	ur Leq Da	y	Leg Ev	/ening	Leq N	ight	Ldn		CNEL
Autos:	62	2.4	60.5		58.8		52.7	61.3	3	61.9
Medium Trucks:	54	4.8	53.3		47.0		45.4	53.9	9	54.1
Heavy Trucks:	58	3.4	57.0		47.9		49.2	57.5	õ	57.7
Vehicle Noise:	64	4.4	62.7		59.4		54.8	63.4	4	63.8
Centerline Distan	ce to Noise C	ontour (in fee	t)							
				70 a	iBA	65 dE	BA	60 dBA	1	55 dBA
			Ldn:	18	8	39		84		181
		C	NEL:	19	9	42		90		194

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ON MO	DEL		_	
Scenai Road Nan Road Segme	Scenario: Existing Road Name: Victoria Avenue Road Segment: Highland Avenue to Pacific					Project Job N	Name: I umber:	Airpor 13635	t Gateway S	Specific	P
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	12,184 vehicle	s		Me	dium Tri	icks (2)	Autos:	15		
Peak Hour	Percentage.	10.00%			IVIC LLC		10K3 (2 1	vics).	15		
reakr	iour voiurrie.	1,210 verlicie	5		110	avy nuc	,ns (3+ 7	члісэ).	15		
Ve Need Control of Con	enicie Speea:	40 mpn		V	ehicle	Mix					
Near/Far La	ine Distance:	24 Teet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tr	ucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	44.0 feet		N	oise S	ource El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos	s: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	5 23	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	006	Grade Adi	ustmen	: 0.0
P	ad Elevation:	0.0 feet				.,					
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 42.	626			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 42.4	418			
	Right View:	90.0 degre	es		Hear	vy Trucks	s: 42.4	439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	66.51	-0.56		0.94		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	77.72	-19.40		0.97		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-21.12		0.96		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	′ Le	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	65	5.7	63.8		62.0		56.0)	64.6	;	65.2
Medium Trucks:	58	3.1	56.6		50.2		48.7		57.1		57.4
Heavy Trucks:	61	1.6	60.2		51.2		52.4	ļ.	60.8		60.9
Vehicle Noise:	67	7.6	65.9		62.6	;	58.1		66.6		67.1
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dE	BA	65 (dBA	(50 dBA	55	dBA
			Ldn:	26		5	6		122	2	262
		С	NEL:	28		6	0		130	1	280

		A-RD-77-1001	liGn	WATN	UISE PR	LDICII		DEL			
Scenari	o: Existing					Project	Name:	Airport	Gateway	Specific	þ
Road Nam	e: Victoria Ave	nue				Job N	umber:	13635			
Road Segmer	t: Base Line to	9th Street									
SITE	SPECIFIC IN	PUT DATA				N	OISE	IODE	L INPUT	S	
Highway Data				S	Site Con	ditions	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	1,210 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2 /	Axles):	15		
Peak H	our Volume:	1,121 vehicles			Hea	avy Truc	ks (3+)	Axles):	15		
Vei	nicle Speed:	45 mph		1	/ehicle N	lix					
Near/Far La	ne Distance:	24 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	44.0 feet			laisa Sa	urco El	wation	e (in fe	of		
Centerline Dist.	o Observer:	44.0 feet		-	10/30 00	Autor	. 0	200	.00		
Barrier Distance	o Observer:	0.0 feet			Mediur	n Trucks	. 0.	207			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	. 2.	106	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			mour	,	. 0.			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in f	feet)		
F	Road Grade:	0.0%				Autos	: 42.	626			
	Left View:	-90.0 degrees	5		Mediur	n Trucks	: 42.	418			
	Right View:	90.0 degree:	3		Heav	y Trucks	: 42.	439			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.44		0.94	1	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-20.27		0.97	7	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-22.00		0.96	6	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrie	er atten	uation)						
VehicleType	Leq Peak Hour	Leq Day		Leq Ev	rening	Leq	Vight		Ldn	C	NEL
Autos:	66.	B 6	4.9		63.1		57.0)	65.	7	66.
Medium Trucks:	58.9	95	7.4		51.1		49.5	5	58.0	0	58.
Heavy Trucks:	62.	J 6	U.6		51.6		52.8	5	61.	2	61.
Vehicle Noise:	68.	5 6	6.8		63.6		59.0)	67.	5	68.
Centerline Distanc	e to Noise Co	ntour (in feet)		70 -	ID A	67			0 484		dD A
		,	dni	70 0	BA	65 0	IBA c	6	120	55	aBA
			an: E	30		6	0		139	3	00
		1.01									

	FHV	VA-RD-77-108 I	HIGHWAY	NOISE P	REDICT		DEL			
Scenar	rio: Existina				Project	Name: A	Airport	Gateway S	pecific I	P
Road Nan	ne: Victoria Ave	nue			Job N	umber: 1	13635	, -		
Road Segme	nt: Pacific Stre	et to Base Line								
SITE	SPECIFIC IN				N		ODE			
Highway Data	0. 2011.0 11			Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	4.431 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		Me	dium Tru	ucks (2 A	(xles):	15		
Peak F	lour Volume:	1,443 vehicles		He	avy Truc	cks (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		Vahiala	Min		-			
Near/Far La	ane Distance:	24 feet		Venicie	icle Type		Dav	Evening	Night	Daily
Site Data				Ven	icie i ype	lutos	77 5%	12 Q%	9.6%	07.86%
one Data				м	∘ dium Ti	rucks:	84.8%	4.9%	10.3%	1 28%
Ba Domine Terro (D.M	rrier Height:	0.0 feet			Jeavy Ti	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline D	ist to Parrier	0.0			,					
Centerline Dist	to Observer	44.0 feet		Noise So	ource El	evations	s (in fe	et)		
Barrier Distance	to Observer:	0.0 feet			Auto	s: 0.0	000			
Observer Height	(Above Pad):	5.0 feet		Mediu	m Truck	s: 2.2	297			
P	ad Elevation:	0.0 feet		Heav	y Truck	s: 8.0	006	Grade Adjı	ustment	: 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in f	eet)		
10	Road Grade:	0.0%			Auto	s: 42.6	526	,		
	Left View:	-90.0 degree	-	Mediu	m Truck	s: 42.4	418			
	Right View:	90.0 degrees	5	Heav	y Truck	s: 42.4	139			
	3 • •	g								
FHWA Noise Mod	lel Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el l	Barrier Atte	n Ber	m Atten
Autos:	66.51	0.17	0	.94	-1.20		-4.67	0.0	00	0.000
Medium Trucks:	11.12	-18.66	0	.97	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-20.39	0	.96	-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq	Night		Ldn	CI	NEL
Autos:	66	.4 6	4.5	62.8		56.7		65.3		65.9
Medium Trucks:	58	.8 5	7.3	51.0		49.4		57.9		58.1
Heavy Trucks:	62	.4 6	0.9	51.9		53.2		61.5		61.6
Vehicle Noise:	68	.4 6	6.6	63.4		58.8		67.4		67.8
Centerline Distan	ce to Noise Co	ntour (in feet)								
			70	0 dBA	65	dBA	6	0 dBA	55	dBA
		L	dn:	29	6	3		136	2	93
		CN	EL:	31	6	8		146	3	14

	FH\	WA-RD-77-108	3 HIGH	IWAY N	OISE P	REDICTIC	ON MOI	DEL				
Scenai Road Nan Road Segme	rio: Existing ne: Victoria Av ent: 9th Street t				Project N Job Nui	lame: / mber: 1	Airpor 13635	t Gateway	Spec	ific P		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	IODI	EL INPUT	s		
Highway Data				s	Site Cor	nditions (H	lard =	10, S	oft = 15)			
Average Daily Peak Hour	Traffic (Adt): Percentage:	8,368 vehicle 10.00%	es		Ме	edium Truc	A ks (2 A	Autos Axles)	: 15 : 15			
Peak H	-lour Volume:	837 vehicle	s		He	eavy Truck	s (3+ A	(xles	: 15			
Ve	ehicle Speed:	45 mph		1	/ohiclo	Mix						
Near/Far La	ane Distance:	24 feet		-	Veh	nicleType		Dav	Evenina	Nia	ht	Daily
Site Data					10,	Au	itos:	77.5%	6 12.9%	9	6%	97.86%
Ba	rrier Height	0.0 feet			M	ledium Tru	cks:	84.89	6 4.9%	10	3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	cks:	86.5%	6 2.7%	10	8%	0.86%
Centerline D	ist. to Barrier:	44.0 feet			loise S	ource Elev	vations	s (in t	eet)			
Centerline Dist.	to Observer:	44.0 feet		E F		Autos:	0.0	000	000			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucke:	2.0	207				
Observer Height	(Above Pad):	5.0 feet			Heat	w Trucks	2.2	106	Grade Ad	iustr	ent [.]	0.0
P	ad Elevation:	0.0 feet			nea	vy mucks.	0.0	000	0/000/10	Jaoun	0//12.	0.0
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent D	Distanc	e (in	feet)			
	Road Grade:	0.0%				Autos:	42.6	626				
	Left View:	-90.0 degre	es		Mediu	m Trucks:	42.4	418				
	Right View:	90.0 degre	es		Hea	vy Trucks:	42.4	439				
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en	Bern	n Atten
Autos:	68.46	-2.71		0.94	1	-1.20		-4.61	0.0	000		0.000
Medium Trucks:	79.45	-21.54		0.97	7	-1.20		-4.87	0.0	000		0.000
Heavy Trucks:	84.25	-23.27		0.96	3	-1.20		-5.50	0.0	000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er attenu	uation)							
VehicleType	Leq Peak Hou	ur Leq Da	у	Leq Ev	rening	Leq N	ight		Ldn		CN	EL
Autos:	65	5.5	63.6		61.8	;	55.8		64.4	4		65.0
Medium Trucks:	57	.7	56.2		49.8	;	48.3		56.	7		57.0
Heavy Trucks:	60).8	59.3		50.3		51.5	i	59.9	9		60.0
Vehicle Noise:	67	7.3	65.5		62.4	Ļ	57.7		66.2	2		66.7
Centerline Distan	ce to Noise C	ontour (in fee	t)									
				70 d	IBA	65 dE	ВА		60 dBA		55 0	3BA
			Ldn:	25	5	53			114		24	7
		С	NEL:	26	6	57			123		26	5

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGH	NAY NO	DISE P	REDICTIO		EL		
Scenai Road Nan Road Segme	Scenario: Existing Road Name: Victoria Avenue Road Segment: 6th Street to 3rd Street					Project N Job Nu	<i>lame:</i> Aii mber: 13	rport Gate 8635	way Spe	cific P
SITE	SPECIFIC IN	IPUT DATA				N	DISE MO	ODEL IN	PUTS	
Highway Data				S	ite Cor	nditions (l	Hard = 10	0, Soft = :	15)	
Average Daily	Traffic (Adt):	8,368 vehicle	s				AL	utos: 18	5	
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Ax	les): 15	5	
Peak H	lour Volume:	837 vehicle	s		He	eavy Truck	(s (3+ Ax	les): 15	5	
Ve	hicle Speed:	45 mph		V	ehicle	Mix				
Near/Far La	ne Distance:	24 feet		-	Veh	nicleType	D	ay Eve	ning Ni	ght Dail
Site Data						A	utos: 7	7.5% 12	2.9% 9	9.6% 97.86
Ba	rrier Heiaht:	0.0 feet			Μ	ledium Tru	icks: 84	4.8% 4	1.9% 10	0.3% 1.28
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 86	6.5% 2	2.7% 10	0.8% 0.86
Centerline D	ist. to Barrier:	44.0 feet		N	oise S	ource Ele	vations	(in feet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.00	0		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	97		
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	8.00	6 Grad	le Adjusti	nent: 0.0
P	ad Elevation:	0.0 feet		_						
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	42.62	26		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	42.41	18		
	Right View:	90.0 degre	es		Hea	vy Trucks:	42.43	39		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	l Barri	er Atten	Berm Atte
Autos:	68.46	-2.71		0.94		-1.20	-4	1.61	0.000	0.0
Medium Trucks:	79.45	-21.54		0.97		-1.20	-4	1.87	0.000	0.0
Heavy Trucks:	84.25	-23.27		0.96		-1.20	-5	5.50	0.000	0.0
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	65	5.5	63.6		61.8		55.8		64.4	6
Medium Trucks:	57	7.7	56.2		49.8		48.3		56.7	5
Heavy Trucks:	60).8	59.3		50.3		51.5		59.9	6
Vehicle Noise:	67	7.3	65.5		62.4		57.7		66.2	6
Centerline Distan	ce to Noise C	ontour (in fee)							
				70 dl	BA	65 d	BA	60 dB	A	55 dBA
		-	Ldn:	25	25 53 114				247	
		C	NEL:	26		57		123		265

	FRM	A-RD-77-100	moi	WATE		LDICI		DEL			
Scenari	o: Existing					Project	Name: /	Airport	Gateway	Specific	Р
Road Nam	e: 6th Street					Job N	umber: `	13635			
Road Segmer	t: Del Rosa Dr	ive to Sterling	Aver	nue							
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				4	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	4,714 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2 A	(xles)	15		
Peak H	our Volume:	471 vehicles			Hea	avy Truc	:ks (3+ A	(xles):	15		
Vel	nicle Speed:	40 mph		1	Vehicle N	lix					
Near/Far Lar	ne Distance:	20 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.869
Bar	rier Height:	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	30.0 feet		-	Noise So	urce Fl	evation	s (in fe	ef)		
Centerline Dist. I	to Observer:	30.0 feet		-	10.00 00	Auto	· 0(000			
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Truck	. 21	297			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	006	Grade Ad	liustment	: 0.0
Pa	d Elevation:	0.0 feet		_		,					
Roa	d Elevation:	0.0 feet		1	Lane Equ	iivalent	Distanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos	5: 28.	723			
	Left View:	-90.0 degree	S		Mediur	n Truck	3. 28.4	413			
	Right View:	90.0 degree	s		Heav	y Truck	5. 28.4	144			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	ten Ber	m Atten
Autos:	66.51	-4.69		3.5	1	-1.20		-4.49	0.	000	0.00
Medium Trucks:	77.72	-23.52		3.5	8	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	82.99	-25.25		3.5	7	-1.20		-5.77	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and I	barri	er atten	uation)						
VehicleType	Leq Peak Hour	Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	64.	1 6	52.2		60.5		54.4		63.	0	63.
Medium Trucks:	56.	6 6	55.1		48.7		47.2		55.	6	55.
Heavy Trucks:	60.	1 5	8.7		49.7		50.9		59.	3	59.
Vehicle Noise:	66.	1 6	54.4		61.1		56.5		65.	1	65.
Centerline Distanc	e to Noise Co	ntour (in feet)		-				-			
				70 0	JBA 1	65	авA о	6	U dBA	55	aBA
		1	an:	1	4	3	0		55	1	41
		CA	- I ·	1	n .		-		70	1	101

	FH\	WA-RD-77-108	HIGH	WAY N	NOISE PR	REDICTIO		DEL				
Scenar Road Nan Road Segme	io: Existing ne: 6th Street	e Avenue to De	Rosa	Drive		Project I Job Nu	Vame: / imber: '	Airport 13635	t Gateway	Speci	fic P	
				. 51110						_		
SITE Highway Data	SPECIFIC II	NPUT DATA			Site Con	Nitions (Hard =	10 S	L INPUT	5		
Average Daily Peak Hour Peak F	Traffic (Adt): Percentage: lour Volume:	3,249 vehicle: 10.00% 325 vehicle:	8		Me He	dium Tru avy Truci	cks (2 A ks (3+ A	Autos: (xles): (xles):	15 15 15			
Ve	hicle Speed:	40 mph		-	Vahiala	Min		-				
Near/Far La	ne Distance:	20 feet		-	Venicie i	NIX icleTupe	1	Dav	Evening	Nia	hf	Daily
Site Data					Ven	cie i ype A	utos	77 5%	12 9%	a	6% 0	07 86%
one Data		0.0.6			Me	edium Tri	ucks:	84.8%	6 4.9%	10	3%	1.28%
Barrier Turne (0.14	rrier Height:	0.0 feet			ŀ	leavy Tri	icks:	86.5%	6 2.7%	10.	8%	0.86%
Centerline Di	ict to Parrier	0.0 30.0 foot				,						
Centerline Dist	to Observer	30.0 feet		4	Noise Sc	ource Ele	vations	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.0	000				
Observer Height	(Above Pad):	5.0 feet			Mediur	n Trucks	: 2.2	297				
P	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.0	006	Grade Ad	justm	ent: C	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distand	e (in	feet)			
	Road Grade:	0.0%				Autos	: 28.	723	,			
	Left View:	-90.0 degree	24		Mediur	n Trucks	: 28.4	413				
	Right View:	90.0 degree	es		Heav	y Trucks	28.4	144				
FHWA Noise Mod	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en	Berm	Atten
Autos:	66.51	-6.30		3.5	1	-1.20		-4.49	0.	000		0.00
Medium Trucks:	77.72	-25.14		3.5	8	-1.20		-4.86	0.	000		0.000
Heavy Trucks:	82.99	-26.86		3.5	7	-1.20		-5.77	0.	000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day		Leq E	vening	Leq N	light		Ldn		CNE	L
Autos:	62	2.5	60.6		58.9		52.8		61.	4		62.0
Medium Trucks:	55	5.0	53.4		47.1		45.5		54.	D		54.2
Heavy Trucks:	58	3.5	57.1		48.0		49.3		57.	6		57.8
Vehicle Noise:	64	4.5	62.8		59.5		54.9		63.	5		63.9
Centerline Distan	ce to Noise C	ontour (in feet,										
				70	dBA	65 d	BA	6	60 dBA		55 dE	3A
			Ldn:	1	1	24	1		51		110	J
		CI	VEL:	1	2	25	5		55		118	ţ

	FH\	VA-RD-77-108	HIGHV	VAY N	IOISE PE	REDICTIO		EL			
Scenar Road Nar Road Segme	io: Existing ne: 6th Street nt: Sterling Ave	ie		Project I Job Nu	Vame: A Imber: 1	irport 3635	Gateway S	Specific	P		
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODE		3	
Highway Data				5	Site Con	ditions (Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	3,519 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	352 vehicle	s		He	avy Truci	ks (3+ A)	(les):	15		
Ve	hicle Speed:	40 mph		1	Vehicle I	Mix					
Near/Far La	ne Distance:	20 feet		-	Veh	icleType	Ľ	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Tru	icks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Di	ist. to Barrier:	30.0 feet		/	Noise Sc	ource Ele	vations	(in fe	eet)		-
Centerline Dist.	to Observer:	30.0 feet				Autos	0.0	00			
Barrier Distance	Barrier Distance to Observer: 0.0 feet				Mediu	n Trucks	. 2.2	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks	. 80	06	Grade Adi	ustment	0.0
P	Pad Elevation: 0.0 feet					y maone.	0.0				
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distance	e (in :	feet)		
	Road Grade:	0.0%				Autos	28.7	23			
	Left View:	-90.0 degre	es		Mediu	n Trucks	28.4	13			
	Right View:	90.0 degre	es		Heav	ry Trucks	28.4	44			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	66.51	-5.96		3.51	1	-1.20	-	4.49	0.0	00	0.000
Medium Trucks:	77.72	-24.79		3.58	В	-1.20	-	4.86	0.0	00	0.000
Heavy Trucks:	82.99	-26.52		3.57	7	-1.20	-	5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	' L	Leq Ev	vening	Leq N	light		Ldn	C	NEL
Autos:	62	.9	61.0		59.2		53.1		61.8		62.4
Medium Trucks:	55	.3	53.8		47.4		45.9		54.4		54.6
Heavy Trucks:	Heavy Trucks: 58.8 57.4				48.4		49.6		58.0		58.1
Vehicle Noise:	Vehicle Noise: 64.8 63.1						55.3		63.8		64.3
Centerline Distant	ce to Noise Co	ontour (in feet)								
			Ľ	70 d	1BA	65 d	BA	6	60 dBA	55	dBA
			Ldn:	12	2	25	5		54	1	16
	CNEL:				2	27	,		58	1	24

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-10	BHIGHV	VAY NO	DISE P	REDICTI		DEL	_	_	
Scenar Road Nan Road Segme	io: Existing ne: 6th Street nt: Victoria Av	enue to Centra	ıl Avenu	e		Project Job N	Name: / umber: ^	Airpor 13635	Gateway S	Specific	P
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	4,047 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	xles).	15		
Peak H	lour Volume:	405 vehicle	s		He	avy Truc	:ks (3+ A	(xles)	15		
Ve	hicle Speed:	40 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	20 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data					1011	A	utos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	/all, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline D	st. to Barrier:	30.0 feet		N	oise Si	ource El	evation	: (in f	eef)		
Centerline Dist.	to Observer:	30.0 feet		-	0.00 0	Autos	· 00	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 20	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Hea	v Trucks	: 80	006	Grade Adi	ustmen	: 0.0
P	Pad Elevation: 0.0 feet					,					
Ro	Road Elevation: 0.0 feet				ane Eq	uivalent	Distanc	e (in:	feet)		
	Road Grade:	0.0%				Autos	s: 28.1	723			
	Left View:	-90.0 degre	es		Mediu	m Trucks	5: 28.4	413			
	Right View:	90.0 degre	es		Hear	vy Trucks	8: 28.4	144			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	66.51	-5.35		3.51		-1.20		-4.49	0.0	00	0.000
Medium Trucks:	77.72	-24.18		3.58		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	82.99	-25.91		3.57		-1.20		-5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq I	Night		Ldn	С	NEL
Autos:	63	3.5	61.6		59.8		53.8		62.4		63.0
Medium Trucks:	55	5.9	54.4		48.0		46.5		55.0		55.2
Heavy Trucks:	59	9.5	58.0		49.0		50.2		58.6		58.7
venicle Noise:	65	5.4	63.7		60.4		55.9		64.4		64.9
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 dl	24	65.			0 dBA	66	dBA
	/			10 01	ж	000	7 7		50 UDA	55	UDA 127
		~	NEL ·	14		2	, 0		63		126
	CNEL:					2	3		03		100

		A-100-11-100			1010211						
Scenari	o: Existing					Project	Name: I	Airport	Gateway	Specific	Þ
Road Nam	e: 5th Street					Job Ni	umber: "	13635			
Road Segmer	nt: E Street to V	Vaterman Ave	nue								
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data					Site Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 2	0,083 vehicles					,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	(xles)	15		
Peak H	our Volume:	2,008 vehicles			He	avy Truc	ks (3+ A	(xles):	15		
Vei	hicle Speed:	45 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	27 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.869
Centerline Dis	st. to Barrier:	50.0 feet			Noise So	urce Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	50.0 feet		F		Autos	. 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	: 2.2	297			
Observer Height (oserver Height (Above Pad): 5.0 feet					v Trucks	. 8.0	006	Grade Ad	justment	: 0.0
Pa	Pad Elevation: 0.0 feet										
Roa	ad Elevation:	0.0 feet		4	Lane Equ	uvalent	Distanc	e (in f	'eet)		
F	Road Grade:	0.0%				Autos	: 48.4	402			
	Left View:	-90.0 degree	s		Mediur	n Trucks	. 48.	219			
	Right View:	90.0 degree	s		Heav	y Trucks	. 48.	237			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	ten Ber	m Atten
Autos:	68.46	1.10		0.1	1	-1.20		-4.65	0.	000	0.00
Medium Trucks:	79.45	-17.74		0.1	3	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-19.46		0.1	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and I	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	· Leq Day		Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	68.	5 6	6.6		64.8		58.7		67.	4	68
Medium Trucks:	60.	6 5	59.1		52.8		51.2		59.	7	59.
Heavy Trucks:	63.	7 6	52.3		53.3		54.5		62.	9	63.
Vehicle Noise:	70.	2 (58.5		65.3		60.7		69.	2	69.
Centerline Distanc	e to Noise Co	ntour (in feet)		70		65 -			O dBA		dDA
			dni	700		050	IDA E	6	20E	55	uBA 40
				4	4	9	5		200	4	42
CNEL				4	1	10	14		22U	4	

	FHV	HIGHWA	Y N	OISE PR	REDICT	ION MO	DEL					
Scenar	<i>io:</i> Existina					Proiect	Name: /	Airport	Gatewa	v Spe	cific F	
Road Nan	ne: 5th Street					Job N	umber:	13635				
Road Segme	nt: I-215 NB R	amps to E Stree	et									
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	L INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt): 3	30,975 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Med	dium Tru	ucks (2 A	Axles):	15			
Peak H	lour Volume:	3,098 vehicles			Hea	avy Truc	cks (3+ A	Axles):	15			
Ve	hicle Speed:	45 mph		v	ehicle A	lix						
Near/Far La	ne Distance:	27 feet		F	Vehi	cleType		Day	Evening	g Ni	ght	Daily
Site Data							Autos:	77.5%	12.99	6	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	dium Ti	rucks:	84.8%	4.9%	6 1	0.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Ti	rucks:	86.5%	2.79	6 1	0.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	loise So	urce El	evation	s (in f	eet)			
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet						s: 0.0	000	,			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					n Truck	s: 2.2	297				
Observer Height	Observer Height (Above Pad): 5.0 feet					v Truck	s: 8.0	006	Grade A	Adjust	ment:	0.0
P	Pad Elevation: 0.0 feet											
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distanc	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 48.4	402				
	Left View:	-90.0 degree	S		Mediur	n Truck	s: 48.	219				
	Right View:	90.0 degree	S		Heav	y Truck	s: 48.:	237				
FHWA Noise Mod	el Calculation:	s		-								
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	iel	Barrier A	Atten	Beri	m Atten
Autos:	68.46	2.98		0.11		-1.20		-4.65	(0.000		0.000
Medium Trucks:	79.45	-15.86		0.13	5	-1.20		-4.87	(0.000		0.000
Heavy Trucks:	84.25	-17.58		0.13	5	-1.20		-5.43		0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and l	arrier a	ttenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	IEL
Autos:	70	.3 6	8.4		66.7		60.6	6	6	9.2		69.9
Medium Trucks:	62	.5 6	1.0		54.7		53.1		6	1.6		61.8
Heavy Trucks:	65	.6 6	i4.2		55.1		56.4	ļ	6	4.7		64.9
Vehicle Noise:	Vehicle Noise: 72.1 70.4				67.2		62.5	5	7	1.1		71.5
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 di	BA	65	dBA	6	60 dBA		55	dBA
	Ldn:			59)	1:	27		274		5	90
		CN	EL:	63	3	1:	36		294		6	33

	FH\	VA-RD-77-108	HIGH	NAY N	IOISE PE	REDICTI		EL			
Scenar Road Nan Road Segme	io: Existing ne: 5th Street nt: Waterman	Avenue to Tip	oecano	e Aven	ue	Project Job Nu	Name: Ai Imber: 13	rport Gateway 635	Spec	ific P	
SITE	SPECIFIC IN	IPUT DATA				N	OISE MO	DDEL INPUT	s		
Highway Data				S	Site Con	ditions (Hard = 1	0, Soft = 15)	-		
Average Daily	Traffic (Adt):	9,167 vehicle	s				AL	itos: 15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 Ax	les): 15			
Peak H	our Volume:	917 vehicle	s		He	avy Truc	ks (3+ Ax	les): 15			
Ve	hicle Speed:	45 mph			/ohiclo I	Mix					
Near/Far La	ne Distance:	14 feet			Veh	icle Type	0	av Evening	Nia	ht I	Daily
Site Data				-	ven	cie i ype	utos: 7	7.5% 12.0%	1vig	6% 0	Dally
one Data					M	n edium Tr	ucks: 8	18% 49%	10	.0% 0	1 28%
Ba Domine Teno (0.14	rrier Height:	0.0 feet			, in the second s	leavy Tr	ucks: 8	8.5% 2.7%	10	8%	0.86%
Contorlino Di	int to Porrior:	0.0 22.0 feet			-						
Centerline Di	to Observer	33.0 feet		٨	Voise So	ource Ele	evations	(in feet)			
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.00	10			
Observer Height	Observer Height (Above Pad): 5.0 feet				Mediu	m Trucks	: 2.29	17			
P	Pad Elevation: 0.0 feet					ry Trucks	: 8.00	6 Grade Ad	djustr	ient: 0	.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distance	(in feet)			
	Road Grade:	0.0%				Autos	: 32.63	34			
	Left View:	-90.0 degre	es		Mediu	n Trucks	: 32.36	52			
	Right View:	90.0 degre	es		Heav	y Trucks	32.38	19			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier At	ten	Berm .	Atten
Autos:	68.46	-2.31		2.68	3	-1.20	-4	1.52 0.	.000		0.000
Medium Trucks:	79.45	-21.14		2.73	3	-1.20	-4	.86 0.	.000		0.000
Heavy Trucks:	84.25	-22.87		2.73	3	-1.20	-5	5.69 0.	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	/	Leq Ev	/ening	Leq I	light	Ldn		CNE	L
Autos:	67	.6	65.7		64.0		57.9	66	.5		67.1
Medium Trucks:	59	.8	58.3		52.0		50.4	58	.9		59.1
Heavy Trucks:	62	.9	61.5		52.4		53.7	62	.1		62.2
Vehicle Noise:	69	.4	67.7		64.5		59.8	68	.4		68.8
Centerline Distan	ce to Noise Co	ontour (in feet)			_					
				70 d	iBA	65 0	'BA	60 dBA		55 dE	3A
			Ldn:	26	6	5	5	119		257	
	CNEL:				8	59	9	128		276	į.

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE P	REDICT	ION MO	DEL		_	
Scenar Road Nan Road Segme	Scenario: Existing Road Name: 5th Street Road Segment: Tippecanoe Avenue to Del Ro SITE SPECIFIC INPUT DATA					Project Job N	Name: i umber:	Airpor 13635	t Gateway S	Specific	P
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	L INPUT	3	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,725 vehicle	s					Autos	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	ucks (2 A	(xles	: 15		
Peak H	lour Volume:	873 vehicle	s		He	eavy Truc	cks (3+ A	(xles	: 15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	14 feet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Ti	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	33.0 feet		N	oise S	ource El	evation	s (in f	ieet)		
Centerline Dist.	to Observer:	33.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.1	297			
Observer Height	Observer Height (Above Pad): 5.0 feet				Hear	vy Truck	s: 8.0	006	Grade Adj	ustmen	0.0
P	ad Elevation: 0.0 feet						Distant	//	f 41		
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivaient	Distant	ce (In	reet)		
	Road Grade:	0.0%			1 4 m ali -	Auto	5: 32.	034			
	Left View:	-90.0 degre	es		Mediu	m Truck	S: 32.	302 290			
	ragin view.	90.0 degre	65		nea	vy mach	3. 02.	000			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ince	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	68.46	-2.52		2.68		-1.20		-4.52	0.0	00	0.000
Medium Trucks:	79.45	-21.36		2.73		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	84.25	-23.08		2.73		-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	67	7.4	65.5		63.7		57.7		66.3		66.9
Medium Trucks:	59	9.6	58.1		51.8		50.2		58.7		58.9
Vehicle Noise	62	2.7	67.4		52.2 64.3		53.5 59.6	,	61.8		62.0
Conterline Distan	on to Noise C	ontour (in foot	01.1		34.0		00.0		00.2		00.0
Centerine Distan	Ce lo NOISe C	uniour (în feel	/	70 dE	ЗA	65	dBA		60 dBA	55	dBA
	Ldn:			25		5	4	J	115	1	249
	Lan: CNEL:			27		5	7		124	-	267

	FHV	VA-RD-77-108	HIGH	IWAY N	IOISE PI	REDICT		IODEL			
Scenari	o: Existing					Projec	t Name	: Airpor	t Gateway	Specific I	P
Road Nam	e: 5th Street					Job N	lumbe	r: 13635			
Road Segmer	nt: Sterling Ave	enue to Victoria	a Ave	nue							
SITE	SPECIFIC IN	PUT DATA					NOISE	MODE	EL INPUT	S	-
Highway Data				5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,911 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 Axles).	: 15		
Peak H	our Volume:	391 vehicle	s		He	avy Tru	cks (3	+ Axles).	: 15		
Ve	hicle Speed:	45 mph		١	Vehicle I	Mix					-
Near/Far La	ne Distance:	14 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Bai	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	33.0 feet		,	Noise Sr	urce F	levatio	ons (in f	eef)		
Centerline Dist.	to Observer:	33.0 feet		-		Auto	15'	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s	2.297			
Observer Height (bserver Height (Above Pad): 5.0 feet					v Truck	s:	8.006	Grade Ac	ljustment	: 0.0
Pa	Pad Elevation: 0.0 feet										
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	IS: 3	2.634			
	Left View:	-90.0 degre	es		Mediui	TI I TUCK	S: 3	2.302			
	Right view:	90.0 degre	es		neav	y much	.s. c	2.309			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:	68.46	-6.01		2.68	В	-1.20		-4.52	0.	000	0.00
Medium Trucks:	79.45	-24.84		2.73	3	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	84.25	-26.57		2.73	3	-1.20		-5.69	0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)					-	
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	vening	Leq	Night		Ldn	CI	VEL
Autos:	63	.9	62.0		60.3		5	4.2	62.	8	63.
Meaium Trucks:	56	.1	54.6		48.3		4	5.7	55.	2	55.
Heavy Trucks:	59	.2	51.8		48.8		5	J.U 2.4	58.	4	58.
venicie Noise:	65	./	64.0		60.8		5	5.1	64.	/	65.
Centerline Distanc	e to Noise Co	ntour (in feet)	70 -		67	dDA		60 d D A		dD A
			I day	70 0	IBA	00	abA 24		60 dBA	55	dBA 46
			Lun:	13	5		1		00	1	40
		0		10	6		24		72	1	56

	FH\	NA-RD-77-108	HIGHW	VAY N	NOISE PF	REDICTI	ON MO	DEL				
Scenar	io: Existing					Project	Name:	Airpor	t Gatewa	y Spe	cific F	>
Road Nan	ne: 5th Street					Job N	umber:	13635				
Road Segme	nt: Del Rosa D	rive to Sterling	Avenue	Э								
SITE	SPECIFIC IN	IPUT DATA				N	OISE I	NODE	L INPU	тѕ		
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	5,595 vehicles	6					Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 /	Axles).	15			
Peak H	lour Volume:	560 vehicles	6		He	avy Truc	:ks (3+ /	Axles):	15			
Ve	ehicle Speed:	45 mph		-	Vohiclo I	Nix						
Near/Far La	ne Distance:	27 feet		-	Venicle	icleTvne	1	Dav	Evenin		aht	Daily
Site Data				-	VCIII	Lic Type	utos:	77.5%	6 12.99	6	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.99	61	0.3%	1.28%
Barrier Tune (0 M	All 1 Permi	0.0 leet			ŀ	leavv Tr	ucks:	86.5%	6 2.79	6 1	0.8%	0.86%
Centerline D	ist to Barrier	50.0 feet		_								
Centerline Dist	to Observer:	50.0 feet		1	Noise Sc	ource Ele	evation	s (in f	eet)			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Autos	s: 0.0	000				
Observer Height	Observer Height (Above Pad): 5.0 feet				Mediur	n Trucks	s: 2.	297				
P	Pad Elevation: 0.0 feet				Heav	y Trucks	s: 8.	006	Grade A	ajust	ment:	0.0
Ro	Road Elevation: 0.0 feet					uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	: 48.	402				
	Left View:	-90.0 degree	s		Mediur	n Trucks	s: 48.	219				
	Right View:	90.0 degree	es		Heav	y Trucks	s: 48.	237				
EHWA Noiso Mod	ol Calculation	c										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier A	tten	Beri	m Atten
Autos:	68.46	-4.45		0.1	1	-1.20		-4.65	(0.000		0.000
Medium Trucks:	79.45	-23.29		0.1	3	-1.20		-4.87		0.000		0.000
Heavy Trucks:	84.25	-25.01		0.1	3	-1.20		-5.43	(0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)							
VehicleType	Leq Peak Hou	ur Leq Day	L	leq E	vening	Leq I	Night		Ldn		CI	IEL
Autos:	62	2.9	61.0		59.3		53.2	2	6	1.8		62.4
Medium Trucks:	55	5.1	53.6		47.2		45.7	7	5	4.1		54.4
Heavy Trucks:	58	3.2	56.7		47.7		49.0)	5	7.3		57.4
Vehicle Noise:	Vehicle Noise: 64.7 62.9				59.8		55.1	1	6	3.7		64.1
Centerline Distan	ce to Noise Co	ontour (in feet,										
				70	dBA	65 0	1BA	1	60 dBA		55	dBA
			Ldn:	1	9	4	1		88		1	89
	CNEL:				20	4	4		94		2	02

	FHV	VA-RD-77-108	HIGHW.	AY NO	DISE PI	REDICT	ION MO	DEL			
Scenar	rio: Existing					Project	Name:	Airpor	t Gateway	Specific	P
Road Nan	ne: 5th Street					Job N	lumber:	13635	-		
Road Segme	nt: Victoria Ave	enue to Central	Avenue								
SITE	SPECIFIC IN	PUT DATA				1	IOISE	NODE		s	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	9,939 vehicles						Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2)	Axles).	15		
Peak H	lour Volume:	994 vehicles			He	avy Tru	cks (3+)	Axles).	15		
Ve	ehicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ane Distance:	27 feet		-	Veh	icleType		Dav	Evenina	Night	Daily
Site Data					1011		, Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrior Hoight:	0.0 foot			M	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall. 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Di	ist. to Barrier:	50.0 feet			laiaa Cr	uree E	lovation	a lin f	in of l		
Centerline Dist.	to Observer:	50.0 feet		N	oise so	ource E	levation	s (in r	eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto	s: 0.	207			
Observer Height	Observer Height (Above Pad): 5.0 feet					m Truck	S: 2.	297	Grade Ad	iustmon	+ 0.0
P	ad Elevation:	0.0 feet			Heav	у тиск	S: 8.	000	Graue Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 48.	402			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 48.	219			
	Right View:	90.0 degree	S		Heav	ry Truck	s: 48.	237			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	-1.96		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-20.79		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.52		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and L	arrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	65	.4 6	3.5		61.7		55.	7	64.3	3	64.9
Medium Trucks:	57	.6 5	6.1		49.7		48.2	2	56.6	3	56.9
Heavy Trucks: 60.7 59.2					50.2		51.5	5	59.8	3	59.9
Vehicle Noise:	67	.2 6	5.4		62.3		57.6	6	66.1	1	66.0
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 dl	BA	65	dBA		60 dBA	55	i dBA
		L	.dn:	28		6	50		128	1	277
	CNEL:					6	54		138		297

Thursday, November 19, 2020

	FH	WA-RD-77-10	B HIGH	WAY	NOISE P	REDICTI		EL _			
Scenai Road Nan Road Segme	Scenario: Existing Road Name: 5th Street Road Segment: Central Avenue to Palm Avenue SITE SPECIFIC INPUT DATA					Project I Job Nu	Vame: A Imber: 1	irport 3635	Gateway S	pecific I	P
SITE	SPECIFIC IN	NPUT DATA				N	OISE M	ODEI	L INPUTS	6	
Highway Data					Site Co.	nditions (Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	9,939 vehicle	s				А	utos:	15		
Peak Hour	Percentage:	10.00%			M	edium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	994 vehicle	es		H	eavy Truc	ks (3+ A)	xles):	15		
Ve	ehicle Speed:	45 mph		-	Vehicle	Mix					
Near/Far La	ane Distance:	27 feet		ŀ	Vel	hicleTyne	Г	Dav	Evenina	Niaht	Daily
Site Data					10.	A	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			N	1edium Tri	ucks: 8	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks: 8	86.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		F	Noise S	ource Ek	vations	(in fo	of)		
Centerline Dist.	to Observer:	50.0 feet				Autos	· 0.0	00	00		
Barrier Distance	to Observer:	0.0 feet			Medii	im Trucks	. 22	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Hea	vv Trucks	8.0	06	Grade Adi	ustment	: 0.0
P	Pad Elevation: 0.0 feet					.,					
Ro	ad Elevation:	0.0 feet		-	Lane Ed	quivalent	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos	: 48.4	02			
	Left View:	-90.0 degre	es		Mediu	Im Trucks	: 48.2	19			
	Right View:	90.0 degre	es		неа	vy Trucks	48.2	37			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	e Road	Fresne	el L	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.96	6	0.1	11	-1.20	-	4.65	0.0	00	0.000
Medium Trucks:	79.45	-20.79)	0.1	13	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-22.52	2	0.1	13	-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	er attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq E	vening	Leq I	light		Ldn	CI	NEL
Autos:	65	5.4	63.5		61.7	7	55.7		64.3		64.9
Medium Trucks:	57	7.6	56.1		49.7	7	48.2		56.6		56.9
Heavy Trucks:	60).7	59.2		50.2	2	51.5		59.8		59.9
Vehicle Noise:	67	7.2	65.4		62.3	3	57.6		66.1		66.6
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70	dBA	65 c	BA	6	0 dBA	55	dBA
	Ldn:			1	28	60)		128	2	277
		C	NEL:	3	30	64	1		138	2	97

	FHV	VA-IND-77-100	mig	IWAT							
Scenari	o: Existing					Project N	lame: A	irport	Gateway	Specific I	
Road Nam	e: 3rd Street					Job Nu	mber: 1	3635			
Road Segmer	t: Waterman	Avenue to Tipp	becan	noe Aver	nue						
SITE S	SPECIFIC IN	PUT DATA				NC	DISE M	ODE	L INPUT	S	
Highway Data					Site Con	ditions (H	lard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	0,460 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,046 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		-	Vehicle I	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	icleType	1	Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Height:	0.0 feet			M	edium Tru	cks: {	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			I	Heavy Tru	cks: 8	36.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet		-	Noise Sc	ource Elev	vations	(in fe	ef)		
Centerline Dist. I	to Observer:	50.0 feet				Autos	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height (J	bserver Height (Above Pad): 5.0 feet				Heav	v Trucks:	8.0	06	Grade Ad	iustment	: 0.0
Pa	Pad Elevation: 0.0 feet					,					
Roa	Road Elevation: 0.0 feet					uivalent E	Distanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos:	48.4	02			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.2	19			
	Right View:	90.0 degre	es		Heav	ry Trucks:	48.2	37			
FHWA Noise Mode	Calculation	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.74		0.1	1	-1.20		4.65	0.	000	0.00
Medium Trucks:	79.45	-20.57		0.1	3	-1.20		4.87	0.	000	0.00
Heavy Trucks:	84.25	-22.30		0.1	3	-1.20	-	5.43	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	ier atter	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq N	ight		Ldn	CI	NEL
Autos:	65	.6	63.7		62.0		55.9		64.	5	65.
Medium Trucks:	57	.8	56.3		49.9		48.4		56.	9	57.
Heavy Trucks:	60	.9	59.5		50.4		51.7		60.	0	60.
Vehicle Noise:	67	.4	65.7		62.5		57.8		66.	4	66.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			l	70	dBA	65 dE	ЗA	6	0 dBA	55	dBA
		-	Ldn:	2	9	62			133	2	86
		C	NEL:	3	1	66			143	3	iU/

	FH\	HIGH\	WAY N	NOISE PF	REDICTI	он мо	DEL					
Scenar	io: Existing					Project	Name:	Airpor	t Gatev	vay Sp	ecific F	2
Road Nan	ne: 5th Street					Job Nu	umber:	13635				
Road Segme	nt: Palm Aven	ue to SR-210 E	B Ram	nps								
SITE	SPECIFIC IN	NPUT DATA				N	OISE I	NODE	EL INP	UTS		
Highway Data					Site Con	ditions (Hard =	10, S	oft = 1	5)		
Average Daily	Traffic (Adt):	26,098 vehicle	5					Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 /	Axles).	15			
Peak F	lour Volume:	2,610 vehicle	S		He	avy Truc	ks (3+)	Axles).	15			
Ve	ehicle Speed:	45 mph			Vehicle I	/lix						
Near/Far La	ne Distance:	27 feet		Ē	Vehi	cleType		Day	Even	ing N	light	Daily
Site Data						A	utos:	77.5%	6 12.	9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.	9%	10.3%	1.28%
Barrier Type (0-W	Vall, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	δ 2.	7%	10.8%	0.86%
Centerline Di	ist. to Barrier:	50.0 feet			Noise So	urce Ele	evation	s (in f	eet)			
Centerline Dist.	Centerline Dist. to Observer: 50.0 feet					Autos	: 0.	000	,			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					n Trucks	2.	297				
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	y Trucks	. 8.	006	Grade	e Adjus	tment:	0.0
P	Pad Elevation: 0.0 feet					.i	Distan	aa (in	faati			
Ro	ad Elevation:	0.0 feet		- H	Lane Equ	Ivalent	Distan	402	reet)			
	Road Grade:	0.0%			Modiur	Aulos n Trucks	. 40.	40Z				
	Dight View:	-90.0 degre	es		Heav	v Trucks	· 40.	219				
	Night view.	90.0 degre	:5		neav	y mucha	. 40.	231				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrie	r Atten	Ber	m Atten
Autos:	68.46	2.23		0.1	1	-1.20		-4.65		0.000)	0.00
Medium Trucks:	79.45	-16.60		0.1	3	-1.20		-4.87		0.000)	0.000
Heavy Trucks:	84.25	-18.33		0.1	3	-1.20		-5.43		0.000)	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r atten	nuation)							
VehicleType	Leq Peak Hou	ur Leq Day	· .	Leq E	vening	Leq I	Vight		Ldn		CI	VEL
Autos:	69	9.6	67.7		65.9		59.9	9		68.5		69.1
Medium Trucks:	61	1.8	60.3		53.9		52.4	1		60.8		61.1
Heavy Trucks:	64	1.9	63.4		54.4		55.6	j –		64.0		64.1
Vehicle Noise:	71	1.4	69.6		66.5		61.8	3		70.3		70.8
Centerline Distan	ce to Noise C	ontour (in feet)									
			L	70	dBA	65 0	iBA	1	50 dBA		55	dBA
		-	Ldn:	5	3	11	3		245		5	27
		C	VEL:	5	07	12	2		262		5	65

	FHV	VA-RD-77-108	HIGHW	AY N	DISE PI	REDICI	ION MO	DEL			
Scenar	io: Existing					Project	Name:	Airport	Gateway	Specific	P
Road Nam	e: 3rd Street					Job N	lumber:	13635	-		
Road Segme	nt: Tippecanoe	Avenue to De	l Rosa D	rive							
SITE	SPECIFIC IN	PUT DATA				1	IOISE I	NODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	15,620 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 /	Axles):	15		
Peak H	lour Volume:	1,562 vehicles	6		He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		V	ohicle I	Mix					
Near/Far La	ne Distance:	27 feet		Ē	Veh	icleTvpe		Dav	Evenina	Niaht	Daily
Site Data							Autos:	77.5%	12.9%	9.69	% 97.86%
Ba	rrior Hoight:	0.0 foot			Me	edium T	rucks:	84.8%	4.9%	10.39	% 1.28%
Barrier Type (0-M	/all_1_Rerm)	0.0 1001			ŀ	leavy T	rucks:	86.5%	2.7%	10.89	% 0.86%
Centerline Di	st. to Barrier:	50.0 feet						- 6- 4	4		
Centerline Dist.	to Observer:	50.0 feet		N	oise sc	ource E	evation	s (in re	eet)		
Barrier Distance	to Observer:	0.0 feet				AUIO	s: 0.	000			
Observer Height	(Above Pad):	5.0 feet			Mediui	m Truck	S: 2.	297	Crada Ad	livetmen	at: 0.0
Pa	ad Elevation:	0.0 feet			Heav	у тиск	S: 8.	000	Grade Au	Jusunei	<i>n</i> . 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 48.	402			
	Left View:	-90.0 degree	es		Mediu	n Truck	s: 48.	219			
	Right View:	90.0 degree	es		Heav	y Truck	s: 48.	237			
EHWA Noise Mod	ol Calculation	•									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresr	nel	Barrier Att	en Be	erm Atten
Autos	68.46	0.01		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-18.83		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-20.56		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	a Lovals (with	out Topo and	harrior a	tton	(ation)						
VehicleType	Lea Peak Hou	r Lea Dav		a Ev	enina	Lea	Niaht	1	Ldn	(CNEL
Autos:	67	.4	65.5		63.7		57.7	7	66.3	3	66.9
Medium Trucks:	59	.6	58.0		51.7		50.1	1	58.0	6	58.8
Heavy Trucks:	62	.6	61.2		52.2		53.4	1	61.6	8	61.9
Vehicle Noise:	69	.1	67.4		64.3		59.6	6	68.	1	68.6
Centerline Distant	ce to Noise Co	ontour (in feet)								
		,		70 d	BA	65	dBA	6	60 dBA	5	5 dBA
			Ldn:	37		8	31		174		374
		CI	VEL:	40	1	8	36		186		401

Thursday, November 19, 2020

	FH	WA-RD-77-108	B HIGHV	VAY NC	DISE P	REDICTIO	ON MOD	EL		
Scenai Road Nan Road Segme	Scenario: Existing Road Name: 3rd Street Road Segment: Del Rosa Drive to Sterling Avenu SITE SPECIFIC INPUT DATA						Name: Ai mber: 13	rport Gate 8635	way Spe	cific P
SITE	SPECIFIC IN	NPUT DATA				N	DISE M	ODEL IN	PUTS	
Highway Data				Si	te Cor	nditions (l	Hard = 1	0, Soft = 1	5)	
Average Daily	Traffic (Adt):	18,143 vehicle	s				Au	utos: 15	5	
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Ax	les): 15	5	
Peak H	lour Volume:	1,814 vehicle	s		He	eavy Truck	ks (3+ Ax	les): 15	5	
Ve	ehicle Speed:	45 mph		Ve	ehicle	Mix				
Near/Far La	ne Distance:	27 feet			Veh	nicleType	D	ay Ever	ning Nig	ght Dail
Site Data						A	utos: 7	7.5% 12	.9% 9	9.6% 97.8
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 8	4.8% 4	.9% 10	0.3% 1.2
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 8	6.5% 2	.7% 10	0.8% 0.8
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.00	0		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	97		
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	8.00	6 Grad	le Adjusti	nent: 0.0
P	ad Elevation:	0.0 feet								
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	48.40)2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.21	19		
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	37		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	Barrie	er Atten	Berm Atte
Autos:	68.46	0.66		0.11		-1.20	-4	1.65	0.000	0.0
Medium Trucks:	79.45	-18.18		0.13		-1.20	-4	1.87	0.000	0.0
Heavy Trucks:	84.25	-19.91		0.13		-1.20	-5	5.43	0.000	0.0
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	68	3.0	66.1		64.4		58.3		66.9	6
Medium Trucks:	60).2	58.7		52.3		50.8		59.3	5
Heavy Trucks:	63	3.3	61.9		52.8		54.1		62.4	6
Vehicle Noise:	69	9.8	68.0		64.9)	60.2		68.8	6
Centerline Distan	ce to Noise C	ontour (in fee	t)							
				70 dE	ЗA	65 d	BA	60 dB/	4	55 dBA
		-	Lan:	41	41 89 192			413		
		C	NEL:	44		96	5	206		443

		A-100-11-100			1010211						
Scenari	o: Existing					Project	Name: A	Airport	Gateway	Specific I	Þ
Road Nam	e: 3rd Street					Job Ni	imber: 1	3635			
Road Segmer	t: Victoria Ave	nue to Palm A	venue	е							
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data					Site Con	ditions ('Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	0,714 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	our Volume:	1,071 vehicles			He	avy Truc	ks (3+ A	xles):	15		
Vel	nicle Speed:	45 mph			Vehicle I	Nix					
Near/Far Lar	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	50.0 feet			Noise Sc	urce Ele	vations	in fe	ef)		
Centerline Dist. I	to Observer:	50.0 feet		F	10.00 00	Autos	. 00	00			
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Trucks	20	97			
Observer Height (J	Above Pad):		Heav	v Trucks	. 8.0	06	Grade Ad	justment	: 0.0		
Pa	d Elevation:	-									
Roa	d Elevation:	0.0 feet		1	Lane Equ	uivalent	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos	: 48.4	102			
	Left View:	-90.0 degree	s		Mediur	n Trucks	48.2	219			
	Right View:	90.0 degree	s		Heav	y Trucks	48.2	237			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.63		0.1	1	-1.20		4.65	0.0	000	0.00
Medium Trucks:	79.45	-20.47		0.1	3	-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-22.19		0.1	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and I	barrie	er atten	uation)						
VehicleType	Leq Peak Hour	· Leq Day		Leq E	vening	Leq I	Vight		Ldn	CI	NEL
Autos:	65.	7 6	53.8		62.1		56.0		64.0	6	65
Medium Trucks:	57.	9 !	56.4		50.0		48.5		57.0	C	57.
Heavy Trucks:	61.	0 !	59.6		50.5		51.8		60.1	1	60.
Vehicle Noise:	67.	5 (55.8		62.6		57.9		66.	5	66.
Centerline Distanc	e to Noise Co	ntour (in feet)									
			. L	70 (dBA	65 0	IBA -	6	0 dBA	55	dBA
		1	_dn:	2	9	63	3		135	2	91

	FHV	NA-RD-77-108	HIGH	NAY N	NOISE PR	REDICTIO		DEL						
Scenar	io: Existing					Project I	Vame: A	Airpor	Gateway	Spec	cific F	,		
Road Nam Road Segme	nt: Sterling Ave	enue to Victoria	Avenu	Je		JOD NL	imber: 1	3635						
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE		s				
Highway Data					Site Con	ditions (Hard =	10, So	oft = 15)	-				
Average Dailv	Traffic (Adt):	13.457 vehicles	5				A	Autos:	15					
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15					
Peak H	lour Volume:	1,346 vehicles	5		He	avy Truci	ks (3+ A	xles):	15					
Ve	hicle Speed:	45 mph		-	Vehicle I	Mix								
Near/Far La	ne Distance:	27 feet		-	Veh	icleType		Dav	Evenina	Nic	tht	Daily		
Site Data						A	utos:	77.5%	12.9%	9	.6%	97.86%		
Pa	rrior Hoight:	0.0 foot			Me	edium Tru	ucks:	84.8%	4.9%	10	.3%	1.28%		
Barrier Type (0-W	(all 1-Rerm)	0.0 1001			ŀ	leavy Tru	icks:	86.5%	2.7%	10	.8%	0.86%		
Centerline Di	st. to Barrier:	50.0 feet		-	N 0-			. (i.e. #	4)					
Centerline Dist.	to Observer:	50.0 feet		-	Noise Sc	Autoo	vations		eet)					
Barrier Distance	Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2 297									
Observer Height	Observer Height (Above Pad): 5.0 feet				Mediur	TI Trucks	. 2.2	197	Grade Ar	liuctr	nont	0.0		
P	Pad Elevation: 0.0 feet					y mucks	. 0.0	000	Orade At	ijusti	nont.	0.0		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	e (in	feet)					
	Road Grade:	0.0%				Autos	: 48.4	102						
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 48.2	219						
	Right View:	90.0 degree	s		Heav	y Trucks	48.2	237						
FHWA Noise Mod	el Calculation	s												
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier At	ten	Berr	n Atten		
Autos:	68.46	-0.64		0.1	1	-1.20		-4.65	0.	000		0.000		
Medium Trucks:	79.45	-19.48		0.1	3	-1.20		-4.87	0.	000		0.000		
Heavy Trucks:	84.25	-21.20		0.1	3	-1.20		-5.43	0.	000		0.000		
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	nuation)									
VehicleType	Leq Peak Hou	ur Leq Day		Leq E	vening	Leq N	light		Ldn		CN	IEL		
Autos:	66	6.7 (64.8		63.1		57.0		65.	6		66.3		
Medium Trucks:	58	1.9	57.4		51.0		49.5		58.	0		58.2		
Heavy Trucks:	62	2.0	60.6		51.5		52.8		61.	1		61.3		
Vehicle Noise:	68	3.5	66.7		63.6		58.9		67.	5		67.9		
Centerline Distant	ce to Noise Co	ontour (in feet)												
				70	dBA	65 d	BA	6	60 dBA		55	јВА		
			Ldn:	34 73 157 33			39							
		Ch	IEL:	3	36	78	3		169		3	33		

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE P	REDICTIO	N MOD	EL			
Scenari Road Nam Road Segmer	o: E+Project e: Waterman nt: Baseline S	Avenue treet to 5th Str	eet			Project N Job Nur	lame: Ai nber: 13	rport Ga 3635	ateway S	Specific	Ρ
SITE S	SPECIFIC II	NPUT DATA				NO	ISE MO	ODEL I	NPUT	5	
Highway Data				Si	ite Cor	ditions (H	lard = 1	0, Soft =	= 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	26,062 vehicle 10.00%	s		Me	dium Truc	AL ks (2 Ax	utos: (les):	15 15		
reak n	biala Speed	2,000 Verlicie	5		110	avy much	3 (J+ MA	103).	15		
Neer/Eer Lee	Distance	40 mpn		Ve	ehicle	Mix					
Nedi/Fdi Ldi	le Distance.	27 leel			Veh	icleType	D	ay Ev	/ening	Night	Daily
Site Data						Au	tos: 7	7.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Μ	edium Tru	cks: 84	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tru	cks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		N	oise S	ource Elev	ations	(in feet)			
Centerline Dist. t	to Observer:	50.0 feet				Autos:	0.00	00			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height (J	Observer Height (Above Pad): 5.0 feet					/y Trucks:	8.00)6 Gr	ade Adj	ustmen	t: 0.0
Pa	d Elevation:	0.0 feet						(in f	4		
Roa	ad Elevation:	0.0 feet		Lä	ane Eq	uivaient L	<i>istance</i>	e (in reel	0		
F	Road Grade:	0.0%				Autos:	48.40)2			
	Left View:	-90.0 degre	es		Meaiu	m Trucks:	48.21	19			
	Right view:	90.0 degre	es		пеа	ly mucks.	48.23	57			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	I Bai	rrier Atte	en Be	rm Atten
Autos:	66.51	2.74		0.11		-1.20	-4	4.65	0.0	00	0.000
Medium Trucks:	77.72	-16.09		0.13		-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-17.82		0.13		-1.20	-5	5.43	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	Leq Eve	ening	Leq Ni	ight	La	in	C	NEL
Autos:	6	3.2	66.3		64.5		58.4		67.1		67.7
Medium Trucks:	60	0.6	59.0		52.7		51.1		59.6		59.8
Heavy Trucks:	Heavy Trucks: 64.1 62.7				53.6		54.9		63.3		63.4
Vehicle Noise:	70).1	68.4		65.1		60.6		69.1		69.5
Centerline Distanc	Centerline Distance to Noise Contour (in feet)										
						65 dE	BA	60 a	IBA	55	5 dBA
	Ldn:				43 94			20	12		435
	Ldn: CNEL:)	21	6		466

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGH	WAY	NOISE P	REDICTI					
Scenai Road Nan Road Segme	rio: E+Project ne: Waterman nt: 5th Street 1	Avenue to 3rd Street				Project Job Ni	Name: A umber: 1	Airport 13635	Gateway S	Specific	P
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data					Site Co	nditions (Hard =	10, So	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	28,232 vehicle 10.00%	s		М	edium Tru	A Icks (2 A	Autos: xles):	15 15		
Peak F	our Volume:	2,823 vehicle	s		н	eavy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		ŀ	Mahiala						
Near/Far La	ne Distance:	67 feet		ŀ	venicie				C	Alimbet	Deiler
Site Data					vei	nicie i ype A	utos:	Day 77.5%	Evening 12.9%	9.6%	97.86%
Pa	rrior Hoight:	0.0 foot			N	1edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		ŀ	Noico S	ourco Ek	wations	(in fi	not)		
Centerline Dist.	to Observer:	50.0 feet		ŀ	10/30 0	Autor	. 0.0	000	500		
Barrier Distance	to Observer:	0.0 feet			Mediu	im Trucks	. 0.0	00			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	. 2.2	006	Grade Adj	ustment	: 0.0
P	Pad Elevation: 0.0 feet										
Ro	ad Elevation:	0.0 feet		-	Lane Ed	quivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 37.4	153			
	Left View:	-90.0 degre	es		Mediu	Im Trucks	: 37.2	216			
	Right View:	90.0 degre	es		Hea	vy Trucks	: 37.2	240			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Disi	tance	Finite	e Road	Fresne	el	Barrier Atte	en Bei	m Atten
Autos:	66.51	3.09		1.7	78	-1.20	-	-4.65	0.0	00	0.000
Medium Trucks:	77.72	-15.75		1.8	32	-1.20	-	-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-17.47		1.8	32	-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	70).2	68.3		66.5	5	60.5		69.1		69.7
Medium Trucks:	62	2.6	61.1		54.7	7	53.2		61.6	i	61.9
Heavy Trucks:	66	6.1	64.7		55.7	7	56.9		65.3		65.4
Vehicle Noise:	72	2.1	70.4		67.1	1	62.6		71.1		71.6
Centerline Distan	ce to Noise C	ontour (in feel	9	70	-/0.4	07	10.4		0.404		-/0.4
	L				abA FO	65 0	IBA		075	55	08A
		~	Lan:		59 128 275				993		
		C	NEL:		04	13	1		290	e	030

	FHW	/A-RD-77-108	HIGHW	AY NOI	SE PRI	EDICTI		DEL					
Scenari Road Nam Road Segmer	io: E+Project e: Tippecanoe nt: 6th Street to			F	Project I Job Ni	Vame: / mber: 1	Airport 13635	Gateway	Specific F	þ			
SITE						N		IODE		5			
Highway Data				Sit	e Cond	itions (Hard =	10, So	ft = 15)				
Average Daily	Traffic (Adt): 1	9 390 vehicles						Autos:	15				
Peak Hour	Percentage:	10.00%			Med	um Tru	cks (2 A	xles):	15				
Peak H	our Volume:	1.939 vehicles			Hea	v Truc	ks (3+ A	xles):	15				
Ve	hicle Speed:	45 mph		14-				,					
Near/Far La	ne Distance:	24 feet		ve	Vehie	X		Dav	Evening	Night	Deilu		
Site Data					Autor: 77.5% 12.0% 0.6% 0								
Sile Dala				_	Mar	n lium Tri	ucks:	01.0%	12.5%	10.3%	1 290		
Bai	rier Height:	0.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.86								
Barrier Type (0-W	all, 1-Berm):	0.0			110	avy m	icks.	00.370	2.1 /0	10.070	0.007		
Centerline Dis	st. to Barrier:	44.0 feet		No	ise Sou	rce Ele	vations	s (in fe	et)				
Centerline Dist.	to Observer:	44.0 feet				Autos	. 0.0	000					
Barrier Distance	to Observer:	0.0 feet		1	Medium	Trucks	: 2.2	297					
Observer Height (Above Pad):			Heavy	Trucks	8.0	006	Grade Adj	iustment.	0.0			
Pa	ad Elevation:	0.0 feet		1.0	o Fau	volont	Distanc	o (in f	in cet				
Roa	ad Elevation:	0.0 feet		Lai	le Lyu	Autoo	40.6	e (1111	eeij				
,	Road Grade:	0.0%			An dium	Trucko	42.0	140					
	Dight View.	-90.0 degree	.5		Heaver	Trucks	. 42.	120					
	Night view.	90.0 degree	5		neavy	mucho		100					
FHWA Noise Mode	el Calculations	1											
VehicleType	REMEL	Traffic Flow	Distan	се	Finite R	load	Fresn	el .	Barrier Atte	en Ber	m Atten		
Autos:	68.46	0.94		0.94		-1.20		-4.61	0.0	000	0.00		
Medium Trucks:	79.45	-17.89		0.97		-1.20		-4.87	0.0	000	0.00		
Heavy Trucks:	84.25	-19.62		0.96		-1.20		-5.50	0.0	000	0.00		
Unmitigated Noise	e Levels (witho	out Topo and	barrier a	ttenua	tion)								
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ever	ning	Leq N	light		Ldn	CI	VEL		
Autos: 69.1 67.2			67.2		65.5		59.4		68.0)	68.		
Autos:	Medium Trucks: 61.3 59.8			53.5		E1 0		60.4	Ļ	60.			
Autos: Medium Trucks:	61.	3 :	59.8		53.5		51.9		53.9 55.2 63.5				
Autos: Medium Trucks: Heavy Trucks:	61. 64.	3 : 4 (59.8 53.0		53.5 53.9		51.9		63.5	5	63.		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	61. 64. 70.	3 : 4 : 9 :	59.8 53.0 59.2		53.5 53.9 66.0		55.2 61.3		63.5 69.9	5	63. 70.		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance	61. 64. 70. ce to Noise Co	3	59.8 53.0 59.2		53.5 53.9 66.0		55.2 61.3		63.5 69.9	5	63. 70.		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	61. 64. 70. ce to Noise Co	3 4 9 ntour (in feet)	59.8 53.0 59.2	70 dB/	53.5 53.9 66.0	65 a	55.2 61.3 BA	6	63.5 69.9 0 dBA	55	63. 70.: dBA		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	61. 64. 70. ce to Noise Co	3	59.8 53.0 59.2	70 dB/ 43	53.5 53.9 66.0	65 a 93	55.2 61.3 BA	6	63.5 69.9 0 dBA 200	55	63. 70. dBA 32		

	FH\	NA-RD-77-108	HIGH	WAY N		REDICTIO		DEL						
Scenar Road Narr Road Segme	io: E+Project ne: Tippecanoe nt: Baseline St	e Avenue treet to 6th Stre	et		Project Name: Airport Gateway Specific P Job Number: 13635									
SITE	SPECIFIC IN	IPUT DATA			ito Cor	NC ditions (DISE N	10 Se	L INPUT	S				
Average Daily Peak Hour Peak H Ve Near/Far La	Traffic (Adt): Percentage: lour Volume: hicle Speed: ne Distance:	13,152 vehicle 10.00% 1,315 vehicle 45 mph 24 feet	s	V	Me He Vehicle I	dium Truck avy Truck Mix	cks (2 A cs (3+ A	Autos: Axles): Axles):	15 15 15 15					
Olto Doto	ne bistance.	24 1001			Veh	icleType		Day	Evening	Night	Daily			
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0			M	Al edium Tru Heavy Tru	icks: icks: icks:	77.5% 84.8% 86.5%	4.9% 2.7%	9.6% 10.3% 10.8%	97.86% 1.28% 0.86%			
Centerline Di	st. to Barrier:	44.0 feet		٨	loise So	ource Ele	vations	s (in fe	et)					
Barrier Distance Observer Height (Ro	to Observer: (Above Pad): ad Elevation: ad Elevation:	0.0 feet 5.0 feet 0.0 feet 0.0 feet) feet Autos. 0.000) feet Medium Trucks: 2.297) feet Heavy Trucks: 8.006 Grade Adjust) feet Lane Equivalent Distance (in feet) Autos: 42.626						ljustment	: 0.0				
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree	es es		Mutos: 42.020 Medium Trucks: 42.418 Heavy Trucks: 42.439									
FHWA Noise Mod	el Calculation	s 			-		_							
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	-0.74 -19.58 -21.30	Dist	0.94 0.97 0.96	<i>Finite</i>	-1.20 -1.20 -1.20	Fresh	ei -4.61 -4.87 -5.50	0. 0. 0. 0.	000 000 000 000	0.000 0.000 0.000			
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	uation)									
VehicleType Autos:	Leq Peak Hou	ur Leq Day	65.6	Leq Ev	ening	Leq N	light 57.7		Ldn 66	C	NEL 67.0			
Medium Trucks:	59	.6	58.1		51.8		50.2		58	7	58.9			
Heavy Trucks:	62	2.7	61.3		52.3		53.5		61.	9	62.0			
Vehicle Noise:	69).2	67.5		64.3		59.7		68.	2	68.7			
Centerline Distant	ce to Noise Co	ontour (in feet)											
			Ldn:	70 d 33	BA 3	65 di 72	BA	6	0 dBA 155	55	dBA 333			
		Ci	NEL:	36	6	77			166	3	358			

	FH	WA-RD-77-108	HIGHV	NAY NO	OISE PF	REDICTI	ION MO	DEL					
Scenar Road Nam Road Segme	io: E+Project ne: Tippecano nt: 3rd Street 1	e Avenue to Mill Street				Project Job N	Name: umber:	Airpor 13635	t Gateway	Spec	fic P		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPUT	s			
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)				
Average Daily	Traffic (Adt):	38,124 vehicle	s					Autos	15				
Peak Hour	Percentage:	10.00%			Me	dium Tru	ucks (2)	Axles)	15				
Peak H	lour Volume:	3,812 vehicle	s		He	avy Truc	cks (3+)	Axles)	15				
Ve	hicle Speed:	45 mph		v	ehicle l	Mix							
Near/Far La	ne Distance:	67 feet		ŀ	Veh	icleTvpe		Dav	Evenina	Nia	ht	Daily	
Site Data							Autos:	77.5%	6 12.9%	9	6%	97.86%	
Ba	rrior Hoight	0.0 feet			Me	edium Ti	rucks:	84.8%	6 4.9%	10	3%	1.28%	
Barrier Type (0-W	/all_1-Berm):	0.0			ŀ	Heavy Tr	rucks:	86.5%	6 2.7%	10	8%	0.86%	
Centerline Di	st. to Barrier:	50.0 feet		A	laisa Se	urco El	ovation	e (in f	oot)				
Centerline Dist.	to Observer:	50.0 feet		IN IN	0136 30	Auto	evalion	000	eeŋ				
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck	s. U.	207					
Observer Height	bserver Height (Above Pad): 5.0 feet						Heavy Trucks: 8,006 Grade Adjustment: 0.0						
P	ad Elevation:	0.0 feet											
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)				
	Road Grade:	0.0%				Autos	s: 37.	453					
	Left View:	-90.0 degre	es		Mediu	m Truck:	s: 37.	216					
	Right View:	90.0 degree	es		Heav	y Truck	s: 37.	240					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier At	ten	Bern	n Atten	
Autos:	68.46	3.88		1.78		-1.20		-4.65	0.	000	-	0.000	
Medium Trucks:	79.45	-14.95		1.82		-1.20		-4.87	0.	000		0.000	
Heavy Trucks:	84.25	-16.68		1.82		-1.20		-5.43	0.	000		0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)								
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn		CN	EL	
Autos:	72	2.9	71.0		69.3		63.2	2	71.	8		72.4	
Medium Trucks:	65	5.1	63.6		57.2		55.	7	64.	2		64.4	
Heavy Trucks:	68	3.2	66.8		57.7		59.0)	67.	3		67.5	
Vehicle Noise:	74	1.7	72.9		69.8		65.	1	73.	7		74.1	
Centerline Distant	ce to Noise C	ontour (in feet)										
						65	dBA		60 dBA		55 c	IBA	
			Ldn:	88	88 189			407		87	7		
		NEL:	94		20	03		437		94	1		

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	FH	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	ION MO	DEL			
Scenai Road Nan Road Segme	Scenario: E+Project Road Name: Tippecanoe Avenue Road Segment: Mill Street to Orange Show Roa SITE SPECIFIC INPUT DATA						t Name: / lumber: ^ ue	Airpor 13635	t Gateway S	Specific	Ρ
SITE	SPECIFIC IN	IPUT DATA					NOISE N	IODE	L INPUTS	5	
Highway Data				Si	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	42,353 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tr	ucks (2 A	xles).	15		
Peak H	lour Volume:	4,235 vehicle	s		He	eavy Tru	cks (3+ A	xles).	15		
Ve	hicle Speed:	45 mph		14	ohiclo	Mix					
Near/Far La	ne Distance:	27 feet			Veł	nicleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			М	ledium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource E	levations	in f	eet)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 22	97			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	006	Grade Adj	ustment	: 0.0
P	Pad Elevation: 0.0 feet										
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalen	t Distanc	e (in:	feet)		
	Road Grade:	0.0%				Auto	s: 48.4	402			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 48.	219			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 48.2	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	4.34		0.11		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	79.45	-14.50		0.13		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-16.22		0.13		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	71	1.7	69.8		68.0)	62.0		70.6		71.2
Medium Trucks:	63	3.9	62.4		56.0)	54.5		62.9)	63.2
Heavy Trucks:	67	7.0	65.5		56.5		57.8		66.1		66.2
venicie Noise.		0.0	11.1		00.0	,	03.9		72.4		12.9
Centeriine Distan	ce to Noise C	ontour (in fee	9	70 dE	BA	65	dBA		50 dBA	55	dBA
			Ldn:	73	73 157			338	7	27	
	Ldn: CNEL:					1	68		362	7	'80

	FHV	VA-RD-77-108	HIGH	IWAY N		REDICTIC		EL _			
Scenari	o: E+Project					Project N	lame: A	irport	Gateway	Specific F	>
Road Nam	e: Del Rosa D	rive				Job Nu	mber: 1	3635	-		
Road Segmer	t: SR-210 EB	Ramps to Hig	hland	Avenue							
SITE	SPECIFIC IN	PUT DATA				N	DISE M	ODE	L INPUT	s	
Highway Data				5	Site Con	ditions (l	Hard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt): 2	26,080 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	cks (2 A.	xles):	15		
Peak H	our Volume:	2,608 vehicle	s		He	avy Truck	(S (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		١	/ehicle l	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	icleType	L	Day	Evening	Night	Daily
Site Data						AL	itos: ī	7.5%	12.9%	9.6%	97.86%
Bar	rier Height:	0.0 feet			Me	edium Tru	icks: 8	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	icks: 8	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet		,	Voise Sr	urce Ele	vations	(in fe	ef)		
Centerline Dist. I	to Observer:	50.0 feet		ŕ		Autos	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	22	97			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks	8.0	06	Grade Ad	iustment	0.0
Pa	d Elevation:			mour	,	0.0	00				
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos:	48.4	02			
	Left View:	-90.0 degree	es		Mediu	n Trucks:	48.2	19			
	Right View:	90.0 degre	es		Heav	y Trucks:	48.2	37			
FHWA Noise Mode	Calculation	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	2/	Barrier Att	en Ber	m Atten
Autos:	68.46	2.23		0.11	1	-1.20	-	4.65	0.0	000	0.00
Medium Trucks:	79.45	-16.60		0.13	3	-1.20	-	4.87	0.0	000	0.00
Heavy Trucks:	84.25	-18.33		0.13	3	-1.20	-	5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	1	Leq Ev	/ening	Leq N	light		Ldn	CI	VEL
Autos:	69	.6	67.7		65.9		59.9		68.	5	69.
Medium Trucks:	61	.8	60.3		53.9		52.4		60.	3	61.
Heavy Trucks:	64	.9	63.4		54.4		55.6		64.0)	64.
Vehicle Noise:	71	.4	69.6		66.5		61.8		70.3	3	70.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			L	70 c	iBA	65 di	BA	6	0 dBA	55	dBA
Ldn:		53	3	113	3		244	5	27		
		-		-	-					_	

									_		_			
	FH	WA-RD-77-108	HIGH	IWAY N	IOISE PF	REDICTI		DDEL						
Scenari	o: E+Project					Project	Name:	Airpor	t Gatev	way Sp	ecific F	>		
Road Nam	e: Tippecano	e Avenue				Job Ni	umber:	13635						
Road Segmer	nt: Orange Sh	iow Road/ San I	Berna	rdino Av	venue to	Harrima	n Place	e / I-10	WB Ra	amps				
SITE	SPECIFIC II	NPUT DATA				N	OISE	MODE	EL INF	PUTS				
Highway Data				5	Site Con	ditions ((Hard =	= 10, S	oft = 1	5)				
Average Daily	Traffic (Adt):	35,233 vehicles	5					Autos	15					
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2	Axles)	15					
Peak H	our Volume:	3,523 vehicles	s		He	avy Truc	:ks (3+	Axles)	15					
Vel	hicle Speed:	45 mph		1	/ohiclo I	<i>liv</i>								
Near/Far Lar	ne Distance:	67 feet		F	Veh	cleTvpe		Dav	Even	ina N	liaht	Dailv		
Site Data				-	Autos: 77.5% 12.9% 9.6% 97									
Bar	rior Hoight	0.0 feet			Me	edium Tr	ucks:	84.8%	64.	.9% 1	10.3%	1.28%		
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	δ 2.	.7% 1	10.8%	0.86%		
Centerline Dis	st. to Barrier:	50.0 feet		7	Voise Sc	urce Ele	evatior	ıs (in f	eet)					
Centerline Dist.	to Observer:	50.0 feet		-	10.00 00	Autos	: 0	000						
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2,297								
Observer Height (Observer Height (Above Pad): 5.0 feet				Heav	v Trucks	, <u>~</u>	006	Grade	e Adius	tment	0.0		
Pa	Pad Elevation: 0.0 feet					y mucha	,. U	.000						
Roa	ad Elevation:	0.0 feet		1	Lane Equ	iivalent	Distar	ice (in	feet)					
F	Road Grade:	0.0%				Autos	s: 37	.453						
	Left View:	-90.0 degree	es		Mediur	n Trucks	5: 37	.216						
	Right View:	90.0 degree	es		Heav	y Trucks	5: 37	.240						
FHWA Noise Mode	el Calculation	IS												
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrie	r Atten	Ber	m Atten		
Autos:	68.46	3.54		1.78	В	-1.20		-4.65		0.000)	0.00		
Medium Trucks:	79.45	-15.30		1.82	2	-1.20		-4.87		0.000)	0.00		
Heavy Trucks:	84.25	-17.02		1.82	2	-1.20		-5.43		0.000)	0.00		
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)									
VehicleType	Leq Peak Ho	ur Leq Day	r	Leq E	/ening	Leq I	Night		Ldn		CI	VEL		
Autos:	72	2.6	70.7		68.9		62.	9		71.5		72.		
Medium Trucks:	64	4.8	63.3		56.9		55.	4		63.8		64.		
Heavy Trucks:	67	7.8	66.4		57.4		58.	6		67.0		67.		
Vehicle Noise:	74	4.3	72.6		69.5		64.	.8		73.3		73.		
Centerline Distance	e to Noise C	ontour (in feet,)											
				70 c	70 dBA 65 dBA 60		60 dBA	4	55	dBA				
			Ldn:	8	83 179			386		8	32			
	CNEL:				9	19	92		414		8	93		

	FHW	/A-RD-77-108	HIGHW	AY NO	OISE P	REDICTIC	N MODEL			
Scenario Road Name Road Segment	Scenario: E+Project Road Name: Del Rosa Drive Road Segment: Highland Avenue to Pacific Stu						lame: Airp mber: 136	ort Gateway \$ 35	Specific	Ρ
SITE S	PECIFIC IN	PUT DATA				NC	DISE MOD	DEL INPUT	s	
Highway Data				S	ite Cor	nditions (H	lard = 10,	Soft = 15)		
Average Daily T	raffic (Adt): 1	9,945 vehicle	6				Auto	s: 15		
Peak Hour P	Percentage:	10.00%			Me	edium Truc	ks (2 Axle	s): 15		
Peak Ho	ur Volume:	1,995 vehicles	6		He	avy Truck	s (3+ Axle	s): 15		
Vehi	icle Speed:	35 mph		v	ehicle	Mix				
Near/Far Lane	e Distance:	14 feet		-	Veh	icleType	Day	Evening	Night	Daily
Site Data						AL	itos: 77.	5% 12.9%	9.6%	6 97.86%
Barr	ior Hoight	0.0 feet			М	edium Tru	cks: 84.8	3% 4.9%	10.3%	6 1.28%
Barrier Type (0-Wa	ll, 1-Berm):	0.0				Heavy Tru	cks: 86.	5% 2.7%	10.8%	6 0.86%
Centerline Dist	to Barrier:	33.0 feet		N	loise S	ource Ele	vations (ir	feet)		
Centerline Dist. to	Observer:	33.0 feet		-		Autos:	0.000		-	
Barrier Distance to	Observer:	0.0 feet			Modiu	m Trucke:	2 207			
Observer Height (A	bove Pad):	5.0 feet			Heat	w Trucks:	9.006	Grade Ad	iustmer	nt· 0.0
Pac	d Elevation:	0.0 feet			neu	vy macka.	0.000			
Road	d Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance (i	n feet)		
R	oad Grade:	0.0%				Autos:	32.634			
	Left View:	-90.0 degree	es		Mediu	m Trucks:	32.362			
	Right View:	90.0 degree	es		Hea	vy Trucks:	32.389			
FHWA Noise Model	Calculations	:								
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresnel	Barrier Att	en Be	erm Atten
Autos:	64.30	2.16		2.68		-1.20	-4.5	2 0.0	000	0.000
Medium Trucks:	75.75	-16.68		2.73		-1.20	-4.8	6 0.0	000	0.000
Heavy Trucks:	81.57	-18.40		2.73		-1.20	-5.6	9 0.0	000	0.000
Unmitigated Noise	Levels (witho	out Topo and	barrier a	attenu	uation)					
VehicleType L	eq Peak Hou	r Leq Day	L	eq Ev	ening	Leq N	ight	Ldn	(ONEL
Autos:	67.	9	66.0		64.3		58.2	66.8	3	67.4
Medium Trucks:	60.	6	59.1		52.7		51.2	59.7	7	59.9
Heavy Trucks:	64.	7	63.3		54.2		55.5	63.8	3	64.0
Vehicle Noise:	70.	1	68.4		65.0	1	60.6	69.1	1	69.6
Centerline Distance	to Noise Co	ntour (in feet,)						-	
				70 dl	BA	65 dl	BA	60 dBA	5	5 dBA
			Ldn:	29 62 134				288		
	CNEL:				31 66 143 308					308

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	FH	WA-RD-77-108	HIGHW	VAY NC	DISE P	REDICTIO	ON MODE	iL		
Scenar Road Nan Road Segme	Scenario: E+Project Road Name: Del Rosa Drive Road Segment: Pacific Street to Baseline Street					Project N Job Nu	lame: Air mber: 136	port Gateway 635	Specif	ic P
SITE	SPECIFIC IN	IPUT DATA				N	DISE MO	DEL INPUT	S	
Highway Data				Si	te Cor	nditions (l	Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	14,618 vehicle	s				Au	tos: 15		
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Axl	es): 15		
Peak F	lour Volume:	1,462 vehicle	s		He	eavy Truck	(s (3+ Axl	es): 15		
Ve	hicle Speed:	45 mph		Ve	ehicle	Mix				
Near/Far La	ne Distance:	27 feet			Veh	nicleType	Da	y Evening	Nigh	t Daily
Site Data						A	utos: 77	.5% 12.9%	9.6	% 97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 84	.8% 4.9%	10.3	% 1.28%
Barrier Type (0-W	Vall, 1-Berm):	0.0				Heavy Tru	icks: 86	.5% 2.7%	10.8	0.86%
Centerline Di	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations (in feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.00)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7		
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	8.00	6 Grade Ad	ljustme	ent: 0.0
P	ad Elevation:	0.0 feet		_					-	
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	48.40	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.21	9		
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	7		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ince	Finite	Road	Fresnel	Barrier At	ten E	Berm Atten
Autos:	68.46	-0.28		0.11		-1.20	-4.	65 0.	000	0.000
Medium Trucks:	79.45	-19.12		0.13		-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	84.25	-20.84		0.13		-1.20	-5.	43 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	/ L	leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	67	7.1	65.2		63.4		57.4	66.	0	66.6
Medium Trucks:	59	9.3	57.8		51.4		49.9	58.	3	58.5
Heavy Trucks:	62	2.3	60.9		51.9	1	53.1	61.	5	61.6
Vehicle Noise:	68	3.8	67.1		64.0	1	59.3	67.	8	68.3
Centerline Distan	ce to Noise C	ontour (in fee)							
				70 dE	3A	65 d	BA	60 dBA		55 dBA
			Ldn:	36 77 166				358		
	CNEL:				38 83 178 384					

Scenari	c: E+Project					Project	Name:	Airport	Gateway	Specific	Р
Road Nam	e: Del Rosa Dr	ive				Job N	umber:	13635			
Road Segmer	t: 9th Street to	6th Street									
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE	L INPUT	S	
Highway Data				1	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	6,379 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2)	Axles):	15		
Peak H	our Volume:	1,638 vehicles			He	avy Truc	:ks (3+)	Axles):	15		
Vei	nicle Speed:	45 mph		1	/ehicle l	Nix					
Near/Far La	ne Distance:	27 feet		-	Veh	cleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	50.0 feet		-	Voise Sr	urco El	ovation	e (in f	oof)		
Centerline Dist.	o Observer:	50.0 feet		-	10130 30	Auto		<u>3 (111 10</u> 000			
Barrier Distance	o Observer:	0.0 feet			Mediu	n Truck	5. U.	207			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	5. Z. 5. R	006	Grade Ad	liustment	.00
Pa	d Elevation:	0.0 feet		L	near	y mack.	. U.	000	0/000/10	Juotimoni	. 0.0
Roa	d Elevation:	0.0 feet		1	ane Eq	uivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	s: 48.	402			
	Left View:	-90.0 degree	s		Mediu	n Truck:	s: 48.	219			
	Right View:	90.0 degree	s		Heav	y Truck:	s: 48.	237			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	ten Ber	m Atter
Autos:	68.46	0.21		0.1	1	-1.20		-4.65	0.	000	0.00
Medium Trucks:	79.45	-18.62		0.13	3	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-20.35		0.13	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and I	barri	er atten	uation)						
VehicleType	Leq Peak Hour	Leq Day		Leq E	/ening	Leq	Night		Ldn	C	NEL
Autos:	67.	6 6	65.7		63.9		57.9	Э	66.	5	67
Medium Trucks:	59.	в б	8.3		51.9		50.3	3	58.	8	59
Heavy Trucks:	62.	86	51.4		52.4		53.6	j.	62.	0	62
Vehicle Noise:	69.	36	67.6		64.5		59.8	3	68.	3	68
Centerline Distanc	e to Noise Co	ntour (in feet)		70 -		67			O dBA		dDA
		,	dni	70 0	IBA	65 0	2BA		170	55	aBA
			un:	3	9	8	3 0		1/9	2	000
		(./\		4			~		197	4	

	FHV	VA-RD-77-108	HIGHW	/AY N	OISE PR	REDICT	ION MC	DEL				
Scenar	io: E+Project					Project	Name:	Airpor	Gateway	Spec	cific F	2
Road Nan	ne: Del Rosa D	rive				Job N	umber:	13635	,			
Road Segme	nt: Baseline St	reet to 9th Stre	et									
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s		
Highway Data				S	Site Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt): 1	6,471 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Med	dium Tru	ucks (2	Axles).	15			
Peak H	lour Volume:	1,647 vehicles			Hea	avy Truc	cks (3+ .	Axles).	15			
Ve	hicle Speed:	45 mph		v	/ehicle N	lix						
Near/Far La	ne Distance:	27 feet		-	Vehi	cleType		Day	Evening	Nig	aht	Daily
Site Data							Autos:	77.5%	12.9%	9	.6%	97.86%
Ba	rrier Height:	0.0 feet			Me	dium Ti	rucks:	84.8%	4.9%	10	1.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			E	leavy Ti	rucks:	86.5%	2.7%	10	.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		٨	loise So	urce El	evation	s (in f	eet)			
Centerline Dist.	to Observer:	50.0 feet		Ē		Auto	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	e. 2	297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	o e 8	006	Grade Ad	diustr	nent:	0.0
P	ad Elevation:	0.0 feet			nour	,	0. 0.					
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 48	.402				
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 48	.219				
	Right View:	90.0 degree	s		Heav	y Truck	s: 48	.237				
FHWA Noise Mod	el Calculations	5										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier At	ten	Berr	n Atten
Autos:	68.46	0.24		0.11	I	-1.20		-4.65	0.	000		0.00
Medium Trucks:	79.45	-18.60		0.13	3	-1.20		-4.87	0.	000		0.00
Heavy Trucks:	84.25	-20.33		0.13	3	-1.20		-5.43	0.	000		0.00
Unmitigated Nois	e Levels (with	out Topo and I	barrier	atteni	uation)							
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	rening	Leq	Night		Ldn		CN	IEL
Autos:	67.	.6 6	65.7		63.9		57.	9	66.	.5		67.
Medium Trucks:	59.	.8 5	58.3		51.9		50.	4	58	.8		59.
Heavy Trucks:	62.	.9 6	61.4		52.4		53.	6	62.	.0		62.
Vehicle Noise:	69	.4 6	67.6		64.5		59.	8	68.	.3		68.
Centerline Distan	ce to Noise Co	ntour (in feet)										
				70 d	IBA	65	dBA	1	60 dBA		55	dBA
		1	.dn:	39	9	8	34		180		3	38
		CA	IEL:	42	2	9	90		193		4	16

	FH\	WA-RD-77-108	HIGHW	AY N	OISE P	REDICTIC	N MODE	L			
Scenar Road Nan Road Segme	rio: E+Project ne: Del Rosa E ent: 6th Street t	Drive to 3rd Street				Project N Job Nu	lame: Air mber: 13	port Gatewa 635	ay Spe	cific F	0
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INP	UTS		
Highway Data				S	Site Cor	nditions (H	Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	11,560 vehicle	s				Au	tos: 15			
Peak Hour	Percentage:	10.00%			Me	edium Truc	ks (2 Axl	es): 15			
Peak F	our Volume:	1,156 vehicle	s		He	avy Truck	s (3+ Axl	es): 15			
Ve	hicle Speed:	45 mph			(- h : - l -			-			
Near/Far La	ne Distance:	27 feet		V	enicie		0.			- het	Deilte
014- 0-4-				_	ven	incle i ype	Da	ay Evenin	IG IN	ynii o cov	Dally
Site Data				_		AL Alium Tru	ILOS: 11	.5% 12.9	1%0 3	9.0%	1 200/
Ba	rrier Height:	0.0 feet			IVI	Hoover Tru	CKS. 04	0% 4.9 E% 07	0/ 1	0.3%	0.96%
Barrier Type (0-V	Vall, 1-Berm):	0.0				neavy nu	UN3. 00	.570 2.7	70 11	0.070	0.0070
Centerline Di	ist. to Barrier:	50.0 feet		Ν	loise S	ource Ele	vations (in feet)			
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.00	D			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks:	8.00	6 Grade	Adjust	ment:	0.0
P	ad Elevation:	0.0 feet			ana Fa	uivelent l	Distance	(in fact)			
Ro	ad Elevation:	0.0 feet		2	ane Eq	uivaient L	AD 40	(III leel)			
	Road Grade:	0.0%				Autos:	48.40	2			
	Len View:	-90.0 degre	es		Weulu	III TIUCKS.	48.21	9			
	Right view:	90.0 degre	es		пеа	vy mucks.	48.23	/			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Barrier	Atten	Berr	n Atten
Autos:	68.46	-1.30		0.11		-1.20	-4.	.65	0.000		0.000
Medium Trucks:	79.45	-20.14		0.13	3	-1.20	-4.	.87	0.000		0.000
Heavy Trucks:	84.25	-21.86		0.13	3	-1.20	-5.	.43	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ L	eq Ev	ening	Leq N	ight	Ldn		CN	IEL
Autos:	66	5.1	64.2		62.4		56.3	6	35.0		65.6
Medium Trucks:	58	3.2	56.7		50.4		48.8	Ę	57.3		57.5
Heavy Trucks:	61	.3	59.9		50.9		52.1	6	30.5		60.6
Vehicle Noise:	67	7.8	66.1		62.9	1	58.3	6	6.8		67.3
Centerline Distan	ce to Noise C	ontour (in feet)								
		-		70 d	BA	65 dl	BA	60 dBA		55	dBA
			Ldn:	31	31 66			142		3	06
	CNEL:				33 71 152 32					28	

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIO		EL	_	_	_			
Scenar Road Nan Road Segme	Scenario: E+Project Road Name: Sterling Avenue Road Segment: Base Line to 9th Street						Project Name: Airport Gateway Specific P Job Number: 13635							
SITE	SPECIFIC I	IPUT DATA				N	DISE MO	DDEL I	NPUTS					
Highway Data				S	ite Cor	nditions (l	Hard = 10	0, Soft =	= 15)					
Average Daily	Traffic (Adt):	16,806 vehicle	S			- diama Tana	AL	itos:	15					
Peak Hour	Percentage:	10.00%			IVIE	ealum Truc	CKS (2 AX	ies):	15					
Peak F	lour volume:	1,681 venicle	S		H	eavy Truck	(S (3+ AX	ies):	15					
Ve	enicle Speed:	40 mpn		V	ehicle	Mix								
Near/Far La	ne Distance:	27 feet			Veł	nicleType	D	ay Ev	ening N	light	Daily			
Site Data						A	utos: 71	7.5%	12.9%	9.6%	97.86%			
Ba	rrier Height:	0.0 feet			N	ledium Tru	icks: 84	4.8%	4.9%	10.3%	1.28%			
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	icks: 86	6.5%	2.7%	10.8%	0.86%			
Centerline Di	st. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in feet)						
Centerline Dist.	to Observer:	50.0 feet				Autos	0.00	0						
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7						
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks:	8.00	6 Gri	ade Adjus	tment:	0.0			
P	ad Elevation:	0.0 feet				,								
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent l	Distance	(in feet	()					
	Road Grade:	0.0%				Autos:	48.40)2						
	Left View:	-90.0 degre	es		Mediu	Im Trucks:	48.21	9						
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	37						
FHWA Noise Mod	el Calculation	S												
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Bar	rrier Atten	Bern	n Atten			
Autos:	66.51	0.83		0.11		-1.20	-4	.65	0.00)	0.000			
Medium Trucks:	77.72	-18.00		0.13		-1.20	-4	1.87	0.00)	0.000			
Heavy Trucks:	82.99	-19.73		0.13		-1.20	-5	5.43	0.00)	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)									
VehicleType	Leq Peak Ho	ur Leq Day	V Le	eq Eve	ening	Leq N	light	Ld	In	CN	IEL			
Autos:	66	3.3	64.4		62.6	6	56.5		65.2		65.8			
Medium Trucks:	58	3.6	57.1		50.8	3	49.2		57.7		57.9			
Heavy Trucks:	62	2.2	60.8		51.7		53.0		61.3		61.5			
Vehicle Noise:	68	3.2	66.5		63.2	2	58.7		67.2		67.6			
Centerline Distan	ce to Noise C	ontour (in feel)											
				70 dE	3A	65 d	BA	60 d	BA	55 0	JBA			
		~	Lan:	32 70 151			32	20 17						
	CNEL:					35 75 161 347					+/			

	FHW	/A-RD-77-108	HIGH	WAY N	OISE PF	REDICT		DEL			
Scenari	o: E+Project					Project	Name: A	Airport	Gateway	Specific F	-
Road Nam	e: Sterling Ave	enue				Job N	lumber: 1	3635			
Road Segmer	nt: 6th Street to	3rd Street									
SITE	SPECIFIC IN	PUT DATA				1	IOISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	4,366 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	1,437 vehicles			He	avy Tru	cks (3+ A	xles):	15		
Vei	hicle Speed:	40 mph		v	ehicle l	Nix					
Near/Far La	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Bar	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	st. to Barrier:	50.0 feet		A	loise Sc	urce F	levations	: (in fe	ef)		
Centerline Dist.	to Observer:	50.0 feet		-		Auto	s' 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	s: 22	997			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s 80	06	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			mour	,	0. 0.0				
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 48.4	102			
	Left View:	-90.0 degree	S		Mediur	n Truck	s: 48.2	219			
	Right View:	90.0 degree	s		Heav	y Truck	s: 48.2	237			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	66.51	0.15		0.11		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-18.68		0.13		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-20.41		0.13		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (witho	out Topo and I	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	65.	6 6	53.7		61.9		55.9		64.5	5	65.
Medium Trucks:	58.	0 5	56.5		50.1		48.6		57.0)	57.
Heavy Trucks:	61.	5 6	50.1		51.1		52.3		60.7		60.
Vehicle Noise:	67.	.5 6	55.8		62.5		58.0		66.5)	66.
Centerline Distance	e to Noise Co	ntour (in feet)	-	70 /			-0.4		0 -0 4		-10.4
			L	/U d	BA	65	aBA	6	136	55	aBA 02
			Lan:	29			33		130	2	92
		C10									

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC	ON MOD	EL			
Scenari Road Nam Road Segmen	o: E+Project e: Sterling Av nt: 9th Street	renue to 6th Street				Project N Job Nu	lame: Ai mber: 13	irport (3635	Gateway S	Specific F	Þ
SITE S	SPECIFIC II	NPUT DATA				NC	DISE M	ODEL	. INPUT	5	
Highway Data				Si	ite Cor	nditions (I	Hard = 1	0, Sof	ft = 15)		
Average Daily	Traffic (Adt):	12,775 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Ax	des):	15		
Peak H	our Volume:	1,278 vehicle	s		He	eavy Truck	is (3+ Ax	(les):	15		
Vel	hicle Speed:	40 mph		V	hicle	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	nicleTvpe	D)av	Evenina	Niaht	Dailv
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht [.]	0.0 feet			М	ledium Tru	cks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tru	cks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in fee	et)		
Centerline Dist. t	to Observer:	50.0 feet		-		Autos	0.00	0	- 7		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks	2.29	97			
Observer Height (Above Pad):	5.0 feet			Heat	vv Trucks	8.00		Grade Adi	ustment	0.0
Pa	d Elevation:	0.0 feet				.,					
Roa	d Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	e (in fe	eet)		
F	Road Grade:	0.0%				Autos:	48.40	02			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.2	19			
	Right View:	90.0 degre	es		Hear	vy Trucks:	48.23	37			
FHWA Noise Mode	Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fresne	I E	Barrier Atte	en Ber	m Atten
Autos:	66.51	-0.36		0.11		-1.20	-4	4.65	0.0	000	0.000
Medium Trucks:	77.72	-19.19		0.13		-1.20	-4	4.87	0.0	000	0.000
Heavy Trucks:	82.99	-20.92		0.13		-1.20	-{	5.43	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	eq Eve	ening	Leq N	light		Ldn	CI	NEL
Autos:	65	5.1	63.2		61.4		55.3		64.0)	64.6
Medium Trucks:	57	7.5	56.0		49.6		48.0		56.5	5	56.7
Heavy Trucks:	61	1.0	59.6		50.5		51.8		60.2	2	60.3
Vehicle Noise:	6	7.0	65.3		62.0)	57.5		66.0)	66.4
Centerline Distance	e to Noise C	ontour (in fee	9	70.0		05.4					10.1
				70 dE	3A	65 di	BA	60) dBA	55	aBA 70
		~	Lan:	27 58 125			2	270			
	CNEL:				29 62 134 289						89

	FH)	WA-RD-77-10	B HIGI	HWAY N	NOISE P	REDICTIC		DEL			
Scena Road Nar Road Segme	rio: E+Project ne: Victoria Av ent: Highland A	eet		Project N Job Nu	lame: A mber: 1	Airport 3635	Gateway	Specifi	νP		
SITE	SPECIFIC IN					NO	DISE N	IODE		s	
Highway Data					Site Cor	nditions (I	Hard =	10, Sc	oft = 15)	-	
Average Daily Peak Hou Peak I	r Traffic (Adt): r Percentage: Hour Volume:	16,944 vehicle 10.00% 1.694 vehicle	es		Me He	edium Truc	/ cks (2 A (s (3+ A	Autos: xles): xles):	15 15 15		
Ve	ehicle Speed:	40 mph		-	V-6:-1-			,			
Near/Far La	ane Distance:	24 feet		-	Venicie Veł	mix nicleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6	% 97.86%
Ba Barrier Type (0-V	arrier Height: Vall, 1-Berm):	0.0 feet 0.0			M	ledium Tru Heavy Tru	icks: icks:	84.8% 86.5%	4.9% 2.7%	10.3 10.8	% 1.28% % 0.86%
Centerline D	ist. to Barrier:	44.0 feet		1	Noise S	ource Ele	vations	in fe	eet)		-
Centerline Dist. Barrier Distance Observer Height	to Observer: to Observer: (Above Pad):	44.0 feet 0.0 feet 5.0 feet			Mediu Hea	Autos: Im Trucks: vy Trucks:	0.0 2.2 8.0	100 197 106	Grade Ad	justme	nt: 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Ed	uivalent l	Distanc	e (in i	feet)		-
	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre	es es		Mediu Hea	Autos: m Trucks: vy Trucks:	42.6 42.4 42.4	326 118 139			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Att	en B	erm Atten
Autos:	66.51	0.87	,	0.9	4	-1.20		4.61	0.0	000	0.000
Medium Trucks:	77.72	-17.96	6	0.9	7	-1.20		4.87	0.0	000	0.000
Heavy Trucks:	82.99	-19.69)	0.9	6	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barri	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	y	Leg E	vening	Leq N	light		Ldn		CNEL
Autos	67	7.1	65.2		63.5	i	57.4		66.0	C	66.6
Medium Trucks:	59	9.5	58.0		51.7	,	50.1		58.	5	58.8
Heavy Trucks	63	3.1	61.6		52.6	;	53.9		62.2	2	62.3
Vehicle Noise:	69	9.1	67.3		64.1		59.5		68.	1	68.5
Centerline Distan	ce to Noise C	ontour (in fee	t)							1	
				70 0	dBA	65 d	BA	6	60 dBA	5	i5 dBA
		-	Ldn:	3	3	70			151		326
		C	NEL:	3	5	75			162		349

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT		DEL		_	
Scenai Road Nan Road Segme	Scenario: E+Project Road Name: Victoria Avenue Road Segment: Pacific Street to Base Line					Project Job N	Name: / umber: ^	Airpor 13635	t Gateway S	Specific	P
SITE	SPECIFIC IN	NPUT DATA				N	IOISE N	NODE	L INPUT	3	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	19,687 vehicle 10.00%	s		Me	edium Tru	ucks (2 A	Autos Axles)	: 15 : 15		
Peak	lour volume:	1,969 vehicle	s		не	avy rruc	CKS (3+ A	axies)	15		
Ve	enicle Speed:	40 mpn		V	ehicle	Mix					
Near/Far La	ine Distance:	24 feet			Veh	nicleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Ti	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	44.0 feet		N	oise S	ource El	evations	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Auto	s: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 23	297			
Observer Height	(Above Pad):	5.0 feet			Heat	vv Truck	s: 8.0	206	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet				.,					
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Auto:	s: 42.0	626			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 42.4	418			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 42.4	439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	66.51	1.52		0.94		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	77.72	-17.31		0.97		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-19.04		0.96		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ Le	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	67	7.8	65.9		64.1		58.0)	66.7	,	67.3
Medium Trucks:	60).2	58.7		52.3		50.8		59.2	1	59.5
Heavy Trucks:	63	3.7	62.3		53.3		54.5	;	62.9		63.0
Vehicle Noise:	69	9.7	68.0		64.7	·	60.2	2	68.7		69.1
Centerline Distan	ce to Noise C	ontour (in feet)								
	-			70 dE	BA	65	dBA	1	60 dBA	55	dBA
			Ldn:	36 78			167	3	361		
	CNEL:				39 83 179 386				386		

Scenario	b: E+Project					Project N	lame: A	Airport	Gateway	Specific I	P
Road Name	e: Victoria Ave	nue				Job Nu	mber: 1	3635			
Road Segmen	t: 9th Street to	6th Street									
SITE S	SPECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUT	S	
Highway Data				S	Site Con	ditions (I	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	3,624 vehicles					A	Autos:	15		
Peak Hour I	Percentage:	10.00%			Med	dium True	cks (2 A	xles):	15		
Peak Ho	our Volume:	1,362 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Vel	nicle Speed:	45 mph		v	/ehicle N	lix					
Near/Far Lar	e Distance:	24 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	itos:	77.5%	12.9%	9.6%	97.869
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-Wa	all. 1-Berm):	0.0			h	leavy Tru	icks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	44.0 feet			laiss So	uree Ele	votiona	(in fo	of		
Centerline Dist. t	o Observer:	44.0 feet		~	voise 30	urce Ele	vauons		eŋ		
Barrier Distance t	o Observer:	0.0 feet			Madium	Autos.	0.0	00			
Observer Height (/	Above Pad):	5.0 feet			Heav	Trucks	2.2	.97	Grade Ad	iustment	. 0 0
Pa	d Elevation:	0.0 feet			neav	y mucks.	0.0	00	Orade Au	lastinent	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent l	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	42.6	626			
	Left View:	-90.0 degrees			Mediun	n Trucks.	42.4	18			
	Right View:	90.0 degrees			Heav	y Trucks.	42.4	139			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.59		0.94	1	-1.20		4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.42		0.97	7	-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.15		0.96	6	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrier	attenu	uation)						
VehicleType	Leq Peak Hour	Leq Day	1	Leq Ev	ening	Leq N	light		Ldn	CI	NEL
Autos:	67.0	6 6	5.7		63.9		57.9		66.	5	67.
Medium Trucks:	59.	B 51	3.3		51.9		50.4		58.	8	59.
Heavy Trucks:	62.9	9 6	1.4		52.4		53.7		62.0)	62.
Vehicle Noise:	69.4	4 6	7.6		64.5		59.8		68.3	3	68.
Centerline Distanc	e to Noise Col	ntour (in feet)		70 d	IRA	65 d	RA	6	0 dBA	55	dBA
				,			1	0	159	1 33	41
		1.	<u> </u>	347	1	1/1			1:10		

	FHV	VA-RD-77-108 I	HIGHW/	AY N	OISE PF	REDICT	ION MO	DEL				
Scenar	io: E+Project					Project	Name:	Airport	Gateway	Spec	ific P	•
Road Nan	ne: Victoria Ave	enue				Job N	umber:	13635	,			
Road Segme	nt: Base Line t	o 9th Street										
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt): 1	16,466 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2)	Axles):	15			
Peak H	lour Volume:	1,647 vehicles			He	avy Tru	cks (3+)	Axles):	15			
Ve	hicle Speed:	45 mph		v	ohicle I	<i>Niv</i>						
Near/Far La	ne Distance:	24 feet		F	Vehi	cleTvpe		Dav	Evenina	Nia	ht	Dailv
Site Data							Autos:	77.5%	12.9%	9	.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10	.3%	1.28%
Barrier Type (0-W	Vall. 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10	.8%	0.86%
Centerline Di	ist. to Barrier:	44.0 feet			loiso Sa	urco E	ovation	e (in fi	nof)			
Centerline Dist.	to Observer:	44.0 feet		N	0136 30	Auto	evauon	000	eeŋ			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Truck	s. U.	207				
Observer Height	(Above Pad):	5.0 feet			Heav	n Truck	5. 2. e [.] 9	006	Grade Ac	liustn	nent [.]	0.0
P	ad Elevation:	0.0 feet			neav	y much	5. 0.	000	0/000/10	jaotii		0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 42.	626				
	Left View:	-90.0 degrees	5		Mediur	n Truck	s: 42.	418				
	Right View:	90.0 degrees	6		Heav	y Truck	s: 42.	439				
FHWA Noise Mod	el Calculation:	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier At	ten	Berr	n Atten
Autos:	68.46	0.23		0.94		-1.20		-4.61	0.	000		0.00
Medium Trucks:	79.45	-18.60		0.97		-1.20		-4.87	0.	000		0.00
Heavy Trucks:	84.25	-20.33		0.96		-1.20		-5.50	0.	000		0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenu	uation)							
VehicleType	Leq Peak Hou	ir Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	68	.4 6	6.5		64.8		58.7	7	67.	3		67.9
Medium Trucks:	60	.6 5	9.1		52.7		51.2	2	59.	7		59.9
Heavy Trucks:	63	.7 6	2.3		53.2		54.8	5	62.	8		63.0
Vehicle Noise:	70	.2 6	8.5		65.3		60.6	6	69.	2		69.
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 di	BA	65	dBA	6	60 dBA		55 (dBA
		L	dn:	39)	8	3		180		38	37
		CN	EL:	42	2	ę	0		193		4	16

	FH	WA-RD-77-108	HIGHW	VAY N	NOISE PF	REDICT		DEL			
Scenar	io: E+Project					Project	Name: I	Airport	Gateway	Specific	P
Road Nan	ne: Victoria Av	enue				Job N	lumber: `	13635			
Road Segme	nt: 6th Street	to 3rd Street									
SITE	SPECIFIC II	NPUT DATA				N	IOISE N	IODE		s	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	9,436 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	(xles)	15		
Peak H	lour Volume:	944 vehicle	s		He	avy Tru	cks (3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		-	Vehicle I	Niv					
Near/Far La	ne Distance:	24 feet		-	Vehi	cleType		Dav	Evenina	Niaht	Daily
Site Data				-		,	Autos:	77.5%	12.9%	9.6%	6 97.86%
Ba	rrier Height	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-V	/all_1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	6 0.86%
Centerline Di	st. to Barrier:	44.0 feet		-	N 0-			- (i - 6	4		
Centerline Dist.	to Observer:	44.0 feet		-	Noise So	ource El	evations	s (IN 16	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000			
Observer Height	(Above Pad):	5.0 feet			Mediur	n Truck	S: 2.4	297	Grade Ad	iustmon	+ 0.0
P	ad Elevation:	0.0 feet			Heav	у ттиск	S: 8.0	000	Graue Auj	usunen	1. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 42.0	626			
	Left View:	-90.0 degre	es		Mediur	n Truck	s: 42.4	418			
	Right View:	90.0 degree	es		Heav	y Truck	s: 42.4	439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-2.18		0.9	4	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-21.02		0.9	7	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.74		0.9	6	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	L	.eq E	vening	Leq	Night		Ldn	C	NEL
Autos:	66	3.0	64.1		62.3		56.3	1	64.9	9	65.5
Medium Trucks:	58	3.2	56.7		50.3		48.8		57.2	2	57.5
Heavy Trucks:	61	1.3	59.9		50.8		52.1		60.4	4	60.5
Vehicle Noise:	67	7.8	66.0		62.9		58.2		66.8	3	67.2
Centerline Distan	ce to Noise C	ontour (in feet)								
-				70 (dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:	2	7	5	58		124		267
		C	NEL:	2	9	6	52		133		287

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH\	VA-RD-77-108	B HIGH	IWAY I	NOISE P	REDICTI	ON MOI	DEL			
Scenar Road Nan Road Segme	Scenario: E+Project Road Name: 6th Street Road Segment: Tippecance Avenue to Del F					Project Job Ni	Name: A umber: 1	Airport 13635	GatewayS	pecific	P
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	6	
Highway Data					Site Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	4,491 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	449 vehicle	s		He	eavy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		-	Vehicle	Mix					
Near/Far La	ne Distance:	20 feet		-	Veh	nicleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			M	ledium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	ist. to Barrier:	30.0 feet		-	Noise S	ource Ele	vations	: (in fe	eet)		
Centerline Dist.	to Observer:	30.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	. 8.0	006	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		L				,,			
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos	28.7	23			
	Left View:	-90.0 degre	es		Mediu	m Trucks	. 28.4	113			
	Right view:	90.0 degre	es		неа	vy Trucks	. 28.4	144			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	-4.90		3.5	51	-1.20		-4.49	0.0	00	0.000
Medium Trucks:	77.72	-23.73		3.5	68	-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	82.99	-25.46		3.5	57	-1.20		-5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	ir Leq Daj	y	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	63	.9	62.0		60.3		54.2		62.8		63.4
Medium Trucks:	56	.4	54.9		48.5		46.9		55.4		55.6
Heavy Trucks:	59	.9	58.5		49.5		50.7		59.1		59.2
			04.2		00.5		00.0		04.5		00.0
Centerine Distan	ce to NOISE CO	ontour (in feel	9	70	dBA	65 0	1BA	e	60 dBA	55	dBA
			Ldn:	. 0	4	2	9	· `	63	1	36
		С	NEL:	1	15	3	1		68	1	46

	FHV	VA-RD-77-108	HIGI	HWAY N	OISE PI	REDICT	ION M	ODEL			
Scenari	io: E+Project					Project	Name	: Airpor	t Gateway	Specific	Р
Road Nam	e: 6th Street					Job N	lumber	: 13635			
Road Segmer	nt: Sterling Ave	enue to Victori	a Ave	nue							
SITE	SPECIFIC IN	PUT DATA				1	IOISE	MODE	L INPUT	s	
Highway Data				s	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	10,051 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	2 Axles).	15		
Peak H	our Volume:	1,005 vehicle	s		He	avy Tru	cks (3-	+ Axles).	15		
Ve	hicle Speed:	40 mph		ν	/ehicle l	Mix					
Near/Far La	ne Distance:	20 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.869
Bai	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	st. to Barrier:	30.0 feet			loise Sc	urce F	levatic	ns (in f	eef)		
Centerline Dist.	to Observer:	30.0 feet		-	10/30 00	Auto	e'	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s.	2 297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s	8.006	Grade Ad	liustment	: 0.0
Pa	ad Elevation:	0.0 feet									
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)		
1	Road Grade:	0.0%				Auto	s: 2	8.723			
	Left View:	-90.0 degre	es		Mediui	m Truck	's: 2	8.413			
	Right View:	90.0 degre	es		Heav	у тиск	's: 2	8.444			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:	66.51	-1.40		3.51		-1.20		-4.49	0.	000	0.00
Medium Trucks:	77.72	-20.23		3.58	3	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	82.99	-21.96		3.57	7	-1.20		-5.77	0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	1	Leq Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	67	.4	65.5		63.8		57	7.7	66.	3	66.
Medium Trucks:	59	.9	58.4		52.0		50).4	58.	9	59
Heavy Trucks:	63	.4	62.0		52.9		54	1.2	62.	6	62.
Vehicle Noise:	69	.4	67.7		64.4		59	9.8	68.	4	68.
Centerline Distance	e to Noise Co	ontour (in feet)					-			
			1 - 1	70 d	IBA	65	aBA		ou dBA	55	aBA
			Lan:	23	5	5	5U		108	2	:34
		~			-	,	- 4		116	-	050

			_				_			_		
	FH	WA-RD-77-108	HIGH	HWAY N	IOISE PF	REDICTIO	ON MO	DEL				
Scenar	io: E+Project					Project I	Vame:	Airport	Gatewa	y Spe	cific F	,
Road Nam	ne: 6th Street					Job Nu	mber:	13635				
Road Segme	nt: Del Rosa I	Drive to Sterling	J Aver	nue								
SITE	SPECIFIC II	NPUT DATA				N	DISE I	NODE	L INPU	тѕ		-
Highway Data				1	Site Con	ditions (Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	7,674 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 /	Axles):	15			
Peak H	lour Volume:	767 vehicle	s		He	avy Trucl	ks (3+ /	Axles):	15			
Ve	hicle Speed:	40 mph		-	Vohiclo	Niv						
Near/Far La	ne Distance:	20 feet		H	Venicie i Veh	icleTvpe		Dav	Evening	n Ni	aht	Dailv
Site Data						A	utos:	77.5%	12.99	6	9.6%	97.86%
Ba	rrior Hoight:	0.0 foot			Me	edium Tru	icks:	84.8%	4.9%	6 1	0.3%	1.28%
Barrier Type (0-W	/all 1-Rerm)	0.0			ŀ	leavy Tru	icks:	86.5%	2.79	6 1	0.8%	0.86%
Centerline Di	st to Barrier	30.0 feet		H								
Centerline Dist.	to Observer:	30.0 feet			voise sc	ource Ele	vation	s (in te	et)			
Barrier Distance	to Observer:	0.0 feet				Autos.	0.0	000				
Observer Height	(Above Pad):	5.0 feet			Meaiui	n Trucks	: Z	297	Crada	diuot	mont	
P	ad Elevation:	0.0 feet			Heav	y Trucks.	8.	006	Graue F	lajusi	ment.	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos.	28.	723				
	Left View:	-90.0 degre	es		Mediur	n Trucks	28.	413				
	Right View:	90.0 degre	es		Heav	y Trucks	28.	444				
FHWA Noise Mod	el Calculatior	s										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier A	ltten	Beri	m Atten
Autos:	66.51	-2.57		3.5	1	-1.20		-4.49	(0.000		0.00
Medium Trucks:	77.72	-21.40		3.5	8	-1.20		-4.86	(0.000		0.00
Heavy Trucks:	82.99	-23.13		3.5	7	-1.20		-5.77	(0.000		0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq N	light		Ldn		CI	VEL
Autos:	66	3.2	64.4		62.6		56.5	5	6	5.2		65.
Medium Trucks:	58	3.7	57.2		50.8		49.3	3	57	7.7		58.0
Heavy Trucks:	62	2.2	60.8		51.8		53.0)	6	1.4		61.
Vehicle Noise:	68	3.2	66.5		63.2		58.7	7	67	7.2		67.
Centerline Distant	ce to Noise C	ontour (in feel)									-
				70 0	dBA	65 d	BA	6	60 dBA		55	dBA
			Ldn:	2	0	42	2		91		1	95
		С	NEL:	2	1	45	5		97		2	09

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTI	ON MOD	EL			
Scenar Road Nan Road Segme	Scenario: E+Project Road Name: 6th Street Road Segment: Victoria Avenue to Central Avenue						Name: Ai umber: 13	irport 3635	Gateway S	Specific	Ρ
SITE	SPECIFIC IN	NPUT DATA				N	OISE M	ODE		3	
Highway Data				S	ite Con	ditions	(Hard = 1	0, So	ft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	10,918 vehicle 10.00%	s		Ме	dium Tru	Ai Icks (2 Ax	utos: des):	15 15		
Peak F	lour Volume:	1,092 vehicle	s		He	avy Truc	:ks (3+ Ax	(les):	15		
Ve	hicle Speed:	40 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	20 feet			Veh	icleType	D	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	edium Ti	ucks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	/all. 1-Berm):	0.0			ŀ	leavy Ti	ucks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	30.0 feet		N	oico Sc		ovations	(in fo	of		
Centerline Dist.	to Observer:	30.0 feet		N	use su	Auto	evalions		elj		
Barrier Distance	to Observer:	0.0 feet			1 4 m all	Autos	s. 0.00	JU 37			
Observer Height	(Above Pad):	5.0 feet			Mealui	TTTUCK	. 2.23	97	Grada Adi	uctmon	
P	ad Elevation:	0.0 feet			Heav	y Trucks	5: 8.00	JO	Graue Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos	s: 28.72	23			
	Left View:	-90.0 degre	es		Mediu	n Truck	28.4	13			
	Right View:	90.0 degre	es		Heav	ry Truck	8: 28.44	44			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	1 1	Barrier Atte	en Bei	rm Atten
Autos:	66.51	-1.04		3.51		-1.20	-4	4.49	0.0	00	0.000
Medium Trucks:	77.72	-19.87		3.58		-1.20	-4	4.86	0.0	00	0.000
Heavy Trucks:	82.99	-21.60		3.57		-1.20		5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leg Peak Hou	ur Leq Daj	/ L	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	67	7.8	65.9		64.1		58.1		66.7		67.3
Medium Trucks:	60	0.2	58.7		52.4		50.8		59.3		59.5
Heavy Trucks:	63	3.8	62.3		53.3		54.6		62.9		63.0
Vehicle Noise:	69	9.7	68.0		64.7		60.2		68.7		69.2
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dE	BA	65 (dBA	6	0 dBA	55	i dBA
			Ldn:	25		5	3		115	2	247
		С	NEL:	26		5	7		123	2	264

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTI		DEL			
Scenai Road Nan Road Segme	Scenario: E+Project Road Name: 5th Street Road Segment: I-215 NB Ramps to E Street					Project I Job Nu	Vame: A Imber: 1	Airport 13635	Gateway S	Specific	Ρ
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	43,371 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	4,337 vehicle	s		He	eavy Truc	ks (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	27 feet			Ver	nicleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.86%
Ba	rrier Heiaht:	0.0 feet			М	ledium Tru	icks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks:	86.5%	2.7%	10.8%	6 0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos	. 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	: 8.0	006	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	e (in i	'eet)		
	Road Grade:	0.0%				Autos	: 48.4	102			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 48.2	219			
	Right View:	90.0 degre	es		Hea	vy Trucks	: 48.2	237			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fresn	e/	Barrier Atte	en Be	rm Atten
Autos:	68.46	4.44		0.11		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	79.45	-14.39		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-16.12		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leq N	light		Ldn	0	NEL
Autos:	71	1.8	69.9		68.1		62.1		70.7	,	71.3
Medium Trucks:	64	1.0	62.5		56.1		54.6		63.0)	63.3
Heavy Trucks:	67	7.1	65.6		56.6	i	57.9		66.2	2	66.3
Vehicle Noise:	73	3.6	71.8		68.7	·	64.0		72.5	5	73.0
Centerline Distan	ce to Noise C	ontour (in feel)					_			
			ட	70 dE	ЗA	65 d	BA	6	i0 dBA	55	5 dBA
			Ldn:	74		15	9		343		/39
		С	NEL:	79		17	1		368		793

	FHV	A-RD-77-108	HIGH	IWAY N	IOISE PI	REDICI		ODEL			
Scenari	o: E+Project					Projec	t Name	: Airpor	t Gateway	Specific	Р
Road Nam	e: 5th Street					Job I	lumber	: 13635			
Road Segmer	t: Waterman /	Avenue to Tipp	becan	oe Aven	ue						
SITE	SPECIFIC IN	PUT DATA				I	NOISE	MODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt): 2	2,329 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Ti	ucks (2	2 Axles):	15		
Peak H	our Volume:	2,233 vehicle	s		He	avy Tru	cks (3-	Axles):	15		
Vel	nicle Speed:	45 mph		١	/ehicle l	Mix					
Near/Far Lar	ne Distance:	14 feet			Veh	icleTyp	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Height:	0.0 feet			Me	edium 1	rucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy 7	rucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	33.0 feet		,	Voise Sr	ource F	levatic	ns (in f	eef)		
Centerline Dist. I	to Observer:	33.0 feet		Ľ.	10,00 00	Auto	.c.	0.000			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		2 297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s	B.006	Grade Ad	liustment	: 0.0
Pa	d Elevation:	0.0 feet		-							
Roa	d Elevation:	0.0 feet		1	ane Eq	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	is: 3	2.634			
	Left View:	-90.0 degre	es		Mediui	m Truck	(S: 3	2.362			
	Right View:	90.0 degre	es		Heav	y Truck	(S.' 3	2.389			
FHWA Noise Mode	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:	68.46	1.56		2.68	3	-1.20		-4.52	0.	000	0.00
Medium Trucks:	79.45	-17.28		2.73	3	-1.20		-4.86	0.	000	0.00
Heavy Trucks:	84.25	-19.00		2.73	3	-1.20		-5.69	0.	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	1	Leq Ev	/ening	Leq	Night		Ldn	C	NEL
Autos:	71.	5	69.6		67.8		6	.8	70.	4	71.
Medium Trucks:	63.	7	62.2		55.8		54	1.3	62.	7	63.
Heavy Trucks:	66.	8	65.4		56.3		5	.6	65.	9	66.
Vehicle Noise:	73.	3	71.5		68.4		63	3.7	72.	2	72.
Centerline Distanc	e to Noise Co	ntour (in feet)	70			10.4				10.4
			Latar	70 0	IBA	65	авА		DU aBA	55	авА
		0	Lan:	4	-	1	00		210	4	00

	FH\	WA-RD-77-108	HIGHWA	NOISE P	REDICTI	ON MODEL			
Scenar Road Nam Road Segme	io: E+Project le: 5th Street nt: E Street to	Waterman Aver	nue		Project Job N	Name: Airpo umber: 1363	ort Gateway 5	Specific F	>
SITE	SPECIFIC IN	NPUT DATA			N	OISE MOD	EL INPUT	S	
Highway Data				Site Cor	nditions	(Hard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt):	32,479 vehicles				Auto	s: 15		
Peak Hour	Percentage:	10.00%		Me	edium Tru	icks (2 Axles): 15		
Peak H	our Volume:	3,248 vehicles		He	eavy Truc	ks (3+ Axles): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	27 feet		Veh	nicleType	Dav	Evenina	Niaht	Dailv
Site Data					A	Autos: 77.5	% 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet		м	ledium Tr	ucks: 84.8	% 4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy Tr	ucks: 86.5	% 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		Noise S	ource El	ovations (in	foot)		
Centerline Dist.	to Observer:	50.0 feet		110/30 0	Autos	evaluons (m	1000		
Barrier Distance	to Observer:	0.0 feet		Madiu	m Trucki	2 2 2 97			
Observer Height (Above Pad):	5.0 feet		Hea	w Trucks	s. 2.207	Grade Ad	liustment	0.0
Pa	ad Elevation:	0.0 feet		nea	vy mucho	5. 0.000		,	
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance (ii	n feet)		
	Road Grade:	0.0%			Autos	s: 48.402			
	Left View:	-90.0 degree	s	Mediu	m Trucks	s: 48.219			
	Right View:	90.0 degree	s	Hea	vy Trucks	s: 48.237			
FHWA Noise Mode	el Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier At	ten Beri	m Atten
Autos:	68.46	3.18	0	0.11	-1.20	-4.6	5 0.	000	0.000
Medium Trucks:	79.45	-15.65	0	.13	-1.20	-4.8	7 0.	000	0.000
Heavy Trucks:	84.25	-17.38	C	0.13	-1.20	-5.4	3 0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	oarrier att	enuation)					-
VehicleType	Leq Peak Hou	ur Leq Day	Leq	Evening	Leq I	Night	Ldn	CI	VEL
Autos:	70).6 6	68.7	66.9		60.8	69.	5	70.1
Medium Trucks:	62	2.7 6	61.2	54.9		53.3	61.	8	62.0
Heavy Trucks:	65	5.8 6	64.4	55.3		56.6	65.	0	65.1
Vehicle Noise:	72	2.3 7	70.6	67.4		62.7	71.	3	71.7
Centerline Distant	ce to Noise Co	ontour (in feet)							
			7	0 dBA	65 0	dBA	60 dBA	55	dBA
		L	.dn:	61	13	31	283	6	99
		CN	IEL:	65	14	41	303	6	54

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	io: E+Project ne: 5th Street nt: Tippecanoe	e Avenue to De	Rosa	Drive		Project Job Ni	Name: umber:	Airport 13635	Gateway	Specific	P
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data				S	ite Cor	ditions ((Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	23,858 vehicle	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Ме	dium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	2,386 vehicles	6		He	avy Truc	:ks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	14 feet		-	Veh	icleType		Dav	Evenina	Night	Daily
Site Data						Д	utos:	77.5%	12.9%	9.6%	97.86%
one pata		0.0.6			м	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Ba Barriar Tuna (0.14	rrier Height:	0.0 reet				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	ict to Parrier	0.0 33.0 foot									
Centerline Dist	to Observer	33.0 feet		N	loise So	ource Ele	evation	s (in fe	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	s: 0.	000			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Trucks	s: 2.	297			
P	ad Elevation:	0.0 feet			Hear	/y Trucks	s: 8.	006	Grade Ad	justmen	t: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 32	.634			
	Left View:	-90.0 deared	s		Mediu	m Trucks	32	.362			
	Right View:	90.0 degree	es		Hear	/y Trucks	32	.389			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	ten Be	rm Atten
Autos:	68.46	1.84		2.68		-1.20		-4.52	0.	000	0.000
Medium Trucks:	79.45	-16.99		2.73		-1.20		-4.86	0.	000	0.000
Heavy Trucks:	84.25	-18.72		2.73		-1.20		-5.69	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)	_					
VehicleType	Leq Peak Hou	ur Leq Day	· 1	Leq Eve	ening	Leq I	Night		Ldn	C	NEL
Autos:	71	.8	69.9		68.1		62.	1	70.	7	71.3
Medium Trucks:	64	1.0	62.5		56.1		54.	6	63.	0	63.3
Heavy Trucks:	67	' .1	65.6		56.6		57.	9	66.	2	66.3
Vehicle Noise:	73	3.6	71.8		68.7		64.	0	72.	5	73.0
Centerline Distan	ce to Noise Co	ontour (in feet,)							1	
				70 dl	BA	65 0	dBA	6	60 dBA	55	5 dBA
			Ldn:	49	1	10)5		226		486
		CI	VEL:	52		11	12		242	1	522

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	FH	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICTI		DEL			
Scenai Road Nan Road Segme	rio: E+Project ne: 5th Street ent: Del Rosa E	J Aven	ue		Project I Job Nu	Name: A Imber: 1	irport 3635	Gateway S	Specific	P	
SITE	SPECIFIC IN	NPUT DATA				N	OISE M	ODE	L INPUTS	5	
Highway Data					Site Cor	nditions (Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	26,122 vehicle	s			ndium Tru	A aka (2 A	utos:	15		
Peak Hour	Percentage:	10.00%					UKS (2 M	xies).	15		
Peak	Hour Volume:	2,612 venicle	s		п	avy muc	KS (3+ A	xies).	15		
Neer/Eer Le	enicie Speed.	45 mpn			Vehicle	Mix					
Nedi/Fdi La	ane Distance.	27 leet			Veh	nicleType	L	Day	Evening	Night	Daily
Site Data						A	utos: T	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			M	ledium Tru	ucks: {	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	ucks: {	36.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet			Noise S	ource Ele	evations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos	: 0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	ım Trucks	: 2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	: 8.0	06	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		-	1 F -		Distance	- ()	41		
Ro	ad Elevation:	0.0 feet		-	Lane Eq	uivaient	Distanc	e (IN 1	eet)		
	Road Grade:	0.0%			11-15	Autos	48.4	02			
	Left View:	-90.0 degre	es		Meaiu	Im Trucks	48.2	19			
	Right View:	90.0 degre	es		неа	vy Trucks	48.2	37			
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	2.24		0.1	1	-1.20	-	4.65	0.0	00	0.000
Medium Trucks:	79.45	-16.60		0.1	3	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-18.32		0.1	3	-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq E	vening	Leg N	light		Ldn	C	NEL
Autos:	69	9.6	67.7		65.9)	59.9		68.5		69.1
Medium Trucks:	61	1.8	60.3		53.9)	52.4		60.8		61.1
Heavy Trucks:	64	1.9	63.4		54.4	ļ.	55.7		64.0	1	64.1
Vehicle Noise:	71	1.4	69.6		66.5	5	61.8		70.3		70.8
Centerline Distan	ce to Noise C	ontour (in feet	9								
			L	70	dBA	65 d	IBA	6	0 dBA	55	dBA
		-	Ldn:	5	53	11	4		245	5	527
		С	NEL:	5	57	12	2		262	5	65

Scenario											
Road Name Road Segmen	2: E+Project 2: 5th Street 2: Victoria Aven	ue		Project Job Ni	Name: A umber: 1	irport 3635	Gateway	Specific I	Þ		
SITE S	PECIFIC INP	UT DATA				N	OISE M	ODE		s	
Highway Data					Site Con	ditions (Hard =	10, So	ft = 15)		
Average Daily T	raffic (Adt): 32	,258 vehicles					A	utos:	15		
Peak Hour F	Percentage: 1	0.00%			Me	dium Tru	icks (2 A	xles):	15		
Peak Ho	ur Volume: 3	,226 vehicles			He	avy Truc	ks (3+ A	xles):	15		
Veh	icle Speed:	45 mph		1	Vehicle I	Nix					
Near/Far Lan	e Distance:	27 feet			Veh	cleType	l	Day	Evening	Night	Daily
Site Data						A	utos:	7.5%	12.9%	9.6%	97.869
Barr	ier Height	0.0 feet			Me	edium Tr	ucks: {	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-Wa	ll. 1-Berm):	0.0			F	leavy Tr	ucks: {	86.5%	2.7%	10.8%	0.86%
Centerline Dist	to Barrier:	50.0 feet		-	Naiaa Ca	uree El	wationa	lin to	of		
Centerline Dist. to	o Observer:	50.0 feet		- F	NUISe St	Autor	valions	00	el)		
Barrier Distance to	o Observer:	0.0 feet			Modiu	Autos n Trucks	. 0.0	00			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Trucks	. 2.2 . 80	06	Grade Ad	iustment	· 0.0
Pad	d Elevation:	0.0 feet			near	y macks	. 0.0	00	0/000/10	aounoni	. 0.0
Road	d Elevation:	0.0 feet		1	Lane Eq	uivalent	Distanc	e (in f	feet)		
R	oad Grade:	0.0%				Autos	: 48.4	02			
	Left View:	-90.0 degree	s		Mediu	n Trucks	:: 48.2	19			
	Right View:	90.0 degree	s		Heav	y Trucks	8: 48.2	37			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	3.15		0.1	1	-1.20	-	4.65	0.0	000	0.00
Medium Trucks:	79.45	-15.68		0.1	3	-1.20	-	4.87	0.0	000	0.00
Heavy Trucks:	84.25	-17.41		0.1	3	-1.20		5.43	0.0	000	0.00
Unmitigated Noise	Levels (withou	It Topo and I	barrie	er atten	uation)						
VehicleType I	eq Peak Hour	Leq Day		Leg E	vening	Leq I	Vight		Ldn	CI	NEL
Autos:	70.5		6.8		66.9		60.8		69.4	1	70.
Meaium Trucks:	62.7		01.2		54.8		53.3		61.7	r	62.
Nehiolo Moioos	00.8		04.4		55.3		50.0		74.5	9	00. 74
venicle Noise:	72.3		0.5		07.4		62.7		71.3	5	/1.
Centerline Distance	e to Noíse Con	tour (in feet)		70 /	dRΔ	65.0	IRΔ	6	0 dBA	55	dBA
			dn	701	1	12	100	0	282		07
		LUII. CNEL:							2112		

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE PF	REDICTIO	ON MO	DEL			
Scenari Road Nam Road Segmer	o: E+Project e: 5th Street nt: Sterling Av	enue to Victoria	a Avenu	ie		Project N Job Nu	lame: i mber:	Airport 13635	Gateway	Specific F	>
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	25,904 vehicle 10.00% 2,590 vehicle	s		Me He	dium Truc avy Truck) cks (2 A cs (3+ A	Autos: Axles): Axles):	15 15 15		
Vel	hicle Speed:	45 mph		V	ehicle I	<i>lix</i>					
Near/Far Lar	ne Distance:	14 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Height	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	33.0 feet		N	oise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	2.2	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.0	006	Grade Adj	iustment:	0.0
Pa	ad Elevation:	0.0 feet							641		
Roa	ad Elevation:	0.0 feet		Li	ane Equ	livalent L	Jistand	ce (In 1	reet)		
,	Road Grade:	0.0%				Autos:	32.	034			
	Left View: Right View:	-90.0 degre 90.0 degre	es es		Heav	n Trucks: y Trucks:	32.	362 389			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	2.20		2.68		-1.20		-4.52	0.0	000	0.000
Medium Trucks:	79.45	-16.63		2.73		-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	84.25	-18.36		2.73		-1.20		-5.69	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ 1	Leq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	72	2.1	70.2		68.5		62.4	ł	71.0)	71.6
Medium Trucks:	64	.3	62.8		56.5		54.9)	63.4	1	63.6
Heavy Trucks:	67	.4	66.0		57.0		58.2		66.6	6	66.7
Vehicle Noise:	73	3.9	72.2		69.0		64.3	1	72.9	9	73.3
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 dE	BA	65 d	BA	6	i0 dBA	55	dBA
			Ldn:	51		111	1		239	5	14
		C	NEL:	55		119	9		256	5	51

	FH)	WA-RD-77-108	HIGHV	VAY N	OISE PR	EDICTIC		DEL			
Scenar	rio: E+Project				Project N	lame: A	irport	Gateway	Specific	P	
Road Nan	ne: 5th Street					Job Nu	mber: 1	3635			
Road Segme	ent: Central Ave	enue to Palm A	venue								
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODE	L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard = :	10, So	ft = 15)		
Average Daily	Traffic (Adt):	35,031 vehicle	s				A	utos:	15		
Peak Hour	r Percentage:	10.00%			Med	dium Truc	:ks (2 A	xles):	15		
Peak H	Hour Volume:	3,503 vehicle	s		Hea	avy Truck	's (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		v	ehicle N	lix					
Near/Far La	ane Distance:	27 feet		-	Vehi	cleType	1	Day	Evening	Night	Daily
Site Data						AL	itos:	, 77.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	dium Tru	cks: 8	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0			H	leavy Tru	cks: 8	36.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		Ν	loise So	urce Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	00	.,	-	
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	06	Grade Ad	justment	: 0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent L	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	48.4	-02			
	Left View:	-90.0 degre	es		Mediun	n Trucks:	48.2	19			
	Right View:	90.0 degre	es		Heav	y Trucks:	48.2	37			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/ I	Barrier Att	en Ber	rm Atten
Autos:	68.46	3.51		0.11		-1.20		4.65	0.0	000	0.000
Medium Trucks:	79.45	-15.32		0.13		-1.20		4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.05		0.13		-1.20	-	5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	′ L	Leq Ev	ening	Leq N	ight		Ldn	C	NEL
Autos:	70).9	69.0		67.2		61.2		69.	3	70.4
Medium Trucks:	63	8.1	61.6		55.2		53.6		62.	1	62.3
Heavy Trucks:	66	6.1	64.7		55.7		56.9		65.3	3	65.4
Vehicle Noise:	72	2.6	70.9		67.8		63.1		71.0	3	72.1
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 d	BA	65 dl	BA	6	0 dBA	55	dBA
			Ldn:	64		138	3		298	6	641
		C	NEL:	69)	148	3		319	e	888

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	io: E+Project ne: 5th Street nt: Palm Aven	EB Ram	ips		Project Job N	Name: / umber: '	Airpor 13635	t Gateway S	pecific	P	
SITE	SPECIFIC I	NPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	52,097 vehicle 10.00%	s		Ме	edium Tru	ı Icks (2 A	Autos: Axles).	15 15		
Peak F	lour Volume:	5,210 vehicle	s		He	eavy Truc	:ks (3+ A	xles).	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	27 feet		v	Veh	nicleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			М	ledium Tr	ucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Ti	ucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	loise S	ource El	evations	in f	eet)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 20	97			
Observer Height	(Above Pad):	5.0 feet			Heat	vv Truck	s: 8.0	006	Grade Adi	ustmen	: 0.0
P	ad Elevation:	0.0 feet				.,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in:	feet)		
	Road Grade:	0.0%				Autos	s: 48.4	402			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 48.2	219			
	Right View:	90.0 degre	es		Hea	vy Trucks	s: 48.2	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	68.46	5.24		0.11		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	79.45	-13.60		0.13		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-15.32		0.13		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	72	2.6	70.7		68.9		62.9		71.5		72.1
Medium Trucks:	64	1.8	63.3		56.9		55.4		63.8		64.1
Heavy Trucks:	67	7.9	66.4		57.4		58.7		67.0		67.1
Vehicle Noise:	74	1.4	72.6		69.5		64.8		73.3		73.8
Centerline Distan	ce to Noise C	ontour (in feel)								
			L	70 dl	BA	65 (dBA	1	50 dBA	55	dBA
		-	Ldn:	84		18	30		388	8	335
		С	NEL:	90		19	33		416	8	396

	FHV	/A-RD-77-108	HIGH	IWAY N	IOISE PI	REDICTI		DEL				
Scenari Road Nam Road Segmen	o: E+Project e: 3rd Street tt: Tippecanoe	Avenue to De	a Drive	Project Name: Airport Gateway Specific P Job Number: 13635 Drive NOISE MODEL INPUTS								
SITE	SPECIFIC IN	PUT DATA				N	OISE	IODE		s		
Highway Data				3	Site Con	ditions (Hard =	10, So	ft = 15)			
Average Daily	Traffic (Adt): 2	7 119 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15			
Peak H	our Volume:	2,712 vehicles	s		He	avv Truc	ks (3+ A	xles):	15			
Vel	nicle Speed:	45 mph			V-hi-l-		•					
Near/Far Lar	ne Distance:	27 feet		Ľ	Venicie i	VIIX		Dev	Evening	Night	Deilu	
Site Data					ven	icie i ype	utor	Day 77.5%	12 0%	0.6%	07.96%	
Sile Dala						n adium Tr	uius.	01.00/	12.570	10.20/	1 007	
Bar	rier Height:	0.0 feet			101	Heavy Tr	ucks:	04.070 96.5%	2 7%	10.3%	0.96%	
Barrier Type (0-W	all, 1-Berm):	0.0			,	icavy ii	ucho.	00.370	2.170	10.070	0.007	
Centerline Dis	t. to Barrier:	50.0 feet		1	Noise So	ource Ele	evations	s (in fe	et)			
Centerline Dist. I	o Observer:	50.0 feet				Autos	: 0.0	000				
Barrier Distance	o Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297				
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	: 8.0	006	Grade Ad	justment.	0.0	
Fa	d Elevation.	0.0 feet		-	l ano Fa	uivalont	Distand	o (in f	(oot)			
Nua	Cond Grade:	0.0%		F	Lano Lq	Autos	. 48	102	000			
r	Left View:	-90.0 degree			Mediu	m Trucks	48:	219				
	Right View:	90.0 degree	es .		Heav	y Trucks	48.	237				
FHWA Noise Mode	Calculations	;										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos:	68.46	2.40		0.1	1	-1.20		-4.65	0.0	000	0.00	
Medium Trucks:	79.45	-16.43		0.13	3	-1.20		-4.87	0.0	000	0.00	
Heavy Trucks:	84.25	-18.16		0.13	3	-1.20		-5.43	0.0	000	0.00	
Unmitigated Noise	Levels (witho	out Topo and	barrie	er atten	uation)							
VehicleType	Leq Peak Hou	r Leq Day	r	Leg Ev	vening	Leq I	Vight		Ldn	CI	VEL	
Autos:	69.	8	67.9		66.1		60.1		68.7	7	69.	
Medium Trucks:	61.	9	60.4		54.1		52.5		61.0)	61.	
Heavy Trucks:	65.	0	63.6		54.6		55.8		64.2	2	64.	
Vehicle Noise:	71.	5	69.8		66.6		62.0		70.8	5	71.	
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 4		65.4	ID A	6	O dBA	55	dD A	
			I dn'	700		000	6	0	251	55	40 40	
		-	Lun:	5	4	11	0		201	5	40	
				E .	0	40	6		- AKU			

	FHW	A-RD-77-108	HIGH	WAY	NOISE PR	REDICT	ION M	ODEL			
Scenar	io: E+Project					Project	Name.	Airport	Gateway	Specific	P
Road Nan	ne: 3rd Street					Job N	umber.	13635			
Road Segme	nt: Waterman A	wenue to Tipp	ecano	be Ave	enue						
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard	= 10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	1,686 vehicles	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak F	lour Volume:	1,169 vehicles	s		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	27 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet			Noine Co	uree E	ovetie	na /in f	a		
Centerline Dist.	to Observer:	50.0 feet			NOISe SC	Auto	evauo		eu		
Barrier Distance	to Observer:	0.0 feet			Martin	Auto	s: (0.000			
Observer Height	(Above Pad):	5.0 feet			Mediur	TI TRUCK	S: 4	2.297	Grade Ad	iustment	. 0 0
P	ad Elevation:	0.0 feet			neav	у писк	s. c	0000	Orade Au	usinen	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Equ	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 48	3.402			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 48	3.219			
	Right View:	90.0 degree	es		Heav	y Truck	s: 48	3.237			
FHWA Noise Mod	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.25		0.	11	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-20.09		0.	13	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.82		0.	13	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hour	· Leq Day	<i>'</i>	Leq I	Evening	Leq	Night		Ldn	C	NEL
Autos:	66.	1	64.2		62.4		56	.4	65.0	D	65.6
Medium Trucks:	58.	3	56.8		50.4		48	.9	57.3	3	57.6
Heavy Trucks:	61	4	59.9		50.9		52	.2	60.	5	60.6
Vehicle Noise:	67.	9	66.1		63.0		58	.3	66.9	9	67.3
Centerline Distan	ce to Noise Co	ntour (in feet,)					-			
			L	70	dBA	65	dBA	(60 dBA	55	dBA
		-	Ldn:		31	6	6		143	3	808
		CI	VEL:		33	7	1		154	3	131

	FH	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MO	DEL			
Scena	rio: E+Project					Project	Name:	Airpor	t Gateway S	Specific	Р
Road Nar	ne: 3rd Street					Job N	lumber:	13635			
Road Segme	ent: Del Rosa I	Drive to Sterling	Aven	ue							
SITE	SPECIFIC IN	NPUT DATA				1	IOISE N	IODE	L INPUTS	6	
Highway Data					Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	28,583 vehicles	s					Autos:	15		
Peak Hou	r Percentage:	10.00%			Me	edium Tr	ucks (2 A	Axles):	15		
Peak I	Hour Volume:	2,858 vehicles	s		He	eavy Tru	cks (3+ A	Axles):	15		
V	ehicle Speed:	45 mph		ŀ	Vehicle	Mix					
Near/Far La	ane Distance:	27 feet			Ver	nicleTvpe		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.86%
B	arriar Haight	0.0 feet			M	ledium T	rucks:	84.8%	4.9%	10.3%	5 1.28%
Barrier Type (0-V	Vall. 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6.86%
Centerline D	ist. to Barrier:	50.0 feet		F	Noico S	ourco E	lovation	e (in f	ooti		
Centerline Dist	to Observer:	50.0 feet		-	NOISe 3	ource E	evalion	5 (111 10	eelj		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	JUU 207			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Truck	S: Z.	297	Grada Adi	uctmon	t· 0.0
F	ad Elevation:	0.0 feet			Hea	vy Truck	s: 8.0	J06	Graue Auj	usunen	1. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 48.	402			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 48.	219			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 48.	237			
FHWA Noise Mod	el Calculation	S Troffic Flow	Dia	tonoo	Finite	Bood	Freen		Porrior Atte	De De	rm Atton
Autos	68.46	2.63	DIS	0 1	1	-1 20	i iesii	-4 65		00	0.000
Medium Trucks	. 00.40	-16.20		0.1	3	-1.20		-4.87	0.0	00	0.000
Heavy Trucks	84.25	-17.93		0.1	3	-1.20		-5.43	0.0	00	0.000
1	- 1 1- 6 44		h			-					
VehicleType	Leg Beak Ho		Jarrie		iualion)	100	Night	1	l dn	0	NEI
Autos	2007 Cak 110	10 Leg Day	68.1	LUYL	66.3	LUQ	60 S		68.0		60 5
Medium Trucks	. 63	22	60.7		54.3		52.8	, i	61.2		61.5
Heavy Trucks	. 6!	5.3	63.8		54.8		56.0	,)	64.4		64.5
Vehicle Noise	7	1.8	70.0		66.9)	62.2		70.7		71.2
Contorlino Distan		ontour (in foot	1					-			
Sentenine Distan	to noise c	ontour (in leet,	,	70	dBA	65	dBA		50 dBA	54	5 dBA
			Ldn:		56	1	21	· `	260		560
		CI	VEL:	e	50	1	29		279		600
		0.									

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHV	VAY NO		REDICTIO					
Scenai Road Nan Road Segme	rio: E+Project ne: 3rd Street nt: Sterling Av	a Avenu	e		Project I Job Nu	Name: A mber: 1	Airport 3635	Gateway S	pecific	P	
SITE	SPECIFIC IN	NPUT DATA				N	DISE M	IODE	L INPUTS	6	
Highway Data				Si	ite Cor	nditions (Hard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,662 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,966 vehicle	s		He	eavy Truck	ks (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	27 feet			Ver	nicleType	l	Day	Evening	Night	Daily
Site Data						A	utos: 1	77.5%	12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			М	ledium Tru	icks: {	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 8	86.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos	0.0	00	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	8.0	06	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent	Distanc	e (in i	'eet)		
	Road Grade:	0.0%				Autos.	48.4	02			
	Left View:	-90.0 degre	es		Mediu	m Trucks	48.2	219			
	Right View:	90.0 degre	es		Hea	vy Trucks.	48.2	37			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.00		0.11		-1.20	-	4.65	0.0	00	0.000
Medium Trucks:	79.45	-17.83		0.13		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-19.56		0.13		-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ [Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	68	3.4	66.5		64.7		58.7		67.3		67.9
Medium Trucks:	60	0.6	59.0		52.7		51.1		59.6		59.8
Heavy Trucks:	63	3.6	62.2		53.2		54.4		62.8		62.9
venicie Noise:	70	J.1	68.4		65.3	•	60.6		69.1		69.6
Centerline Distan	ce to Noise C	ontour (in feel	9	70 45	24	6F ~	DA I	4	O dBA	FF	dBA
			I dn	70 UE		050		C	202	55	36
		C	NEL ·	44		94 10	1		217	4	68
		0		-1		10	•			4	

	FHV	/A-RD-77-108	HIGH	WAY N	OISE PF	REDICTI	ON MO	DEL			
Scenari	o: 2040					Project	Name:	Airport	Gateway	Specific I	>
Road Nam	e: Waterman	Avenue				Job Ni	umber:	13635	-		
Road Segmer	t: Baseline St	reet to 5th Stre	et								
SITE	SPECIFIC IN	PUT DATA				N	OISE	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	8,982 vehicles	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2 /	Axles):	15		
Peak H	our Volume:	2,898 vehicles	s		Hea	avy Truc	ks (3+)	Axles):	15		
Vel	nicle Speed:	40 mph		v	ehicle N	lix					
Near/Far Lar	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet			laise Sa	urco El	vation	s (in fa	oof)		
Centerline Dist. t	to Observer:	50.0 feet		-	0130 00	Autor	. 0	200			
Barrier Distance	o Observer:	0.0 feet			Mediur	n Trucks	. 0.	207			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks	. <u>2</u> .	106	Grade Ad	iustment	· 0.0
Pa	d Elevation:	0.0 feet			mour	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. 0.			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	ıivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	: 48.	402			
	Left View:	-90.0 degree	es		Mediur	n Trucks	a: 48.	219			
	Right View:	90.0 degree	es		Heav	y Trucks	: 48.	237			
FHWA Noise Mode	l Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	el	Barrier Att	en Ber	m Atten
Autos:	66.51	3.20		0.11		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-15.63		0.13		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-17.36		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Ev	ening	Leq I	Vight		Ldn	CI	NEL
Autos:	68	6	66.7		65.0		58.9)	67.	5	68.
Medium Trucks:	61	0	59.5		53.1		51.6	5	60.	1	60.
Nebiolo Noissi	64	0	03.1 60.0		54.1 65.0		55.4	+	63.	2	63.
Venicle Noise:	70	6	68.8		65.6		61.0)	69.0	5	70.0
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 d	DA .	65 /		6	O dBA	55	dDA
			I dn'	10 0		10	10M		217	1 35	67
		0	VEL.	47		10	18		232	4	00
		0	*	30			<i>.</i>		202	0	00

	FH\	WA-RD-77-108	HIGHV	VAY N		REDICT		DDEL			
Scenari Road Nam Road Segmer	o: E+Project e: 3rd Street nt: Victoria Av	enue to Palm A	venue			Project Job N	t Name: lumber:	Airpor 13635	t Gateway	Specific I	Ρ
SITE	SPECIFIC IN	IPUT DATA					OISE	MODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	17,123 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles).	15		
Peak H	our Volume:	1,712 vehicles	5		He	avy Tru	cks (3+	Axles).	15		
Ve	hicle Speed:	45 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	27 feet			Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Pa	rior Hoight:	0.0 foot			М	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet			loiso Si	ourco E	lovatio	ne (in f	oot)		
Centerline Dist.	to Observer:	50.0 feet		1	10/36 30	Auto	evauo	000	eeŋ		
Barrier Distance	to Observer:	0.0 feet			Madiu	Auto m Truck	18. U	207			
Observer Height (Above Pad):	5.0 feet			Hear	III Truck	.5. 2	006	Grade Ad	iustment	· 0.0
Pá	ad Elevation:	0.0 feet			nea	y muck	.s. c	.000	Orade Au	usinen	. 0.0
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distaı	nce (in	feet)		
1	Road Grade:	0.0%				Auto	s: 48	3.402			
	Left View:	-90.0 degree	es		Mediu	m Truck	is: 48	3.219			
	Right View:	90.0 degree	es		Heav	/y Truck	:s: 48	3.237			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.40		0.11	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-18.43		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-20.16		0.13	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	' I	Leq Ev	ening/	Leq	Night		Ldn	C	NEL
Autos:	67	.8	65.9		64.1		58	.1	66.	7	67.3
Medium Trucks:	60	0.0	58.4		52.1		50	.5	59.0	D	59.2
Heavy Trucks:	63	1.0	61.6		52.6		53	.8	62.2	2	62.3
Vehicle Noise:	69	0.5	67.8		64.6		60	.0	68.	5	69.0
Centerline Distance	e to Noise Co	ontour (in feet,)	-	-		-				
				70 a	íBA	65	dBA		60 dBA	55	dBA
			Ldn:	4(D	1	36		185	3	98
		CI	VEL:	43	3	9	92		198	4	27

	FH	WA-RD-77-108 H	GHWAY	NOISE PR	REDICTIO				
Scenari Road Nam Road Segmer	io: 2040 e: Waterman nt: 5th Street	Avenue to 3rd Street			Project I Job Nu	Vame: Airp mber: 136	oort Gateway 35	Specific F	5
SITE	SPECIFIC II	NPUT DATA			N	DISE MO	DEL INPUT	S	
Highway Data				Site Con	ditions (I	Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	31,551 vehicles				Aut	os: 15		
Peak Hour	Percentage:	10.00%		Me	dium Tru	cks (2 Axle	s): 15		
Peak H	our Volume:	3,155 vehicles		He	avy Truck	ks (3+ Axle	s): 15		
Ve	hicle Speed:	40 mph		Vohiclo	Mix				
Near/Far La	ne Distance:	67 feet		Veh	icleType	Da	Evening	Night	Daily
Site Data				ven	cie i ype Δi	utos: 77	5% 12.0%	9.6%	07.86%
one Data				M	odium Tri	ucks: 84	8% 4.9%	10.3%	1 28%
Barrier Turne (0.14)	rier Height:	0.0 feet		ŀ	leavy Tri	icks: 86	5% 2.7%	10.8%	0.86%
Contorlino Di	dil, 1-Dellil).	0.0 50.0 foot			,				
Centerline Dist	to Observer	50.0 feet		Noise Sc	ource Ele	vations (i	n feet)		
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000			
Observer Height (Above Pad):	5.0 feet		Mediu	n Trucks.	: 2.297			
Pa	ad Elevation:	0.0 feet		Heav	y Trucks	8.006	Grade Ad	ijustment:	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance (in feet)		
1	Road Grade:	0.0%			Autos	37.453			
	Left View:	-90.0 degrees		Mediu	n Trucks.	37.216			
	Right View:	90.0 degrees		Heav	y Trucks	37.240			
FHWA Noise Mode	el Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Berr	n Atten
Autos:	66.51	3.57	1.	.78	-1.20	-4.0	65 O.	000	0.000
Medium Trucks:	77.72	-15.26	1.	.82	-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	82.99	-16.99	1.	.82	-1.20	-5.4	43 0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and ba	rrier atte	enuation)					
VehicleType	Leq Peak Ho	ur Leq Day	Leq	Evening	Leq N	light	Ldn	CN	IEL
Autos:	70	0.7 68	.8	67.0		60.9	69.	6	70.2
Medium Trucks:	63	3.1 61	.6	55.2		53.7	62.	1	62.4
Heavy Trucks:	66	65 65	.2	56.2		57.4	65.	8	65.9
Vehicle Noise:	72	2.6 70	.9	67.6		63.1	71.	6	72.0
Centerline Distance	e to Noise C	ontour (in feet)							
			70) dBA	65 d	BA	60 dBA	55	dBA
		Ld	n:	64 138 297			6	39	
		CNE	L:	68 147 317 68					84

Thursday, November 19, 2020

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MO	DEL			
Scenai Road Nan Road Segme	Scenario: 2040 Road Name: Tippecanoe Avenue Road Segment: Baseline Street to 6th Street					Project Job N	Name: i umber:	Airpor 13635	t Gateway S	Specific	Ρ
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	19,291 vehicle	S					Autos	15		
Peak Hour	Percentage:	10.00%			IVIE		JUKS (2 A	(xies)	10		
Peak	iour volume:	1,929 venicie	s		пе	avy mu	3KS (3+ A	(xies)	15		
Ve Need Control of Con	enicie Speea:	45 mpn		V	ehicle	Mix					
Near/Far La	ine Distance:	24 leet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						1	Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Ti	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	44.0 feet		N	oise S	ource El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Auto:	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	006	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distant	ce (in	feet)		
	Road Grade:	0.0%				Auto:	s: 42.	626			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 42.4	418			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 42.4	439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	68.46	0.92		0.94		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-17.91		0.97		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-19.64		0.96		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	V L	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	69	9.1	67.2		65.5		59.4		68.0)	68.6
Medium Trucks:	61	1.3	59.8		53.4		51.9)	60.4		60.6
Heavy Trucks:	64	1.4	63.0		53.9	1	55.2	2	63.5		63.7
Vehicle Noise:	70).9	69.1		66.0)	61.3	5	69.9		70.3
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dE	BA	65	dBA	1	60 dBA	55	dBA
	Ldn:			43 93 200			4	430			
	CNEL:					g	9		214	4	162

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PE	REDICT	ION MO	DEL			
Scenar	io: 2040					Projec	t Name: J	Airport	Gateway	Specific F	þ
Road Nam	e: Tippecanoe	Avenue				Job N	lumber:	13635			
Road Segme	nt: 3rd Street to	o Mill Street									
SITE	SPECIFIC IN	PUT DATA				I	NOISE	IODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 4	13,928 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	Axles):	15		
Peak H	lour Volume:	4,393 vehicle	s		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		N	/ehicle l	Mix					
Near/Far La	ne Distance:	67 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Ba	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Di	st. to Barrier:	50.0 feet			loiso Sc	urco E	lovation	e (in f	nofi		
Centerline Dist.	to Observer:	50.0 feet		-	10/36 30	Auto		200	eey		
Barrier Distance	to Observer:	0.0 feet			Madiu	AUIC Truck	IS. 0.1	207			
Observer Height ((Above Pad):	5.0 feet			Heav	II TIUCK	ιδ. Ζ.ι (e) Ω (297	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			neav	y much		000	Orade Auj	usunon.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 37.	453			
	Left View:	-90.0 degree	es		Mediu	n Truck	s: 37.	216			
	Right View:	90.0 degre	es		Heav	y Truck	is: 37.	240			
FHWA Noise Mode	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	4.50		1.78	3	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-14.34		1.82	2	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-16.07		1.82	2	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	CI	VEL
Autos:	73	.5	71.6		69.9		63.8	3	72.4	4	73
Medium Trucks:	65	.7	64.2		57.9		56.3	3	64.8	5	65
Heavy Trucks:	68	.8 0	67.4		58.3		59.6) -	68.0	J	68
Vehicle Noise:	75	.3	73.6		70.4		65.7	, 	74.3	3	74.
Centerline Distant	ce to Noise Co	ontour (in feet)	70 a	ID A	65	dBA	4	C dBA	55	dD A
			I dn'	70 0		00	0.0		117	50	UDA 64
			Lun:	90	,	2	.00		++1	9	04
		0	NEL	10	3	2	23		480	11	034

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PF	REDICTI	ON MC	DEL			
Scenar Road Nan Road Segme	io: 2040 ne: Tippecanoe nt: 6th Street to	e Avenue o 3rd Street				Project I Job Nu	Name: Imber:	Airpor 13635	t Gateway	Specifi	сP
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MOD	EL INPUT	s	
Highway Data				S	Site Con	ditions (Hard =	: 10, S	oft = 15)		
Average Daily Peak Hour Peak F	Traffic (Adt): 1 Percentage: lour Volume:	16,328 vehicles 10.00% 1,633 vehicles			Me Hei	dium Tru avy Truc	cks (2 ks (3+	Autos Axles) Axles)	: 15 : 15 : 15		
Ve	hicle Speed:	45 mph		L.	(obiclo I	Niv					
Near/Far La	ne Distance:	24 feet		-	Vehi	icleTvpe		Dav	Evenina	Niaht	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6	% 97.86%
Ba	rrier Height	0.0 feet			Me	edium Tri	ucks:	84.8%	6 4.9%	10.3	% 1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	6 2.7%	10.8	% 0.86%
Centerline Di	st. to Barrier:	44.0 feet			loiso Sa	urco Ek	wation	e (in t	(act)		
Centerline Dist.	to Observer:	44.0 feet		-	10/36 30		· 0	000	eeŋ		
Barrier Distance	to Observer:	0.0 feet			Madium	Mulos m Trucka	. 0	207			
Observer Height	Above Pad):	5.0 feet			Heav	n Trucks		006	Grade Ac	liustme	nt: 0.0
P	ad Elevation:	0.0 feet			Ticav	y mucks	. 0	.000	0/000/10	jaouno	na: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 42	.626			
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 42	.418			
	Right View:	90.0 degree	s		Heav	y Trucks	: 42	.439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier At	ten B	erm Atten
Autos:	68.46	0.20		0.94	Ļ	-1.20		-4.61	0.	000	0.000
Medium Trucks:	79.45	-18.64		0.97	7	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-20.36		0.96	3	-1.20		-5.50	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenı	uation)						-
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq I	light		Ldn		CNEL
Autos:	68	.4 6	6.5		64.7		58.	7	67.	3	67.9
Medium Trucks:	60	.6 5	9.1		52.7		51.	2	59.	6	59.9
Heavy Trucks:	63	.7 6	2.2		53.2		54.	4	62.	8	62.9
Vehicle Noise:	70	.2 6	8.4		65.3		60.	6	69.	1	69.6
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 d	IBA	65 a	IBA		60 dBA	1	5 dBA
		L	.dn:	39	9	8	3		179		385
		CN	EL:	41	1	89	Э		192		413

	FH	WA-RD-77-108	HIGHW	AY N	IOISE PF	REDICT	ON MO	DEL				
Scenar	io: 2040					Project	Name:	Airport	Gatew	/ay Sp	ecific F	5
Road Nam	e: Tippecano	e Avenue				Job N	umber:	13635				
Road Segme	nt: Mill Street	to Orange Sho	w Road /	San B	Bernardir	io Aveni	le					
SITE	SPECIFIC II	NPUT DATA				N	OISE	IODE		UTS		
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15	i)		
Average Daily	Traffic (Adt):	47,921 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2 /	Axles):	15			
Peak H	lour Volume:	4,792 vehicle	s		Hea	avy Truc	:ks (3+)	Axles):	15			
Ve	hicle Speed:	45 mph		1	Vehicle N	lix						
Near/Far La	ne Distance:	27 feet			Vehi	cleType		Day	Eveni	ng N	light	Daily
Site Data						A	lutos:	77.5%	12.9	Э%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9	9% 1	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Ti	ucks:	86.5%	2.7	7% 1	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		-	Noise So	urce El	ovation	e (in fi	oof)			
Centerline Dist.	to Observer:	50.0 feet		ŕ	10/30 00	Auto	. 0	200	100			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	. 0.	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck		106	Grade	Adius	tment:	0.0
Pa	ad Elevation:	0.0 feet			mour	,	. 0.					
Roa	ad Elevation:	0.0 feet		1	Lane Equ	iivalent	Distan	ce (in i	feet)			
1	Road Grade:	0.0%				Autos	s: 48.	402				
	Left View:	-90.0 degre	es		Mediur	n Truck	s: 48.	219				
	Right View:	90.0 degre	es		Heav	y Truck	5.' 48.	237				
FHWA Noise Mod	el Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	el	Barrier	Atten	Berr	m Atten
Autos:	68.46	6 4.87		0.1	1	-1.20		-4.65	-	0.000)	0.000
Medium Trucks:	79.45	5 -13.96		0.13	3	-1.20		-4.87		0.000)	0.000
Heavy Trucks:	84.25	5 -15.69		0.13	3	-1.20		-5.43		0.000)	0.000
Unmitigated Noise	e Levels (with	nout Topo and	barrier	atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	′ L	eq Ev	vening	Leq	Night		Ldn		CN	VEL
Autos:	72	2.2	70.3		68.6		62.5	5	-	71.1	-	71.8
Medium Trucks:	64	4.4	62.9		56.6		55.0)		63.5		63.7
Heavy Trucks:	6	7.5	66.1		57.0		58.3	3		66.6		66.8
Vehicle Noise:	74	4.0	72.3		69.1		64.4	Ļ		73.0		73.4
Centerline Distant	ce to Noise C	ontour (in feet)						-	-		
				70 c	dBA	65 (dBA	e	30 dBA		55	dBA
			Ldn:	7	9	17	70		367		7	90
		C	NEL	8	5	11	23		303		8	47

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIO		EL _	_		_
Scenar Road Nan Road Segme	Scenario: 2040 Road Name: Tippecanoe Avenue Road Segment: Orange Show Road/ San Bernard					Project N Job Nu Harriman	<i>lame:</i> Ai <i>mber:</i> 13 Place / I	irport 0 3635 I-10 W	Gateway S B Ramps	Specific I	>
SITE	SPECIFIC I	IPUT DATA				N	DISE M	ODEL	INPUTS	5	
Highway Data				S	ite Cor	nditions (l	Hard = 1	0, Sof	t = 15)		
Average Daily Peak Hour	Traffic (Adt):	29,159 vehicle	S		Me	dium Tru	Au cks (2 Ax	utos: des):	15 15		
Peak H	lour Volume	2 916 vehicle	s		He	avy Truck	(S (3+ Ax	(les):	15		
Ve	hicle Sneed	45 mph				,					
Near/Far La	ne Distance:	67 feet		V	ehicle	Mix					
riouni un Eu	no biotanoo.	01 1000			Veh	icleType	D	Day E	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	eaium Tru	ICKS: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			,	Heavy In	ICKS: 8	6.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	50.0 feet				Autos	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks	8.00	06 0	Grade Adi	ustment	0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	37.45	53			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	37.21	16			
	Right View:	90.0 degre	es		Hear	vy Trucks:	37.24	40			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	I B	arrier Atte	en Ber	m Atten
Autos:	68.46	2.72		1.78		-1.20	-4	4.65	0.0	00	0.000
Medium Trucks:	79.45	-16.12		1.82		-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-17.84		1.82		-1.20	-5	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	.eq Eve	ening	Leq N	light	L	dn	CI	NEL
Autos:	71	1.8	69.9		68.1		62.0		70.7		71.3
Medium Trucks:	64	1.0	62.4		56.1		54.5		63.0		63.2
Heavy Trucks:	67	7.0	65.6		56.6		57.8		66.2		66.3
Vehicle Noise:	73	3.5	71.8		68.6		64.0		72.5		73.0
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dE	BA	65 d	BA	60	dBA	55	dBA
			Ldn:	73 158		3	341	7	34		
	CNEL:					79 170 365 787					

	FHV	/A-RD-77-108	HIGHW	AY NO	OISE PF	REDICT					
Scenari	io: 2040					Project	Name: A	Airport	Gateway	Specific F	>
Road Nam	e: Del Rosa D	rive				Job N	lumber: 1	3635	,		
Road Segmer	nt: Highland Av	enue to Pacifi	c Street								
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	IODE		S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	9,585 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	lour Volume:	1,959 vehicles	6		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	35 mph		v	ehicle l	Nix					
Near/Far La	ne Distance:	14 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%
Bai	rrier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	33.0 feet			laiaa Ca	uree E	lovation	lin fe	of		
Centerline Dist.	to Observer:	33.0 feet		14	use su	Auto	evalions		el)		
Barrier Distance	to Observer:	0.0 feet			Modiur	AULO n Truck	s. 0.0	00			
Observer Height (Above Pad):	5.0 feet			Heav	n Truck	S. Z.Z	.97	Grade Ad	iustment	0.0
Pa	ad Elevation:			Tieav	y HUCK	3. 0.0	00	Orade Au	usunon.	0.0	
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distanc	e (in i	feet)		
I	Road Grade:	0.0%				Auto	s: 32.6	634			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 32.3	362			
	Right View:	90.0 degree	es		Heav	y Truck	s: 32.3	889			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	64.30	2.08		2.68		-1.20		4.52	0.0	000	0.000
Medium Trucks:	75.75	-16.75		2.73		-1.20		4.86	0.0	000	0.000
Heavy Trucks:	81.57	-18.48		2.73		-1.20		-5.69	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	67.	9	66.0		64.2		58.1		66.8	3	67.4
Ada alissan Tassalana	60.	5	59.0		52.7		51.1		59.6	6	59.8
Medium Trucks:		<u> </u>	63.2		54.2		55.4		63.8	3	63.9
Heavy Trucks:	64.	0								`	60 /
Heavy Trucks: Vehicle Noise:	64. 70.	.1	68.3		64.9		60.5		69.0	J	05.
Heavy Trucks: Vehicle Noise:	64. 70. ce to Noise Co	ntour (in feet,	68.3		64.9		60.5	0	69.0	,	03.
Heatum Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	64. 70. ce to Noise Co	o 1 ntour (in feet,	68.3	70 dl	64.9 BA	65	60.5 dBA	6	69.0	55	dBA
Heavy Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	64. 70. ce to Noise Co	o 1 ntour (in feet,	68.3	70 dl 28	64.9 BA	65	60.5 dBA	6	69.0 0 dBA 132	55	dBA 85

	FHV	VA-RD-77-108	HIGHWA	AY NO	DISE PI	REDICT	ION MC	DEL				
Scenar	io: 2040					Proiect	Name:	Airpo	t Gateway	v Spe	cific F	,
Road Nam	e: Del Rosa D	rive				Job N	lumber:	13635	5			
Road Segme	nt: SR-210 EB	Ramps to High	nland Ave	enue								
SITE	SPECIFIC IN	PUT DATA				1	OISE	MOD	EL INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt): 2	26,238 vehicles	6					Autos	: 15			
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles)	: 15			
Peak H	lour Volume:	2,624 vehicles	6		He	avy Tru	cks (3+ .	Axles)	: 15			
Ve	hicle Speed:	45 mph		V	ohiclo	Mix						
Near/Far La	ne Distance:	27 feet		F	Veh	icleTvpe		Dav	Evening	N	aht	Dailv
Site Data				-			Autos:	77.59	% 12.9%	6	9.6%	97.86%
Ba	rrier Height	0.0 feet			M	edium T	rucks:	84.89	% 4.9%	61	0.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	86.59	% 2.7%	6 1	0.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	oise So	ource E	levation	s (in i	feet)			
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0	000	í			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	297				
Observer Height	Above Pad):	5.0 feet			Heav	v Truck	s: 8	006	Grade A	djust	ment:	0.0
Pi	ad Elevation:	0.0 feet								-		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 48	.402				
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 48	.219				
	Right View:	90.0 degree	es		Heav	y Truck	's: 48	.237				
FHWA Noise Mod	el Calculations	5										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresi	nel	Barrier A	tten	Beri	m Atten
Autos:	68.46	2.26		0.11		-1.20		-4.65	0	0.000		0.000
Medium Trucks:	79.45	-16.58		0.13		-1.20		-4.87		0.000		0.000
Heavy Trucks:	84.25	-18.30		0.13		-1.20		-5.43	0	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	69.	.6	67.7		66.0		59.	9	68	3.5		69.1
Medium Trucks:	61.	.8	60.3		53.9		52.	4	60	0.9		61.1
Heavy Trucks:	64.	.9	63.5		54.4		55.	/	64	1.0		64.2
Vehicle Noise:	71	.4	69.6		66.5		61.	8	70).4		70.8
Centerline Distant	ce to Noise Co	ontour (in feet)	1	70 d	DA.	65	dDA	1	60 dBA			dDA
			l dn'	10 0	DA	00	1/1	1	245		00	20 20
		C	JEL:	57		1	1 4 22		243		5	29 67
		CI	v <u> </u>	57			~~		200		5	

	FHV	VA-RD-77-108	HIGHW		DISE PI	REDICI		DEL			
Scenar	io: 2040					Projec	Name:	Airport	Gateway	Specific	P
Road Nam	ne: Del Rosa D	rive				Job N	lumber:	13635			
Road Segme	nt: Pacific Stre	et to Baseline	Street								
SITE	SPECIFIC IN	PUT DATA				1	IOISE N	IODE		s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	15,318 vehicles	6				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	Axles):	15		
Peak H	lour Volume:	1,532 vehicles	3		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	27 feet		Ē	Veh	icleTvp	2	Dav	Evenina	Niaht	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%
Ba	rrior Hoight:	0.0 foot			M	edium T	rucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0_M	(all 1-Berm)	0.0 1001			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		-							_
Centerline Dist	to Observer:	50.0 feet		N	loise Sc	ource E	levation	s (in fe	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000			
Observer Height ((Above Pad):	5.0 feet			Mediu	m Truck	s: 2.1	297		. ,	
Pi	ad Elevation:	0.0 feet			Heav	ry Truck	's: 8.0	006	Grade Ad	justmen	t: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 48.	402			-
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 48.	219			
	Right View:	90.0 degree	s		Heav	ry Truck	s: 48.	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-0.08		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-18.91		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-20.64		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenı	ation)						
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	67	.3	65.4		63.6		57.6	6	66.2	2	66.8
Medium Trucks:	59	.5	58.0		51.6		50.1		58.5	5	58.7
Heavy Trucks:	62	.5	61.1		52.1		53.3	3	61.7	7	61.8
Vehicle Noise:	69	.1	67.3		64.2		59.5	5	68.0	D	68.
Centerline Distant	ce to Noise Co	ontour (in feet)									
				70 d	BA	65	dBA	6	60 dBA	55	i dBA
			Ldn:	37		1	30		171	:	369
		CI	IEL:	40		1	35		184	:	396

Thursday, November 19, 2020

Thursday, November 19, 2020

FHV	VA-RD-77-108	HIGHW	AY NC	DISE P	REDICTIO	ON MOE	EL			
Scenario: 2040 Road Name: Del Rosa D Road Segment: Baseline St	Scenario: 2040 Road Name: Del Rosa Drive Road Segment: Baseline Street to 9th Street SITE SPECIFIC INPUT DATA					lame: A mber: 1	irport (3635	Gateway S	Specific	Ρ
SITE SPECIFIC IN	IPUT DATA				N	DISE M	ODEL	. INPUTS	5	
Highway Data			Si	te Cor	nditions (l	Hard = 1	10, Soi	ft = 15)		
Average Daily Traffic (Adt):	12,139 vehicles	s				A	utos:	15		
Peak Hour Percentage:	10.00%			Me	eaium Truc	CKS (2 A.	xies):	15		
Peak Hour Volume:	1,214 vehicles	5		He	eavy Truck	(S (3+ A)	xies):	15		
Vehicle Speed:	45 mph		Ve	ehicle	Mix					
Near/Far Lane Distance:	27 feet			Veh	nicleType	L	Day	Evening	Night	Daily
Site Data					A	utos: 7	7.5%	12.9%	9.6%	97.86%
Barrier Height:	0.0 feet			М	ledium Tru	icks: 8	34.8%	4.9%	10.3%	1.28%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy Tru	icks: 8	36.5%	2.7%	10.8%	0.86%
Centerline Dist. to Barrier:	50.0 feet		No	oise S	ource Ele	vations	(in fe	et)		
Centerline Dist. to Observer:	50.0 feet				Autos	0.0	00	.,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks	22	97			
Observer Height (Above Pad):	5.0 feet			Hea	vv Trucks	8.0	06	Grade Adi	ustment	: 0.0
Pad Elevation:	0.0 feet				.,					
Road Elevation:	0.0 feet		La	nne Eq	uivalent l	Distanc	e (in fe	eet)		
Road Grade:	0.0%				Autos:	48.4	02			
Left View:	-90.0 degree	es		Mediu	m Trucks:	48.2	19			
Right View:	90.0 degree	es		Hea	vy Trucks:	48.2	37			
FHWA Noise Model Calculation	s									
VehicleType REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos: 68.46	-1.09		0.11		-1.20	-	4.65	0.0	00	0.000
Medium Trucks: 79.45	-19.92		0.13		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks: 84.25	-21.65		0.13		-1.20	-	5.43	0.0	00	0.000
Unmitigated Noise Levels (with	out Topo and	barrier a	ttenua	ation)						
VehicleType Leq Peak Hou	ir Leq Day	' Le	eq Eve	ning	Leq N	light		Ldn	C	NEL
Autos: 66	.3	64.4		62.6		56.6		65.2		65.8
Medium Trucks: 58	.5	57.0		50.6		49.0		57.5		57.7
Heavy Trucks: 61	.5	60.1		51.1		52.3		60.7		60.8
Venicie ivolse: 68	.0	00.3		03.2		58.5		67.0		67.5
Centerline Distance to Noise Co	ontour (in feet,)	70 dF	RA	65 d	RA	6(0 dBA	55	dBA
		Ldn:	32		68			147		16
	Ldn: CNEL:				34 73 157 33				139	

Scenario	2040					Project N	lame: /	Airport	Gateway	Specific I	Þ
Road Name	Del Rosa Dr	ive				Job Nu	mber: 1	3635			
Road Segment	5 6th Street to	3rd Street									
SITE S	PECIFIC IN	PUT DATA				N	DISE N	IODE		S	
Highway Data					Site Con	ditions (l	Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt): 1	2,774 vehicles					1	Autos:	15		
Peak Hour P	ercentage:	10.00%			Me	dium Truc	cks (2 A	xles):	15		
Peak Ho	ur Volume:	1,277 vehicles			He	avy Truck	(S (3+ A	xles):	15		
Vehi	cle Speed:	45 mph		Ī	Vehicle I	<i>lix</i>					
Near/Far Lane	e Distance:	27 feet		1	Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.86
Barr	ier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-Wa	ll, 1-Berm):	0.0			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.86
Centerline Dist	to Barrier:	50.0 feet		-	Noise Sc	urce Ele	vations	: (in fe	ef)		
Centerline Dist. to	Observer:	50.0 feet			10.00 00	Autos	0.0	000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks	2.2	997			
Observer Height (A	bove Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	iustment	: 0.0
Pac	l Elevation:	0.0 feet		L						·	
Road	l Elevation:	0.0 feet		-	Lane Equ	ivalent l	Distanc	e (in f	feet)		
R	oad Grade:	0.0%				Autos:	48.4	102			
	Left View:	-90.0 degrees			Mediur	n Trucks:	48.2	219			
,	Right View:	90.0 degrees			Heav	y Trucks:	48.2	237			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.87		0.1	1	-1.20		-4.65	0.	000	0.00
Medium Trucks:	79.45	-19.70		0.1	3	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-21.43		0.1	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrie	er atter	uation)						
VehicleType L	eq Peak Hour	Leq Day		Leq E	vening	Leq N	light		Ldn	CI	NEL
Autos:	66.	5 6	4.6		62.8		56.8		65.	4	66.
Medium Trucks:	58.	7 5	7.2		50.8		49.3		57.	7	58.
Heavy Trucks:	Heavy Trucks: 61.8 60.3				51.3		52.5		60.	9	61.
Vehicle Noise:	68.3	3 6	6.5		63.4		58.7		67.	2	67.
Centerline Distance	to Noise Co	ntour (in feet)						-			
			, L	70	dBA	65 di	BA	6	0 dBA	55	dBA
		L	an:	3	3	70			152	3	27
		(14/1									

	FH\	NA-RD-77-108	HIGHV	VAY NO	DISE PF	REDICTIC	N MOD	EL			
Scenari Road Nam Road Segmer	o: 2040 e: Del Rosa D nt: 9th Street t	Drive to 6th Street				Project N Job Nur	lame: A nber: 1:	irport (3635	Gateway S	Specific F	0
SITE	SPECIFIC IN	IPUT DATA				NC	ISE M	ODEL	INPUTS	6	
Highway Data				S	ite Con	ditions (F	lard = 1	0, Soi	ft = 15)		
Average Daily	Traffic (Adt):	12,294 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 A)	des):	15		
Peak H	our Volume:	1,229 vehicle	s		He	avy Truck	s (3+ A)	(les):	15		
Vel	hicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	icleType	L)ay	Evening	Night	Daily
Site Data						Au	tos: 7	7.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	cks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		N	oise Sc	ource Elev	/ations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	,)0	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.29	97			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.00	06	Grade Adj	ustment:	0.0
Pa	ad Elevation:	0.0 feet			ana Ea	uiualant F	Viatana	in fi	not)		
Roa	ad Elevation:	0.0 feet		L	ane Equ	Autos:		2 (III IC	eel)		
, , , , , , , , , , , , , , , , , , ,	Loft View:	0.0%			Mediu	n Trucks	40.4	10			
	Right View:	90.0 degre	es es		Heav	y Trucks:	48.2	37			
EHWA Noise Mode	Calculation	e									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	1 E	Barrier Atte	n Beri	m Atten
Autos:	68.46	-1.03		0.11		-1.20		4.65	0.0	00	0.000
Medium Trucks:	79.45	-19.87		0.13		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.60		0.13		-1.20	-	5.43	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ 1	Leq Eve	ening	Leq N	ight		Ldn	CI	IEL
Autos:	66	5.3	64.4		62.7		56.6		65.2		65.8
Medium Trucks:	58	1.5	57.0		50.6		49.1		57.6		57.8
Heavy Trucks:	61	.6	60.2		51.1		52.4		60.7		60.9
Vehicle Noise:	68	3.1	66.4		63.2		58.5		67.1		67.5
Centerline Distance	e to Noise Co	ontour (in feet)								
			L	70 dE	BA	65 dE	BA	60	D dBA	55	dBA
		0	Lan:	32 69 148			3	19			
	CNEL:				34 74 159 342						42

	FH	WA-RD-77-108	HIGHV	VAYN	OISE P	REDICTION		DEL			
Scena	rio: 2040					Project I	Name:	Airpor	t Gateway	Specifi	рP
Road Nar	ne: Sterling Av	enue				Job NL	imber:	13635			
Road Segme	ent: Base Line t	o 9th Street									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE	L INPUT	s	
Highway Data				S	Site Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	13,433 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 /	Axles).	15		
Peak I	Hour Volume:	1,343 vehicle	s		He	avy Truc	ks (3+ /	Axles).	15		
Ve	ehicle Speed:	40 mph		v	<i>lehicle</i>	Mix					
Near/Far La	ane Distance:	27 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6	% 97.86%
Ba	rrier Height	0.0 feet			М	edium Tru	ucks:	84.8%	4.9%	10.3	% 1.28%
Barrier Type (0-V	Vall. 1-Berm):	0.0			1	Heavy Tru	ucks:	86.5%	2.7%	10.8	% 0.86%
Centerline D	ist. to Barrier:	50.0 feet			laina C	uree Ele	votion	o (in f	aati		
Centerline Dist.	to Observer:	50.0 feet		n	ioise se	Autoo	vauon	s (III I	eelj		
Barrier Distance	to Observer:	0.0 feet			Madiu	Autos	. 0.	207			
Observer Height	(Above Pad):	5.0 feet			Weulu	III TTUCKS	. 2.	201	Grade An	liustma	nt: 0.0
F	ad Elevation:	0.0 feet			near	ly mucks	. 0.	000	0/000/10	Juouno	<i>n</i> . 0.0
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 48.	402			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 48.	219			
	Right View:	90.0 degree	es		Hear	/y Trucks	: 48.	237			
FHWA Noise Moo	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en B	erm Atten
Autos	66.51	-0.14		0.11		-1.20		-4.65	0.	000	0.000
Medium Trucks:	77.72	-18.97		0.13	3	-1.20		-4.87	0.	000	0.000
Heavy Trucks	82.99	-20.70		0.13	3	-1.20		-5.43	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	′ I	Leq Ev	rening	Leq N	light		Ldn		CNEL
Autos	65	.3	63.4		61.6		55.6	6	64.	2	64.8
Medium Trucks	57	.7	56.2		49.8		48.3	3	56.	7	57.0
Heavy Trucks:	61	.2	59.8		50.8		52.0)	60.	4	60.5
Vehicle Noise:	67	.2	65.5		62.2		57.7	7	66.	2	66.7
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 d	BA	65 a	BA		60 dBA	5	5 dBA
			Ldn:	28	3	60)		130		280
		C	NEL:	30)	64	1		139		299

Thursday, November 19, 2020

	FH	WA-RD-77-10	B HIGHV	VAY NC	DISE P	REDICTIC	N MODE	L		
Scenai Road Nan Road Segme	Scenario: 2040 Road Name: Sterling Avenue Road Segment: 9th Street to 6th Street					Project N Job Nui	lame: Air mber: 136	oort Gateway	Specific	Ρ
SITE	SPECIFIC I	NPUT DATA				NC	DISE MO	DEL INPUT	S	
Highway Data				Si	ite Cor	nditions (H	lard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	14,385 vehicle	s				Au	tos: 15		
Peak Hour	Percentage:	10.00%			Me	edium Truc	sks (2 Axle	es): 15		
Peak F	lour Volume:	1,439 vehicle	s		He	eavy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	40 mph		Ve	ehicle	Mix				
Near/Far La	ne Distance:	27 feet			Veh	nicleType	Da	y Evening	Night	Daily
Site Data						AL	itos: 77	.5% 12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	cks: 84	.8% 4.9%	10.3%	5 1.28%
Barrier Type (0-V	/all, 1-Berm):	0.0				Heavy Tru	cks: 86	.5% 2.7%	10.8%	0.86%
Centerline D	st. to Barrier:	50.0 feet		N	oise S	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.000)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297	,		
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks:	8.006	Grade Ad	justmen	t: 0.0
P	ad Elevation:	0.0 feet		-						
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent L	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	48.402	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219	-		
	Right View:	90.0 degre	es		неа	vy Trucks:	48.23	(
FHWA Noise Mod	el Calculation	IS								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier Att	en Be	rm Atten
Autos:	66.51	0.16		0.11		-1.20	-4.	65 0.0	000	0.000
Medium Trucks:	77.72	-18.67		0.13		-1.20	-4.	87 0.0	000	0.000
Heavy Trucks:	82.99	-20.40		0.13		-1.20	-5.	43 0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	ight	Ldn	0	NEL
Autos:	65	5.6	63.7		61.9	1	55.9	64.	5	65.1
Medium Trucks:	58	3.0	56.5		50.1		48.6	57.	D	57.3
Heavy Trucks:	61	1.5	60.1		51.1		52.3	60.	7	60.8
Vehicle Noise:	67	7.5	65.8		62.5	i	58.0	66.	5	67.0
Centerline Distan	ce to Noise C	ontour (in fee	t)							
				70 dE	3A	65 dl	BA	60 dBA	55	5 dBA
		-	Ldn:	29 63 136				293		
		C	NEL:	31		67		145		313

	FHV	/A-RD-77-108	HIGH	HWAY N	OISE PI	REDICT	ION MC	DEL			
Scenari	o: 2040					Project	Name:	Airpor	t Gateway	Specific I	>
Road Nam	e: Victoria Ave	nue				Job N	lumber:	13635	, í	-	
Road Segmer	t: Highland Av	enue to Pacifi	c Stre	eet							
SITE	SPECIFIC IN	PUT DATA				1	OISE	MODE	EL INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt): 2	6,114 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles).	15		
Peak H	our Volume:	2,611 vehicle	s		He	avy Tru	cks (3+	Axles).	15		
Vel	nicle Speed:	40 mph		N	/ehicle l	Mix					
Near/Far Lar	ne Distance:	24 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	6 2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	44.0 feet			loise Sr		lovation	e (in f	oot)		
Centerline Dist. t	to Observer:	44.0 feet		<u></u>	0138 30	Auto	e' 0	000	001		
Barrier Distance t	o Observer:	0.0 feet			Modiu	n Truck	3. U	207			
Observer Height (J	Above Pad):	5.0 feet			Heav	n Truck	3. Z.	006	Grade Ad	iustment	
Pa	d Elevation:	0.0 feet			near	y mach	3. 0.	000	0/000//10	Juotimoni	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 42	.626			
	Left View:	-90.0 degree	es		Mediu	m Truck	's: 42	.418			
	Right View:	90.0 degre	es		Heav	ry Truck	's: 42	.439			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	2.75		0.94	Ļ	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-16.09		0.97	,	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-17.81		0.96	6	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barri	er atten	uation)					Т	
VehicleType	Leq Peak Hou	r Leq Day	·	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	69.	0	67.1		65.3		59.	3	67.9	9	68.
Medium Trucks:	61.	4	59.9		53.5		52.	0	60.4	4	60
Heavy Trucks:	64.	9	63.5		54.5		55.	(64.	1	64
Vehicle Noise:	70.	9	69.2		65.9		61.	4	69.9	J	70
Centerline Distanc	e to Noise Co	ntour (in feet)	70 4	DA I	65	dRA		60 dBA	FF	dBA
			I dn'	70 0	1	00	M	1 '	202	1 55	35
		0	NEL.	44	•	1	<u>00</u>		202	4	66
			VLL.	47			00		210	4	

	FH	WA-RD-77-108	B HIGH	WAY N	OISE PF	REDICTIO	ON MOD	EL			
Scenar Road Narr Road Segme	Scenario: 2040 Road Name: Sterling Avenue Road Segment: 6th Street to 3rd Street					Project I Job Nu	Name: Ai mber: 13	irport (3635	Gateway S	Specific F	, ,
SITE	SPECIFIC I	NPUT DATA				N	DISE M	ODEL	INPUTS	5	
Highway Data				s	Site Con	ditions (Hard = 1	0, Soi	ft = 15)		
Average Daily	Traffic (Adt):	11,619 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 Ax	kles):	15		
Peak H	lour Volume:	1,162 vehicle	s		He	avy Trucl	ks (3+ Ax	(les):	15		
Ve	hicle Speed:	40 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	27 feet		-	Veh	icleType	D	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	Heavy Tru	icks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet			loise Sc	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos	0.00	00	- 7		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks	8.00	06	Grade Adj	ustment:	0.0
P	ad Elevation:	0.0 feet		-							
Roi	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distance	e (in te	eet)		
	Road Grade:	0.0%				Autos.	48.40	02			
	Left View:	-90.0 degre	es		Mediur	n Trucks	48.2	19 27			
	Rigili view.	90.0 degre	es		neav	y mucks.	40.2	51			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/ E	Barrier Atte	en Beri	n Atten
Autos:	66.51	-0.77		0.11		-1.20	-4	4.65	0.0	00	0.000
Medium Trucks:	11.12	-19.60		0.13	•	-1.20		4.07	0.0	00	0.000
Heavy Hucks.	02.99	-21.33		0.13		-1.20	-3	0.43	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	lation)	1000	liabt		l da	~	151
Venicie rype Autos:	Ley Feak Hol	Leq Da	62.9	Leg Ev	ening 61.0	Leq N	54 Q		LUII 63.6	U	64 2
Medium Trucks:	57	7.0	55.5		49.2		47.6		56.1		56.3
Heavy Trucks:	60	.6	59.2		50.1		51.4		59.7		59.9
Vehicle Noise:	66	3.6	64.9		61.6		57.0		65.6		66.0
Centerline Distant	ce to Noise C	ontour (in feel)								
L				70 d	BA	65 d	BA	60) dBA	55	dBA
			Ldn:	25	25 55 118			2	54		
	Lan: CNEL:				25 35 116 234 27 59 126 272						72

	FH	WA-RD-77-108	B HIGHV	NAY NO	DISE PI	REDICTIO	N MOI	DEL			
Scenar Road Nam Road Segme	io: 2040 ne: Victoria Av nt: Pacific Stro	enue eet to Base Lin	e			Project N Job Nur	lame: A nber: 1	Airpor 3635	t Gateway S	Specific	Ρ
SITE	SPECIFIC II	NPUT DATA				NO	ISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions (H	lard =	10, S	oft = 15)		
Average Daily Peak Hour Peak k	Traffic (Adt): Percentage:	17,643 vehicle 10.00%	is		Me	dium Truc	/ ks (2 A s (3+ 4	Autos. xles).	15 15		
r can n	bicle Speed	1,704 venicie	.5		110	avy much	3 (01 7	xic3).	10		
Near/Far La	ne Distance:	24 feet		V	ehicle I	Mix		0	Guardian	Market	Deite
Site Data					ven	icie i ype	itos:	Day 77 5%	Evening	Night 9.6%	Dally
Ba	wier Height	0.0 feet			М	edium Tru	cks:	84.8%	6 12.5%	10.3%	5 1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0 1001			1	Heavy Tru	cks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	44.0 feet		N	oise Sr	ource Flev	ations	in f	eet)		
Centerline Dist.	to Observer:	44.0 feet			0.00 00	Autos	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucke	2.2	97			
Observer Height ((Above Pad):	5.0 feet			Heat	N Trucks	8.0	06	Grade Adi	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet			neur	y mucho.	0.0	00	,		
Roa	ad Elevation:	0.0 feet		La	ane Eq	uivalent D	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	42.6	626			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	42.4	18			
	Right View:	90.0 degre	es		Heav	y Trucks:	42.4	139			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier Atte	en Be	rm Atten
Autos:	66.51	1.05		0.94		-1.20		4.61	0.0	000	0.000
Medium Trucks:	77.72	-17.79		0.97		-1.20		4.87	0.0	000	0.000
Heavy Trucks:	82.99	-19.52		0.96		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V 1	Leq Eve	ening	Leq Ni	ight		Ldn	C	NEL
Autos:	67	7.3	65.4		63.6		57.6		66.2	2	66.8
Medium Trucks:	59	9.7	58.2		51.8		50.3		58.7	7	59.0
Heavy Trucks:	6	3.2	61.8		52.8		54.0		62.4	ļ	62.5
Vehicle Noise:	6	9.2	67.5		64.2		59.7		68.2	2	68.7
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dE	BA	1	60 dBA	55	5 dBA
			Ldn:	34		72			156		335
		NEL:	36	36 77 167					:	359	

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MO	DEL			
Scenai Road Nan Road Segme	Scenario: 2040 Road Name: Victoria Avenue Road Segment: Base Line to 9th Street					Project Job N	Name: I lumber:	Airpor 13635	t Gateway S	Specific	Ρ
SITE	SPECIFIC IN	NPUT DATA				N	IOISE N	NODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	13,063 vehicle 10.00%	s		Ме	edium Tri	ucks (2 A	Autos Axles)	15 15		
Peak F	lour Volume:	1,306 vehicle	s		He	eavy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	24 feet			Veh	nicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			М	ledium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	44.0 feet		N	loise S	ource El	levation	s (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 21	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	206	Grade Adj	ustmen	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 42.	626			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 42.	418			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 42.4	439			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	68.46	-0.77		0.94		-1.20		-4.61	0.0	00	0.000
Medium Trucks:	79.45	-19.60		0.97		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-21.33		0.96		-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	67	7.4	65.5		63.8		57.7		66.3		66.9
Medium Trucks:	59	9.6	58.1		51.7		50.2		58.7		58.9
Heavy Trucks:	62	2.7	61.3		52.2		53.5	i	61.8		62.0
Vehicle Noise:	69	9.2	67.4		64.3		59.6	5	68.2		68.6
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dl	BA	65	dBA	1	60 dBA	55	dBA
			Ldn:	33		7	72		154	3	332
		С	NEL:	36		7	77		165	3	356

		A-RD-77-108	nigi		NUISE P	REDICI		DEL			
Scenario	2040					Project	Name:	Airpor	Gateway	Specific	
Road Name	e: Victoria Ave	nue				Job N	lumber:	13635			
Road Segment	t: 6th Street to	3rd Street									
SITE S	PECIFIC IN	PUT DATA				N	IOISE I	NODE	L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt): 1	2,525 vehicles	6					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	edium Tr	ucks (2)	Axles):	15		
Peak Ho	our Volume:	1,253 vehicles	5		He	eavy Tru	cks (3+)	Axles):	15		
Veh	icle Speed:	45 mph		F	Vehicle	Mix					
Near/Far Lan	e Distance:	24 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Barr	rier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Dist	t. to Barrier:	44.0 feet		-	Noine C	ouroo E	lovation	o lin f	a o fi		
Centerline Dist. to	o Observer:	44.0 feet		-	NOISE 3	Auto	evalion	s (III I	een		
Barrier Distance to	o Observer:	0.0 feet			Modiu	MULO m Truck	S. U.	207			
Observer Height (A	Above Pad):	5.0 feet			Hear	W Truck	з. 2. 	006	Grade Ad	iustment	· 0.0
Pad	d Elevation:	0.0 feet			neu	vy mack	3. 0.	000	0/000/10	aotinoni	. 0.0
Road	d Elevation:	0.0 feet		2	Lane Eq	uivalen	t Distan	ce (in	feet)		
R	oad Grade:	0.0%				Auto	s: 42.	626			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 42.	418			
	Right View:	90.0 degree	s		Hea	vy Truck	's: 42.	439			
FHWA Noise Model	l Calculations										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.95		0.9	4	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-19.79		0.9	7	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.51		0.9	6	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and	barri	ier atter	uation)						
VehicleType I	Leq Peak Hour	Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	67.	2 (65.3		63.6		57.8	5	66.1	1	66.
Medium Trucks:	59.	4 :	57.9		51.6		50.0)	58.5	5	58.
Heavy Trucks:	62.	5 1	51.1		52.0		53.3	3	61.6	j.	61.
Vehicle Noise:	69.	0	67.3		64.1		59.4	1	68.0)	68.
Centerline Distance	e to Noise Co	ntour (in feet)	1	70	dRΔ	65	dBA		SO dBA	55	dBA
			l dn'	,0,	2	05	70		150		23
		~	JEI ·	3	5		75		161		46
		0.			-		-				-

	FH\	NA-RD-77-108	HIGH	NAY NO	DISE PRE	DICTIO	N MODEL			
Scenari Road Nam Road Segmer	o: 2040 e: Victoria Av nt: 9th Street t		F	Project Na Job Nun	ame: Airpor nber: 13635	t Gateway s	Specific F	•		
SITE	SPECIFIC IN	IPUT DATA				NO	ISE MODI	EL INPUT	s	
Highway Data				S	ite Cond	itions (H	lard = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	10,302 vehicle	s				Autos	: 15		
Peak Hour	Percentage:	10.00%			Medi	um Truci	ks (2 Axles)	: 15		
Peak H	our Volume:	1,030 vehicle	s		Hear	/y Trucks	s (3+ Axles)	: 15		
Ve	hicle Speed:	45 mph		V	ehicle Mi	Y				
Near/Far La	ne Distance:	24 feet		-	Vehic	eTvpe	Dav	Evenina	Niaht	Dailv
Site Data						Au	tos: 77.5%	6 12.9%	9.6%	97.86%
Bai	rier Height:	0.0 feet			Med	lium Truc	cks: 84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			He	avy Truc	cks: 86.5%	6 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	44.0 feet		N	nisa Sau	rce Elev	ations (in t	(aat)		
Centerline Dist.	to Observer:	44.0 feet			0130 000	Autos:	0.000	001		
Barrier Distance	to Observer:	0.0 feet			Medium	Trucks:	2 297			
Observer Height (Above Pad):	5.0 feet			Heavy	Trucks:	8 006	Grade Ad	iustment:	0.0
Pá	ad Elevation:	0.0 feet		_			0.000			
Roa	ad Elevation:	0.0 feet		Li	ane Equi	valent D	istance (in	feet)		
/	Road Grade:	0.0%				Autos:	42.626			
	Left View:	-90.0 degree	es		Meaium	Trucks:	42.418			
	Right View:	90.0 degree	es		Heavy	TTUCKS:	42.439			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite R	oad	Fresnel	Barrier Att	en Berr	n Atten
Autos:	68.46	-1.80		0.94		-1.20	-4.61	0.0	000	0.000
Medium Trucks:	79.45	-20.64		0.97		-1.20	-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.36		0.96		-1.20	-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)					
VehicleType	Leq Peak Hou	ur Leq Day	/ 1	Leq Eve	ening	Leq Ni	ght	Ldn	CN	IEL
Autos:	66	6.4	64.5		62.7		56.7	65.3	3	65.9
Medium Trucks:	58	3.6	57.1		50.7		49.2	57.6	6	57.9
Heavy Trucks:	61	.7	60.2		51.2		52.4	60.8	3	60.9
Vehicle Noise:	68	3.2	66.4		63.3		58.6	67.1	1	67.6
Centerline Distance	e to Noise C	ontour (in feet)							
			L	70 dE	BA	65 dB	IA	60 dBA	55	dBA
	Ldn:				28 61 132			2	33	
		Ci	VEL:	30	30 65 141 304					

	FH1	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	ON MOI	DEL			
Scenar Road Nam Road Segme	io: 2040 ne: 6th Street nt: Tippecano	e Avenue to De	l Rosa D	rive		Project N Job Nui	lame: / mber: 1	Airpor 13635	t Gateway	Specific	Ρ
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (H	lard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	5,359 vehicles	5					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	:ks (2 A	xles).	15		
Peak H	lour Volume:	536 vehicles	6		He	avy Truck	s (3+ A	xles).	15		
Ve	hicle Speed:	40 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	20 feet		F	Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data				+		Au	itos:	77.5%	6 12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium Tru	cks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	/all. 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	30.0 feet			laiaa Ca	uree Eler	votion	in f	in of l		
Centerline Dist.	to Observer:	30.0 feet		~	10136 30	Autos:	auona	000	eeŋ		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Truckov	2.0	00			
Observer Height	(Above Pad):	5.0 feet			Hoo	II TIUCKS.	2.2	106	Grade Ad	iustment	t· 0.0
P	ad Elevation:	0.0 feet			i icav	y muchs.	0.0	000	0/000/10	actinoni	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	28.7	723			
	Left View:	-90.0 degree	es		Mediui	m Trucks:	28.4	113			
	Right View:	90.0 degree	es		Heav	y Trucks:	28.4	144			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	66.51	-4.13		3.51		-1.20		-4.49	0.0	000	0.000
Medium Trucks:	77.72	-22.96		3.58		-1.20		-4.86	0.0)00	0.000
Heavy Trucks:	82.99	-24.69		3.57		-1.20		-5.77	0.0)00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenı	uation)					-	
VehicleType	Leq Peak Hou	ur Leq Day	Le	eq Ev	ening	Leq N	ight		Ldn	С	NEL
Autos:	64	.7	62.8		61.0		55.0		63.6	3	64.2
Medium Trucks:	57	' .1	55.6		49.3		47.7		56.2	2	56.4
Heavy Trucks:	60).7	59.3		50.2		51.5		59.8	3	59.9
Vehicle Noise:	66	6.7	64.9		61.6		57.1		65.6	ŝ	66.1
Centerline Distant	ce to Noise C	ontour (in feet,									
				70 d	BA	65 dE	BA		60 dBA	55	5 dBA
			Ldn:	15	5	33			71	1	154
		CI	VEL:	16	6	35			76	1	164

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH	WA-RD-77-10	B HIGH	WAY NO	OISE P	REDICTIO		EL			
Scenar Road Nan Road Segme	Scenario: 2040 Road Name: 6th Street Road Segment: Del Rosa Drive to Sterling Aven					Project N Job Nu	Vame: Aii mber: 13	rport Gate 635	way Spe	cific P	
SITE	SPECIFIC II	NPUT DATA				N	DISE MO	DEL IN	PUTS		
Highway Data				S	ite Cor	nditions (l	Hard = 10	0, Soft = :	15)		
Average Daily	Traffic (Adt):	7,501 vehicle	es				AL	itos: 18	5		
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 Ax	les): 18	5		
Peak F	lour Volume:	750 vehicle	es		He	eavy Truck	ks (3+ Ax	les): 18	5		
Ve	hicle Speed:	40 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	20 feet			Veh	nicleType	D	ay Eve	ning Ni	ght	Daily
Site Data						A	utos: 7	7.5% 12	2.9% 9	9.6%	97.86%
Ba	rrier Height:	0.0 feet			Μ	ledium Tru	icks: 84	4.8% 4	1.9% 10	0.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	icks: 86	6.5% 2	2.7% 10	0.8%	0.86%
Centerline Di	st. to Barrier:	30.0 feet		N	loise S	ource Ele	vations	(in feet)			
Centerline Dist.	to Observer:	30.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	8.00	6 Grad	le Adjusti	ment: (D.O
P	ad Elevation:	0.0 feet		_					-		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	28.72	23			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	28.41	3			
	Right View:	90.0 degre	es		Hea	vy Trucks:	28.44	4			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barri	er Atten	Berm	Atten
Autos:	66.51	-2.67		3.51		-1.20	-4	1.49	0.000		0.000
Medium Trucks:	77.72	-21.50)	3.58		-1.20	-4	.86	0.000		0.000
Heavy Trucks:	82.99	-23.23	5	3.57		-1.20	-5	5.77	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Eve	ening	Leq N	light	Ldn		CNE	EL
Autos:	66	5.2	64.3		62.5		56.4		65.1		65.7
Medium Trucks:	58	3.6	57.1		50.7		49.2		57.6		57.9
Heavy Trucks:	62	2.1	60.7		51.7		52.9		61.3		61.4
venicie ivoise:	60	5.1	66.4		63.1		0.80		67.1		67.5
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 d	DA.	65 d	DA .	60 d P	Δ	55 d	DA.
			I dn	10 00		05 U	DA	80	~	10	2
	Lan: CNEL				21 44 95 20				20	5	
				~ .				00		200	-

	FHW	A-RD-77-108 I	HIGH	WAY N	OISE PR	REDICTIC		DEL			
Scenario	p: 2040					Project N	lame: A	Airport	Gateway	Specific I	>
Road Name	e: 6th Street					Job Nu	mber: 1	3635			
Road Segmen	t: Victoria Ave	nue to Central	Aven	ue							
SITE S	SPECIFIC INI	PUT DATA				N	DISE N	IODE	L INPUT	s	
Highway Data				5	Site Con	ditions (l	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	5,844 vehicles					A	Autos:	15		
Peak Hour I	Percentage:	10.00%			Med	dium Truc	cks (2 A	xles):	15		
Peak He	our Volume:	584 vehicles			Hea	avy Truck	(S (3+ A	xles):	15		
Vel	nicle Speed:	40 mph		1	/ehicle N	Nix					
Near/Far Lar	e Distance:	20 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	30.0 feet			loise So	urce Fle	vations	in fo	ef)		
Centerline Dist. t	o Observer:	30.0 feet		ŕ	10/30 00	Autos	0.0	00	00		
Barrier Distance t	o Observer:	0.0 feet			Mediun	n Trucks	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks:	8.0	06	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			nour,) 1140110.	0.0			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent l	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	28.7	23			
	Left View:	-90.0 degrees	3		Mediun	n Trucks:	28.4	13			
	Right View:	90.0 degrees	6		Heav	y Trucks:	28.4	144			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	66.51	-3.75		3.51		-1.20		4.49	0.	000	0.00
Medium Trucks:	77.72	-22.59		3.58	3	-1.20		4.86	0.	000	0.00
Heavy Trucks:	82.99	-24.31		3.57	7	-1.20		-5.77	0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrie	er atten	uation)						
VehicleType	Leq Peak Hour	Leq Day		Leq Ev	ening	Leq N	light		Ldn	CI	NEL
Autos:	65.	1 6	3.2		61.4		55.3		64.	D	64.
Medium Trucks:	57.	5 5	6.0		49.6		48.1		56.	j D	56.
Heavy Trucks:	61.	1 5	9.6		50.6		51.8		60.	2	60.3
Vehicle Noise:	67.0	0 6	5.3		62.0		57.5		66.	0	66.
Centerline Distanc	e to Noise Col	ntour (in feet)		70 6	ID A	6E d	D A	6	0 484	55	dDA
		,	dn [.]	100	3	35		0	76	1 55	63
		CN	EI ·	11	7	38			81	1	74
		0/1				00			0.		

	FHV	VA-RD-77-108	HIGHWA	AY NO	DISE PF	REDICTI	ON MO	DEL				
Scenar	io: 2040					Project	Name:	Airpor	t Gatew	ay Spe	ecific F	>
Road Nam	e: 6th Street					Job N	umber:	13635				
Road Segme	nt: Sterling Ave	enue to Victoria	Avenue									
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	EL INP	UTS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,278 vehicles						Autos.	: 15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 i	Axles)	: 15			
Peak H	lour Volume:	828 vehicles			He	avy Truc	:ks (3+)	Axles)	: 15			
Ve	hicle Speed:	40 mph		v	ehicle l	Mix						
Near/Far La	ne Distance:	20 feet			Veh	icleType		Day	Evenii	ng N	ight	Daily
Site Data						A	lutos:	77.5%	6 12.9	9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9	9% 1	0.3%	1.28%
Barrier Type (0-W	(all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	6 2.7	'% 1	0.8%	0.86%
Centerline Di	st. to Barrier:	30.0 feet		N	oise Sc	ource El	evation	s (in f	ieet)			
Centerline Dist.	to Observer:	30.0 feet				Autos	s: 0.	.000	1			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	s: 2.	297				
Observer Height	Above Pad):	5.0 feet			Heav	y Trucks	s: 8.	.006	Grade	Adjust	ment:	0.0
P	ad Elevation:	0.0 feet					Distan	//	641			
Roi	ad Elevation:	0.0 feet		1	ane Equ	livalent	Distan	ce (In	reet)			
	Road Grade:	0.0%			Madiu	Autos	5. 28.	.123				
	Lent View:	-90.0 degree	s		Healur	II Trucks	s. 28.	.413				
	Right view.	90.0 degree	5		neav	y HUCKS	5. 20.	.444				
FHWA Noise Mod	el Calculation	5										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresi	nel	Barrier	Atten	Beri	m Atten
Autos:	66.51	-2.24		3.51		-1.20		-4.49		0.000		0.000
Medium Trucks:	77.72	-21.07		3.58		-1.20		-4.86		0.000		0.000
Heavy Trucks:	82.99	-22.80		3.57		-1.20		-5.77		0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq I	Night		Ldn		CI	VEL
Autos:	66	.6 6	4.7		62.9		56.9	9		55.5		66.1
Medium Trucks:	59	.0 5	07.5		51.1		49.0	6		58.1		58.3
Heavy Trucks:	62	.6 6	01.1		52.1		53.4	4		01.7		61.0
venicie ivoise:	68	.5 6	6.8		63.5		59.	0		57.5		68.0
Centerline Distant	ce to Noise Co	ontour (in feet)	-	70 .			-10.4		co -/D *			-04
		,		/U di	BA	65 0	3BA		bu dBA		55	ава
			an:	21		4	4		95		2	00 20
		CN	EL:	22		4	1		102		2	20

	FH\	VA-RD-77-108 H	IGHWA	NOISE PI	REDICTIO		EL			
Scenario Road Name Road Segmen	o: 2040 e: 5th Street t: I-215 NB R	amps to E Street			Project I Job Nu	Vame: Aii imber: 13	rport Gate 635	way Spe	cific P	
SITE S	SPECIFIC IN	IPUT DATA			N	OISE MO	DEL IN	PUTS		
Highway Data				Site Con	ditions (Hard = 10), Soft = 1	5)		
Average Daily 1	Traffic (Adt):	37,481 vehicles				AL	itos: 15	5		
Peak Hour H	Percentage:	10.00%		Me	dium Tru	cks (2 Ax	<i>les):</i> 15	5		
Peak Ho	our Volume:	3,748 vehicles		He	avy Truci	ks (3+ Ax	<i>les):</i> 15	5		
Veh	nicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	27 feet		Veh	icleType	D	ay Ever	ning N	ght	Daily
Site Data					A	utos: 7	7.5% 12	.9%	9.6%	97.86%
Ban	rier Heiaht [.]	0.0 feet		M	edium Tru	ucks: 84	4.8% 4	.9% 1	0.3%	1.28%
Barrier Type (0-Wa	all, 1-Berm):	0.0		1	Heavy Tru	ucks: 86	6.5% 2	.7% 1	0.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet		Noise So	ource Ele	vations	(in feet)			
Centerline Dist. t	o Observer:	50.0 feet			Autos	: 0.00	0			
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Trucks	2.29	7			
Observer Height (A	Above Pad):	5.0 feet		Heav	/v Trucks	8.00	6 Grad	le Adjust	ment:	0.0
Pa	d Elevation:	0.0 feet						-		
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)			
F	Road Grade:	0.0%			Autos	: 48.40	12			
	Left View:	-90.0 degrees		Mediu	m Trucks	48.21	9			
	Right view.	90.0 degrees		//eav	ly mucks.	40.23				
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrie	er Atten	Berm	Atten
Autos:	68.46	3.81	C).11	-1.20	-4	.65	0.000		0.000
Medium Trucks:	79.45	-15.03	C	0.13	-1.20	-4	.87	0.000		0.000
Heavy Trucks:	84.25	-16.75	C	0.13	-1.20	-5	.43	0.000		0.000
Unmitigated Noise	Levels (with	out Topo and ba	arrier att	enuation)	_					
VehicleType	Leq Peak Hou	Ir Leq Day	Leq	Evening	Leq N	light	Ldn		CNI	EL
Autos:	71	.2 69	9.3	67.5		61.5		70.1		70.7
Medium Trucks:	63	.4 61	1.8	55.5		53.9		62.4		62.6
Heavy Trucks:	66	.4 65	5.0	56.0		57.2		65.6		65.7
Vehicle Noise:	72	.9 71	1.2	68.1		63.4		71.9		72.4
Centerline Distanc	e to Noise Co	ontour (in feet)								
			7	0 dBA	65 d	BA	60 dB/	4	55 d	BA
		Lo	in:	67	14	4	311		67	1
		CNE	L:	72	15	5	334		71	9

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	FH	WA-RD-77-10	8 HIGH	WAY N	OISE P	REDICTIO	ON MOD	EL			
Scenar Road Nam Road Segme	io: 2040 ne: 5th Street nt: E Street to			Project N Job Nu	lame: A mber: 13	irport 3635	Gateway S	Specific F	>		
SITE	SPECIFIC I	NPUT DATA				N	DISE M	ODEI	. INPUTS	6	
Highway Data				S	Site Cor	nditions (l	Hard = 1	0, So	ft = 15)		
Average Daily Peak Hour Peak h	Traffic (Adt): Percentage: lour Volume:	22,657 vehicl 10.00% 2.266 vehicl	es		Me He	edium Truc eavy Truck	A cks (2 A) (s (3+ A)	utos: kles): kles):	15 15 15		
Ve	hicle Speed:	45 mph						<i>,</i>			
Near/Far La	ne Distance:	27 feet		v	venicie	MIX			Evening	Might	Daily
Site Data					ven	Ai	utos: 7	7.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			М	edium Tru	icks: 8	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0 1001				Heavy Tru	icks: 8	6.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		•	loise S	ource Ele	vations	(in fe	ef)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos	0.00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.20	97			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks	8.0	06	Grade Adii	ustment	0.0
P	ad Elevation:	0.0 feet			1100	<i>i) maono</i> .	0.01		,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	48.4	02			
	Left View:	-90.0 degre	ees		Mediu	m Trucks.	48.2	19			
	Right View:	90.0 degre	ees		Hear	vy Trucks:	48.2	37			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.6	2	0.11		-1.20	-1	4.65	0.0	00	0.000
Medium Trucks:	79.45	-17.2	1	0.13	5	-1.20		4.87	0.0	00	0.000
Heavy Trucks:	84.25	-18.9	1	0.13	5	-1.20	-:	5.43	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	l barrie	er attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Ev	ening	Leq N	light		Ldn	CI	VEL
Autos:	69	9.0	67.1		65.3		59.3		67.9		68.5
Medium Trucks:	61	1.2	59.7		53.3		51.8		60.2		60.4
Heavy Trucks:	64	4.2	62.8		53.8		55.0		63.4		63.5
Vehicle Noise:	70).8	69.0		65.9		61.2		69.7		70.2
Centerline Distant	ce to Noise C	ontour (in fee	t)	70 4	DA	05 -1	04		0 -10 4		
			I dn:	10 0	DA	100	DA 2	6	222	55	08A
			NEL:	40) I	10.	כ 1		223 230	4	19 14
		,	NVLL.	51					200	5	14

	FHW	/A-RD-77-108	HIGH	HWAY N	OISE PF	REDICT	ION MO	DEL			
Scenari Road Nam Road Segmer	io: 2040 e: 5th Street nt: Tippecanoe	Avenue to De	Ros	a Drive		Projec Job N	Name: / lumber:	Airport 13635	Gateway	Specific F	-
SITE	SPECIFIC IN	PUT DATA				1	IOISE N	IODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 1	4,297 vehicles	s				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	(xles)	15		
Peak H	our Volume:	1,430 vehicles	s		He	avy Tru	cks (3+ A	(xles):	15		
Ve	hicle Speed:	45 mph		V	/ehicle I	Nix					
Near/Far La	ne Distance:	14 feet			Vehi	cleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Bai	rier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	st. to Barrier:	33.0 feet			laise Sa	urco F	lovation	: (in fi	oof)		
Centerline Dist.	to Observer:	33.0 feet			10/30 00	Auto	e' 0 (000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	5. 0.0	207			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 2.2	106	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			mour	,	0. 0.0				
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distanc	e (in	feet)		
1	Road Grade:	0.0%				Auto	s: 32.0	534			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 32.	362			
	Right View:	90.0 degree	es		Heav	у ттиск	S: 32.	389			
FHWA Noise Mode	el Calculations	1									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	68.46	-0.38		2.68	3	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	79.45	-19.21		2.73	3	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	84.25	-20.94		2.73	3	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise	e Levels (witho	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Ev	rening	Leq	Night		Ldn	CI	NEL
Autos:	69.	6	67.7		65.9		59.8		68.5	5	69
Medium Trucks:	61.	8	60.3		53.9		52.4		60.8	3	61
Heavy Trucks:	64.	8	63.4		54.4		55.6		64.0)	64
Vehicle Noise:	71.	3	69.6		66.4		61.8		70.3	3	70
Centerline Distance	e to Noise Co	ntour (in feet,)	70 a	ID A	65	d D A	4	O dBA	55	dDA
			I dn'	100	5	05	74		160	30	46
Lan: CNEL				· 37 80 172 371			71				
		01	•	31						0	

	EU	MA PD 77 100						ושר			
	FN\	WA-RD-77-108		IVAT N		VEDICI					
Scenari	o: 2040					Project	Name: A	Airport	Gateway	Specific	P
Road Nam	e: 5th Street					Job N	lumber: 1	3635			
Road Segmer	t: Waterman	Avenue to Tip	pecan	oe Aveni	Je						
SITE	SPECIFIC IN	NPUT DATA					IOISE M	ODE		s	
Highway Data				S	ite Con	ditions	(Hard = :	10, So	ft = 15)		
Average Daily	Traffic (Adt):	13,621 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	1,362 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far Lar	ne Distance:	14 feet		-	Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data						,	Autos: 1	77.5%	12.9%	9.69	6 97.86%
Bar	rior Hoight	0.0 feet			М	edium T	rucks: 8	34.8%	4.9%	10.39	6 1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			1	leavy T	rucks: 8	86.5%	2.7%	10.89	6 0.86%
Centerline Dis	t. to Barrier:	33.0 feet			loise So	ource E	levations	(in fe	ef)		
Centerline Dist.	to Observer:	33.0 feet				Auto	s: 0.0	00	- 1		-
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2.2	97			
Observer Height (Above Pad):	5.0 feet			Heat	v Truck	s: 80	06	Grade Ad	iustmer	nt: 0.0
Pa	d Elevation:	0.0 feet			mour	<i>y maon</i>	0. 0.0				
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Auto	s: 32.6	634			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 32.3	362			
	Right View:	90.0 degre	es		Heav	y Truck	s: 32.3	89			
FHWA Noise Mode	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/	Barrier Att	en Be	erm Atten
Autos:	68.46	-0.59	1	2.68		-1.20	-	4.52	0.0	000	0.00
Medium Trucks:	79.45	-19.42		2.73		-1.20	-	4.86	0.0	000	0.00
Heavy Trucks:	84.25	-21.15		2.73		-1.20	-	5.69	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	y	Leq Ev	ening	Leq	Night		Ldn	(ONEL
Autos:	69	9.3	67.4		65.7		59.6		68.2	2	68.9
Medium Trucks:	61	1.6	60.0		53.7		52.1		60.6	5	60.
Heavy Trucks:	64	1.6	63.2		54.2		55.4		63.8	3	63.9
Vehicle Noise:	71	1.1	69.4		66.2		61.6		70.1	1	70.
Centerline Distance	e to Noise Co	ontour (in fee	t)								
				70 d	BA	65	dBA	6	0 dBA	5	5 dBA
			Ldn:	33	5	7	72		155		335
		С	NEL:	36	6	7	77		167		359

	FH\	VA-RD-77-108	HIGHW	AY N	IOISE PF	REDICTI	ION MO	DDEL			
Scenar Road Nan Road Segme	<i>io:</i> 2040 ne: 5th Street nt: Del Rosa D	rive to Sterling	Avenue			Project Job N	Name: umber:	Airport 13635	Gateway	Specific	Ρ
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	= 10, So	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	10,664 vehicle: 10.00% 1,066 vehicle:	5		Me He	dium Tru avy Truc	ıcks (2 cks (3+	Autos: Axles): Axles):	15 15 15		
Ve	hicle Speed:	45 mph		1	/ehicle l	Mix					
Near/Far La	ne Distance:	27 feet		F	Veh	icleTvpe		Dav	Evenina	Night	Dailv
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	/all, 1-Berm):	0.0			ŀ	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		1	Voise Sc	ource El	evatior	ns (in fe	eet)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s' 2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	s 8	006	Grade Ad	iustment	t: 0.0
P	ad Elevation:	0.0 feet		L	nour	<i>y</i> ao	. 0	.000			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in i	feet)		
	Road Grade:	0.0%				Autos	s: 48	.402			
	Left View:	-90.0 degree	es		Mediu	n Truck	s: 48	.219			
	Right View:	90.0 degree	es		Heav	y Truck	s: 48	.237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	-1.65		0.11	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-20.49		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-22.21		0.13	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	' L	eq Ev	/ening	Leq	Night		Ldn	С	NEL
Autos:	65	.7	63.8		62.1		56.	0	64.0	6	65.2
Medium Trucks:	57	.9	56.4		50.0		48.	5	56.9	9	57.2
Heavy Trucks:	61	.0	59.5		50.5		51.	8	60.	1	60.2
Vehicle Noise:	67	.5	65.7		62.6		57.	.9	66.	5	66.9
Centerline Distan	ce to Noise Co	ontour (in feet,)								
				70 a	iBA	65 (dBA	6	60 dBA	55	dBA
			Ldn:	29	9	6	2		135	. 2	290
		CI	VEL:	3	1	6	7		144	3	311

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	FH	WA-RD-77-108	HIGHW	VAY NO	DISE P	REDICTI					
Scenai Road Nan Road Segme	rio: 2040 ne: 5th Street nt: Sterling Av	enue to Victori	a Avenu	e		Project I Job Nu	Name: A Imber: 1	Airport 13635	Gateway S	Specific	P
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				Si	ite Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	8,476 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	848 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	14 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			М	edium Tru	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	33.0 feet		N	oise Si	ource Ele	vations	in fe	pet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks	: 8.0	006	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		_		,					
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 32.6	534			
	Left View:	-90.0 degre	es		Mediu	m Trucks	32.3	362			
	Right View:	90.0 degre	es		Hear	vy Trucks	32.3	389			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	el 🛛	Barrier Atte	en Bei	m Atten
Autos:	68.46	-2.65		2.68		-1.20	-	-4.52	0.0	00	0.000
Medium Trucks:	79.45	-21.48		2.73		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	84.25	-23.21		2.73		-1.20		-5.69	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	67	7.3	65.4		63.6		57.6		66.2		66.8
Medium Trucks:	59	9.5	58.0		51.6		50.1		58.5		58.8
Heavy Trucks:	62	2.6	61.1		52.1		53.4		61.7		61.8
Vehicle Noise:	69	9.1	67.3		64.2		59.5		68.0		68.5
Centerline Distan	ce to Noise C	ontour (in fee)								
			L	/0 dE	3A	65 d	IBA	6	OU OBA	55	abA 44
			Lan:	24		53	5		113	2	44
		C	NEL:	26		56	5		121	2	262

	FHW	/A-RD-77-108	HIGH	IWAY N	IOISE PE	REDICT	ION MO	DEL			
Scenari	o: 2040					Projec	t Name:	Airport	Gateway	Specific	Р
Road Nam	e: 5th Street					Job N	lumber:	13635			
Road Segmer	nt: Central Ave	nue to Palm A	venue	e							
SITE	SPECIFIC IN	PUT DATA				I	NOISE	NODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	1,912 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2)	Axles):	15		
Peak H	our Volume:	1,191 vehicles	6		He	avy Tru	cks (3+)	Axles):	15		
Vei	hicle Speed:	45 mph		1	Vehicle I	Mix					
Near/Far La	ne Distance:	27 feet		F	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			F	Heavy T	rucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	st. to Barrier:	50.0 feet			Noise Sr	ource F	levation	s (in fø	pet)		
Centerline Dist.	to Observer:	50.0 feet		-	10.00 00	Auto	.e. 0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	is: 0.	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade Ad	iustment	: 0.0
Pa	ad Elevation:	0.0 feet		_		,					
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 48.	402			
	Left View:	-90.0 degree	es		Mediui	m Truck	(S. 48.	219			
	Right View:	90.0 degree	es		Heav	y Truck	(S.' 48.	237			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.17		0.1	1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-20.01		0.1	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-21.73		0.1	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	66.	2	64.3		62.5		56.	5	65.	1	65
Medium Trucks:	58.	4	56.9		50.5		49.0	D	57.4	4	57
Heavy Trucks:	61.	5	60.0		51.0		52.2	2	60.0	ö	60
Vehicle Noise:	68.	0	66.2		63.1		58.4	4	66.9	9	67
Centerline Distance	e to Noise Co	ntour (in feet,) 	70	-04		-10.4	1 -	0.404		-10.4
				/0 0	JBA	65	aBA	6	OU OBA	55	aBA
		~	Lan:	3	1		57 70		140	3	12
		()	vr=1 '						1:00		

	FH	WA-RD-77-108	HIGH	NAY NO	DISE PF	REDICTI	ON MOI	DEL			
Scenari Road Nam Road Segmer	o: 2040 e: 5th Street nt: Victoria Av	enue to Centra	l Avenu	ie		Project I Job Ni	Name: A Imber: 1	Airport 13635	Gateway	Specific F	D
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	te Con	ditions (Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	11,954 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	our Volume:	1,195 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ehicle I	Nix					
Near/Far La	ne Distance:	27 feet		-	Vehi	icleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	, 77.5%	12.9%	9.6%	97.86%
Bai	rier Heiaht [.]	0.0 feet			Me	edium Tri	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	; (in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	: 2.2	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	: 8.0	006	Grade Adj	ustment.	0.0
Pa	ad Elevation:	0.0 feet					Distance	- ((41		
Roa	ad Elevation:	0.0 feet		Li	ane Equ	livalent	Distanc	e (In 1	eet)		
'	Road Grade:	0.0%				Autos	48.4	102			
	Left View: Right View:	-90.0 degre	es es		Heav	n Trucks v Trucks	: 48.2 : 48.2	219 237			
FHWA Noise Mode	Calculation	IS	Dist		E inite	Deed		-1	Damian 44		
venicie i ype	REMEL	Traffic Flow	Dista	ance 0.11	Finite	1 20	Fresh	4 6 5	Barrier Atte	en Ben	m Atten
Autos. Medium Trucks:	70.45	-1.10		0.11		-1.20		4.05	0.0	00	0.000
Heavy Trucks:	84.25	-21.72		0.13		-1.20		-5.43	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leg Peak Ho	ur Leq Day	/	Leg Eve	ening	Leq I	light		Ldn	CI	VEL
Autos:	. 66	3.2	64.3		62.5		56.5	I	65.1		65.7
Medium Trucks:	58	3.4	56.9		50.5		49.0		57.4	L .	57.7
Heavy Trucks:	61	1.5	60.0		51.0		52.3		60.6	6	60.7
Vehicle Noise:	68	3.0	66.2		63.1		58.4		66.9)	67.4
Centerline Distance	e to Noise C	ontour (in feet)							T	
				70 dE	BA	65 a	IBA	6	0 dBA	55	dBA
			Ldn:	31		6	7		145	3	13
		C	NEL:	34		72	2		156	3	36

	FH)	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICTI		DEL			
Scena	rio: 2040					Project I	Name: I	Airpor	t Gateway	Specific	Ρ
Road Nar	ne: 5th Street					Job Ni	imber: '	13635			
Road Segme	ent: Palm Aven	ue to SR-210 E	B Ran	nps							
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				5	Site Cor	nditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	33,870 vehicle	s				,	Autos:	15		
Peak Hou	r Percentage:	10.00%			Me	edium Tru	cks (2 A	(xles)	15		
Peak I	Hour Volume:	3,387 vehicle	s		He	eavy Truc	ks (3+ A	(xles)	15		
V	ehicle Speed:	45 mph		1	/ehicle	Mix					
Near/Far La	ane Distance:	27 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.86%
Ba	arrier Height:	0.0 feet			М	edium Tru	ucks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tri	ucks:	86.5%	2.7%	10.8%	6 0.86%
Centerline D	ist. to Barrier:	50.0 feet		,	Voise S	ource Ele	vation	s (in f	eet)		
Centerline Dist	to Observer:	50.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 2.3	97			
Observer Height	(Above Pad):	5.0 feet			Heat	w Trucks	. 80	006	Grade Ad	liustmen	t: 0.0
F	Pad Elevation:	0.0 feet			mou	iy maono	. 0				
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	e (in:	feet)		
	Road Grade:	0.0%				Autos	: 48.4	402			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 48.	219			
	Right View:	90.0 degre	es		Hea	vy Trucks	48.	237			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos	68.46	3.37		0.11	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks	79.45	-15.47		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	84.25	-17.19		0.13	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	1	Leq Ev	/ening	Leg N	light		Ldn	C	NEL
Autos	70).7	68.8		67.1		61.0)	69.6	3	70.2
Medium Trucks	62	2.9	61.4		55.0		53.5		62.0	D	62.2
Heavy Trucks	66	6.0	64.6		55.5		56.8		65.	1	65.3
Vehicle Noise	72	2.5	70.8		67.6		62.9)	71.	5	71.9
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 a	iBA	65 a	IBA	(60 dBA	55	5 dBA
			Ldn:	63	3	13	5		291		627
		C	NEL:	6	7	14	5		312		672

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FHV	/A-RD-77-108	HIGH	WAY N	OISE P	REDICTI	ON MO	DEL			
Scenario: 2040 Road Name: 3rd Street Road Segment: Waterman	Scenario: 2040 Road Name: 3rd Street Road Segment: Waterman Avenue to Tippe						Airpor 13635	t Gateway S	Specific	P
SITE SPECIFIC IN	PUT DATA				N	OISE I	NODE	L INPUT	5	
Highway Data			S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt): 1 Peak Hour Percentage: Peak Hour Volume:	3,621 vehicle 10.00% 1,362 vehicle	s		Me He	edium Tru eavy Truc	Icks (2 / Icks (3+ /	Autos Axles) Axles)	15 15 15		
Vehicle Speed:	45 mph		V	ahiala	Miy					
Near/Far Lane Distance:	27 feet		-	Veh	icleTyne		Dav	Evening	Night	Daily
Site Data				VCI	A	Autos:	77.5%	6 12.9%	9.6%	6 97.86%
Barrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	6 4.9%	10.3%	6 1.28%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	6 2.7%	10.8%	6 0.86%
Centerline Dist. to Barrier:	50.0 feet		N	loise S	ource El	evation	s (in f	eet)		
Centerline Dist. to Observer:	50.0 feet				Autos	s: 0.	000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks	s: 2.	297			
Observer Height (Above Pad):	5.0 feet			Hear	v Trucks	s: 8.	006	Grade Adj	ustmen	t: 0.0
Pad Elevation:	0.0 feet		-							
Road Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
Road Grade:	0.0%				Autos	s: 48.	402			
Left View: Right View:	-90.0 degre	es		Mediu Hear	m Trucks	s: 48. s: 48	219 237			
rught view.	50.0 degre	55			<i>,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>		201			
FHWA Noise Model Calculations	;									
VehicleType REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresh	iel 🛛	Barrier Atte	en Be	rm Atten
Autos: 68.46	-0.59		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks: 79.45	-19.42		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 84.25	-21.15		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and	barrie	r attenu	uation)						
VehicleType Leq Peak Hou	r Leq Day	<i>'</i>	Leq Ev	ening	Leq I	Night		Ldn	C	NEL
Autos: 66	8	64.9		63.1		57.1		65.7	,	66.3
Medium Trucks: 59.	0	57.5		51.1		49.5	5	58.0)	58.2
Heavy Trucks: 62	0	60.6		51.6		52.8	3	61.2	2	61.3
Venicie ivoise. 60	5			03.7		59.0	,	07.5)	00.0
Centerline Distance to Noise Co	ntour (in feet)	70 d	RA	65 (dRA		60 dBA	5	5 dBA
		I dn'	34	 _	7	4	1	158	1 0.	341
	C	NEL:	37	,	7	9		170		366

	FHW	/A-RD-77-108	HIGHW	AY NOIS	E PREDICTIC	ON MODE	L		
Scenari	o: 2040				Project N	lame: Airp	ort Gateway	Specific F	
Road Nam	e: 3rd Street				Job Nu	mber: 136	35		
Road Segmer	t: Del Rosa Di	rive to Sterling	Avenue						
SITE	SPECIFIC IN	PUT DATA			NC	DISE MO	DEL INPUT	s	
Highway Data				Site	Conditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt): 3	4,523 vehicles				Aut	os: 15		
Peak Hour	Percentage:	10.00%			Medium Truc	ks (2 Axle	es): 15		
Peak H	our Volume:	3,452 vehicles			Heavy Truck	s (3+ Axle	es): 15		
Vel	nicle Speed:	45 mph		Vehi	cle Mix				
Near/Far Lar	ne Distance:	27 feet			VehicleType	Da	y Evening	Night	Daily
Site Data					AL	itos: 77	.5% 12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Medium Tru	cks: 84.	.8% 4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			Heavy Tru	cks: 86	.5% 2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet		Nois	o Sourco Elo	vations (i	n foot)		
Centerline Dist. t	to Observer:	50.0 feet		NUIS	e Source Lie		n leely		
Barrier Distance t	o Observer:	0.0 feet			Aulos. adium Trucks:	2 207			
Observer Height (J	Above Pad):	5.0 feet		ivit	Heavy Trucks:	8.006	Grade Ad	liustment	0.0
Pa	d Elevation:	0.0 feet		,	icavy macks.	0.000	0/000/10	juotinonit.	0.0
Roa	d Elevation:	0.0 feet		Lane	e Equivalent L	Distance ('in feet)		
F	Road Grade:	0.0%			Autos:	48.402	2		
	Left View:	-90.0 degree	s	M	edium Trucks:	48.219)		
	Right View:	90.0 degree	s		leavy Trucks:	48.237	,		
FHWA Noise Mode	l Calculations	;							
VehicleType	REMEL	Traffic Flow	Distar	nce F	inite Road	Fresnel	Barrier Att	ten Ben	m Atten
Autos:	68.46	3.45		0.11	-1.20	-4.	65 0.	000	0.000
Medium Trucks:	79.45	-15.38		0.13	-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	84.25	-17.11		0.13	-1.20	-5.	43 0.	000	0.000
Unmitigated Noise	Levels (witho	out Topo and I	oarrier a	attenuati	on)				
VehicleType	Leq Peak Hou	r Leq Day	L	eq Evenir	ng Leq N	ight	Ldn	CI	VEL
Autos:	70.	8 6	8.9	6	37.2	61.1	69.	7	70.3
Medium Trucks:	63.	0 6	51.5		55.1	53.6	62.	0	62.
Heavy Trucks:	66.	1 6	64.6		55.6	56.9	65.	2	65.3
Vehicle Noise:	72.	6 7	'0.8	(67.7	63.0	71.	6	72.0
		ntour (in foot)							
Centerline Distanc	e to Noise Co	ntour (in leet)	1	70 /0.4	05.0		00 10 1		
Centerline Distanc	e to Noise Co	ntour (in reer)		70 dBA	65 dl	BA	60 dBA	55	dBA
Centerline Distanc	e to Noise Co		.dn:	70 dBA 63	65 dl	BA	60 dBA 295	55 6	35

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	FHW	A-RD-77-108 I	HIGHWA'	Y NC	DISE PI	REDICT	ION MOI	DEL				
Scenar	Scenario: 2040 Road Name: 3rd Street					Project	Name: /	Airport	Gateway	Spec	ific P	•
Road Nam	ne: 3rd Street					Job N	lumber: *	13635				
Road Segme	nt: Tippecanoe	Avenue to Del	Rosa Dri	ve								
SITE	SPECIFIC INI	PUT DATA				1	IOISE N	IODE	L INPUT	s		
Highway Data				Si	te Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt): 1	9,594 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	(xles):	15			
Peak H	lour Volume:	1,959 vehicles			He	avy Tru	cks (3+ A	(xles):	15			
Ve	ehicle Speed:	45 mph		Ve	ehicle l	Mix						
Near/Far La	ne Distance:	27 feet			Veh	icleType		Day	Evening	Nig	ht	Daily
Site Data							Autos:	77.5%	12.9%	9	.6%	97.86%
Ba	rrier Height:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10	.3%	1.28%
Barrier Type (0-W	Vall, 1-Berm):	0.0			F	Heavy T	rucks:	86.5%	2.7%	10	.8%	0.86%
Centerline Di	ist. to Barrier:	50.0 feet		N	nico Sr	urce E	lovation	in fa	oof)			
Centerline Dist.	to Observer:	50.0 feet		/11	//30 00	Auto	e' 0 (000				
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck	5. 0.0	207				
Observer Height ((Above Pad):	5.0 feet			Heal	n Truck	s. 2.	106	Grade Ad	liustr	ent:	0.0
P	ad Elevation:	0.0 feet			near	y much	3. 0.0	000		,		
Ro	ad Elevation:	0.0 feet		Lá	ne Eq	uivalen	t Distanc	e (in :	feet)			
	Road Grade:	0.0%				Auto	s: 48.4	402				
	Left View:	-90.0 degrees	3		Mediu	m Truck	s: 48.2	219				
	Right View:	90.0 degrees	6		Heav	y Truck	s: 48.2	237				
FHWA Noise Mod	el Calculations			-								
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fresn	el	Barrier At	ten	Berr	n Atten
Autos:	68.46	0.99	().11		-1.20		-4.65	0.	000		0.000
Medium Trucks:	79.45	-17.84	(0.13		-1.20		-4.87	0.	000		0.000
Heavy Trucks:	84.25	-19.57	(0.13		-1.20		-5.43	0.	000		0.000
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier at	enu	ation)							
VehicleType	Leq Peak Hour	· Leq Day	Leg	Eve	ening	Leq	Night		Ldn		C٨	IEL
Autos:	68.4	4 6	6.5		64.7		58.6		67.	3		67.9
Medium Trucks:	60.	5 5	9.0		52.7		51.1		59.	6		59.8
Heavy Trucks:	63.0	6 6	2.2		53.2		54.4		62.	8		62.9
Vehicle Noise:	70.	1 6	8.4		65.2		60.6		69.	1		69.6
Centerline Distant	ce to Noise Col	ntour (in feet)										
			7	'0 dE	3A	65	dBA	6	60 dBA		55 0	dBA
		L	dn:	44	44 94			202		43	35	
		CN	EL:	47		1	01		217		46	67

	FH	WA-RD-77-108	HIGHW	AY NO		REDICTIO		DEL			
Scenar Road Nam Road Segme	io: 2040 ne: 3rd Street nt: Sterling Av	venue to Victori	a Avenu	e		Project I Job Nu	Vame: . mber:	Airpor 13635	t Gateway	Specific	Ρ
SITE	SPECIFIC II	NPUT DATA				N	OISE I	NODE	L INPUT	S	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	21,178 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium True	cks (2 /	Axles).	15		
Peak H	lour Volume:	2,118 vehicle	s		He	avy Truck	ks (3+ /	Axles).	15		
Ve	hicle Speed:	45 mph		V	hicle	Mix					
Near/Far La	ne Distance:	27 feet		-	Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data					-	A	utos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height	0.0 feet			М	edium Tru	icks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all_1-Berm):	0.0			1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	oico Si	ourco Elo	vation	e (in f	not)		
Centerline Dist.	to Observer:	50.0 feet		14	use so	Autoo	vauon	s (III I	eelj		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Trucko	. 0.	207			
Observer Height	(Above Pad):	5.0 feet			Hear	a Trucks		006	Grade Ad	iustmen	t· 0.0
P	ad Elevation:	0.0 feet			Tica	ly muchs.	. 0.	000	0/000/10	Juounon	. 0.0
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	48.	402			
	Left View:	-90.0 degre	es		Mediu	m Trucks.	48.	219			
	Right View:	90.0 degre	es		Hear	/y Trucks	48.	237			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	1.33		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-17.51		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-19.23		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	.eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	68	3.7	66.8		65.0		59.0)	67.0	6	68.2
Medium Trucks:	60	0.9	59.4		53.0		51.5	5	59.9	9	60.2
Heavy Trucks:	63	3.9	62.5		53.5		54.7	7	63.	1	63.2
Vehicle Noise:	70	0.5	68.7		65.6		60.9	9	69.4	4	69.9
Centerline Distant	ce to Noise C	ontour (in fee)								
				70 dE	BA	65 d	BA	1	60 dBA	55	5 dBA
			Ldn:	46		99)		213	4	458
		С	NEL:	49		10	6		228	4	492

Thursday, November 19, 2020

	FH	WA-RD-77-10	8 HIGH\	NAY NO	DISE P	REDICTIC	N MODE	L		
Scenar Road Nan Road Segme	io: 2040 ne: 3rd Street nt: Victoria Av	enue to Palm.	Avenue			Project N Job Nui	<i>ame:</i> Airp nber: 136	ort Gateway 35	Specifi	сР
SITE	SPECIFIC IN	NPUT DATA				NC	ISE MO	DEL INPUT	S	
Highway Data				Si	te Cor	ditions (F	lard = 10,	Soft = 15)		
Average Daily Peak Hour	Traffic (Adt):	18,390 vehicle	es		Me	dium Truc	Auto ks (2 Axle	os: 15 (s): 15		
Peak H	lour Volume:	1 839 vehicle			He	avy Truck	s (3+ Ayle	s): 15		
Ve	hicle Sneed	45 mph					0 10 - 7 000			
Near/Far La	ne Distance:	27 feet		V	ehicle	Mix				-
NCall al Ed	ne bistance.	27 1000			Veh	icleType	Da	y Evening	Night	Daily
Site Data						AL	tos: 77.	5% 12.9%	9.6	% 97.86%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 84.	8% 4.9%	10.3	% 1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 86.	5% 2.7%	10.8	% 0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	oise S	ource Ele	ations (ii	n feet)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos'	0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2 297			
Observer Height	(Above Pad):	5.0 feet			Heat	v Trucks	8 006	Grade Ad	liustme	nt: 0.0
P	ad Elevation:	0.0 feet			mou	<i>, , , , , , , , , , , , , , , , , , , </i>	0.000		,	
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L)istance (in feet)		
	Road Grade:	0.0%				Autos:	48.402			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219			
	Right View:	90.0 degre	es		Hear	vy Trucks:	48.237			
FHWA Noise Mod	el Calculation	IS								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier At	ten B	erm Atten
Autos:	68.46	0.71		0.11		-1.20	-4.6	65 O.	000	0.000
Medium Trucks:	79.45	-18.12	2	0.13		-1.20	-4.8	87 0.	000	0.000
Heavy Trucks:	84.25	-19.85	5	0.13		-1.20	-5.4	43 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	r attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	y .	Leq Eve	ening	Leq N	ight	Ldn		CNEL
Autos:	68	3.1	66.2		64.4		58.4	67.	0	67.6
Medium Trucks:	60	0.3	58.8		52.4		50.8	59.	3	59.5
Heavy Trucks:	63	3.3	61.9		52.9		54.1	62.	5	62.6
Vehicle Noise:	69	9.8	68.1		65.0		60.3	68.	8	69.3
Centerline Distan	ce to Noise C	ontour (in fee	t)							
			L	70 dE	ЗA	65 dl	BA	60 dBA	1	55 dBA
			Ldn:	42		90		194		417
		C	NEL:	45		96		208		447

								0022			
Scenari	io: 2040+Proje	ct				Projec	t Name	e: Airpor	t Gateway	Specific	Р
Road Nam	e: Waterman	Avenue				Job N	lumbe	r: 13635			
Road Segmer	nt: 5th Street to	o 3rd Street									
SITE	SPECIFIC IN	PUT DATA				1	NOISE	MODE	EL INPUT	S	
Highway Data				5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt): 3	32,255 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 Axles).	: 15		
Peak H	lour Volume:	3,226 vehicle	s		He	avy Tru	cks (3	+ Axles).	: 15		
Ve	hicle Speed:	40 mph		١	/ehicle l	Mix					
Near/Far La	ne Distance:	67 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86
Bai	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	6 2.7%	10.8%	0.86
Centerline Dis	st. to Barrier:	50.0 feet		,	loise Sr	urce F	levatio	ons (in f	eef)		
Centerline Dist.	to Observer:	50.0 feet		Ľ.		Auto	101 a c.	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	.s.	2 297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s	8.006	Grade Ad	liustment	: 0.0
Pa	ad Elevation:	0.0 feet		-							
Roa	ad Elevation:	0.0 feet		4	ane Eq	uivalen	t Dista	nce (in	feet)		
1	Road Grade:	0.0%				Auto	is: 3	7.453			
	Left View:	-90.0 degree	es		Mediui	n Truck	(S.' 3	7.216			
	Right View:	90.0 degre	es		Heav	у тиск	IS: 3	7.240			
FHWA Noise Mode	el Calculations	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:	66.51	3.67		1.78	3	-1.20		-4.65	0.	000	0.00
Medium Trucks:	77.72	-15.17		1.82	2	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	82.99	-16.90		1.82	2	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	<i>(</i>	Leq Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	70	.8	68.9		67.1		6	1.0	69.	7	70
Medium Trucks:	63	.2	61.7		55.3		5	3.8	62.	2	62
Heavy Trucks:	66	.7	65.3		56.3		5	7.5	65.	9	66
Vehicle Noise:	72	.7	71.0		67.7		6	3.2	71.	7	72
Centerline Distance	ce to Noise Co	ontour (in feet)								
			L	70 d	IBA	65	dBA		50 dBA	55	dBA
		~	Lan:	6	2	1	40		301	6	648

	FH	WA-RD-77-108	HIGHW	AY N	IOISE PI	REDICT	ION MO	DEL			
Scenar Road Nar Road Segme	io: 2040+Proje ne: Waterman nt: Baseline S	ect Avenue treet to 5th Stre	et			Project Job N	t Name: I lumber:	Airport 13635	Gateway	Specific	Ρ
SITE	SPECIFIC IN	NPUT DATA				ľ	NOISE N	IODE		5	
Highway Data				3	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	29,303 vehicles	5				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2 A	(xles):	15		
Peak H	lour Volume:	2,930 vehicles	s		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph			/ohiclo	Mix					
Near/Far La	ne Distance:	27 feet		Ľ	Venicie i	VIIX		Dav	Evening	Night	Daily
Sito Data					ven	icie i ype	Autos	77 5%	12.0%	0.6%	07.96%
Sile Dala				_	M	ر dium T	rucks:	84.8%	4.9%	10.3%	1 28%
Ba.	rrier Height:	0.0 feet				Heavy T	rucks:	86.5%	2.7%	10.8%	0.86%
Barrier Type (0-W	all, 1-Berm):	0.0 50.0 feet				loary l		00.07	2.170	10.070	0.0070
Centerline Dist	to Observer	50.0 feet		1	Voise So	ource E	levation	s (in fe	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Truck	s: 2.2	297			
P	ad Elevation:	0.0 feet			Heav	y Truck	:s: 8.0	006	Grade Ad	ustment	: 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distand	e (in :	feet)		
	Road Grade:	0.0%				Auto	s: 48.4	402	,		
	Left View:	-90.0 deared	s		Mediu	m Truck	s: 48.	219			
	Right View:	90.0 degree	es		Heav	y Truck	s: 48.	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	66.51	3.25		0.1	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	77.72	-15.58		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-17.31		0.13	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	' L	.eq E\	/ening	Leq	Night		Ldn	C	NEL
Autos:	68	3.7	66.8		65.0		58.9		67.6	6	68.2
Medium Trucks:	61	1.1	59.6		53.2		51.6		60.1		60.3
Heavy Trucks:	64	1.6	63.2		54.2		55.4		63.8	3	63.9
Vehicle Noise:	70).6	68.9		65.6		61.1		69.6	6	70.0
Centerline Distant	ce to Noise C	ontour (in feet,)								
			L	70 c	1BA	65	dBA	6	i0 dBA	55	dBA
			Ldn:	4	7	1	01		218	4	170
		CI	VEL:	5	U	1	80		234	Ę	503

	FH\	NA-RD-77-108 HIG	HWAY	NOISE PI	REDICTI	ON MOD	EL					
Scenari Road Nam Road Segmer	Scenario: 2040+Project Road Name: Tippecanoe Avenue Road Segment: Baseline Street to 6th Street					Name: Ai Imber: 13	irport Ga 3635	teway S	pecific P	,		
SITE	SPECIFIC IN	IPUT DATA			N	OISE M	ODEL II	NPUTS				
Highway Data				Site Con	ditions ('Hard = 1	0, Soft =	: 15)				
Average Daily	Traffic (Adt):	20,437 vehicles				A	utos:	15				
Peak Hour	Percentage:	10.00%		Me	dium Tru	cks (2 Ax	des):	15				
Peak H	our Volume:	2,044 vehicles		Heavy Trucks (3+ Axles): 15								
Ve	hicle Speed:	45 mph		Vehicle	Mix							
Near/Far La	ne Distance:	24 feet		VehicleType Day Evening Night Da								
Site Data				ven	A	utos: 7	7.5%	12.9%	9.6%	97.86%		
Data Data		0.0.64		м	edium Tr	ucks: 8	4.8%	4.9%	10.3%	1.28%		
Barrier Type (0 W	all 1 Rorm):	0.0 reet		1	Heavy Tr	ucks: 8	6.5%	2.7%	10.8%	0.86%		
Centerline Di	st to Barrier	44.0 feet										
Centerline Dist	to Observer:	44.0 feet		Noise So	ource Ele	evations	(in feet)					
Barrier Distance	to Observer:	0.0 feet			Autos	0.00	00					
Observer Height (Diserver Height (Above Pad): 5.0 feet					2.29	97 50 Cm	ada Adiu	otmont	0.0		
Pa	ad Elevation:	0.0 feet		Heavy Trucks: 8.006 Grade Adjustment: 0.0								
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in feet,)				
1	Road Grade:	0.0%			Autos	: 42.6	26					
	Left View:	-90.0 degrees		Mediu	m Trucks	42.4	18					
	Right View:	90.0 degrees		Heavy Trucks: 42.439								
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresne	l Bar	rier Attei	n Berr	n Atten		
Autos:	68.46	1.17	0.9	94	-1.20	-4	4.61	0.00	00	0.000		
Medium Trucks:	79.45	-17.66	0.9	97	-1.20	-4	4.87	0.00	00	0.000		
Heavy Trucks:	84.25	-19.39	0.9	96	-1.20		5.50	0.00	00	0.000		
Unmitigated Noise	e Levels (with	out Topo and barr	ier attei	nuation)								
VehicleType	Leq Peak Hou	ır Leq Day	Leq E	Evening	Leq I	Vight	Ldi	n	C٨	IEL		
Autos:	69	.4 67.5		65.7		59.6		68.3		68.9		
Medium Trucks:	61	.6 60.0		53.7		52.1		60.6		60.8		
Heavy Trucks:	64	.6 63.2		54.2		55.4		63.8		63.9		
Vehicle Noise:	Vehicle Noise: 71.1 69.4					61.6		70.1		70.6		
Centerline Distance	enterline Distance to Noise Contour (in feet)											
			70	70 dBA 65 dBA 60 dBA 5			55 (dBA				
		Ldn:	4	45 96 208			44	17				
		CNEL:		48	10	13	223	3	48	30		

Thursday, November 19, 2020

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MO	DEL					
Scenai Road Nan Road Segme	Scenario: 2040+Project Road Name: Tippecanoe Avenue Road Segment: 6th Street to 3rd Street					Project Job N	Name: I lumber:	Airpor 13635	t Gateway S	Specific	P		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	EL INPUT	3			
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)				
Average Daily Peak Hour	Traffic (Adt): Percentage:	21,388 vehicle 10.00%	s		Me	edium Tri	ucks (2 A	Autos Axles)	: 15 : 15				
Peak	lour volume:	2,139 vehicle	s		Tieavy Trucks (3+ Axies). 13								
Ve	enicle Speed:	45 mpn		V	ehicle	Mix							
Near/Far La	ine Distance:	24 feet			Veh	nicleType	1	Day	Evening	Night	Daily		
Site Data						ŀ	Autos:	77.5%	6 12.9%	9.6%	6 97.86%		
Ba	rrier Heiaht:	0.0 feet			М	ledium Ti	rucks:	84.8%	6 4.9%	10.3%	6 1.28%		
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	6 0.86%		
Centerline D	ist. to Barrier:	44.0 feet		N	oise S	ource El	evation	s (in f	ieet)				
Centerline Dist.	to Observer:	44.0 feet				Auto:	s: 0.0	000	,				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.1	297					
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	006	Grade Adj	ustmer	nt: 0.0		
P	ad Elevation:	0.0 feet											
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	t Distand	ce (in	feet)				
	Road Grade:	0.0%				Auto	s: 42.	626					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 42.4	418					
	Right View:	90.0 degre	es		Hear	vy Truck	s: 42.	439					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten		
Autos:	68.46	1.37		0.94		-1.20		-4.61	0.0	00	0.000		
Medium Trucks:	79.45	-17.46		0.97		-1.20		-4.87	0.0	00	0.000		
Heavy Trucks:	84.25	-19.19		0.96		-1.20		-5.50	0.0	00	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)								
VehicleType	Leq Peak Hou	ur Leq Day	' Le	eq Eve	ening	Leq	Night		Ldn	(CNEL		
Autos:	69	9.6	67.7		65.9		59.8		68.5		69.1		
Medium Trucks:	61	1.8	60.2		53.9		52.3		60.8		61.0		
Heavy Trucks:	64	1.8	63.4		54.4		55.6	;	64.0)	64.1		
Vehicle Noise:	71	1.3	69.6		66.4		61.8	3	70.3		70.8		
Centerline Distan	ce to Noise C	ontour (in feet)										
				70 dE	BA	65	dBA		60 dBA	5	5 dBA		
			Ldn:	46		g	99		214		461		
	CNEL:					10	07		230		495		

	FH\	NA-RD-77-108	HIGH	WAY N	IOISE PF	REDICTIO	N MODI	ΞL			
Scenar	rio: 2040+Proje	ect				Project N	lame: Aii	rport	Gateway	Specific F	>
Road Nar	ne: Tippecanoe	e Avenue				Job Nur	nber: 13	635			
Road Segme	ent: Mill Street f	o Orange Sho	w Road	I /San E	Bernardir	no Avenue	÷				
SITE	SPECIFIC IN	IPUT DATA				NO	ISE MO	DDEI		S	
Highway Data				5	Site Con	ditions (H	lard = 10), So	ft = 15)		
Average Daily	Traffic (Adt):	57,683 vehicle	s				AL	itos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 Ax	les):	15		
Peak H	Hour Volume:	5,768 vehicle	s		He	avy Truck	s (3+ Ax	les):	15		
Ve	ehicle Speed:	45 mph		١	/ehicle I	Mix					
Near/Far La	ane Distance:	27 feet		F	Vehi	icleType	D	ay	Evening	Night	Daily
Site Data					-	Au	tos: 7	7.5%	12.9%	9.6%	97.86%
Ra	rrier Height	0.0 feet			Me	edium Tru	cks: 84	4.8%	4.9%	10.3%	1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	cks: 86	6.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	50.0 feet			Noise Se	urce Elos	ations	in fo	of		
Centerline Dist.	to Observer:	50.0 feet		'	10/30 30	Autos	0.00	0	09		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks:	2.20	7			
Observer Height	(Above Pad):	5.0 feet			Heav	n Trucks.	2.23	6	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet			neav	y mucho.	0.00	0	0/000/10	dounioni.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent D)istance	(in f	eet)		
	Road Grade:	0.0%				Autos:	48.40	12			
	Left View:	-90.0 degre	es		Mediur	n Trucks:	48.21	9			
	Right View:	90.0 degre	es		Heav	y Trucks:	48.23	7			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	1	Barrier Att	en Ben	m Atten
Autos:	68.46	5.68		0.11	1	-1.20	-4	.65	0.0	000	0.00
Medium Trucks:	79.45	-13.15		0.13	3	-1.20	-4	.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.88		0.13	3	-1.20	-5	.43	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	/	Leq Ev	/ening	Leq Ni	ght		Ldn	CI	VEL
Autos:	73	.0	71.1		69.4		63.3		72.0)	72.
Medium Trucks:	65	.2	63.7		57.4		55.8		64.3	3	64.
Heavy Trucks:	68	.3	66.9		57.8		59.1		67.4	+	67.
Vehicle Noise:	74	.8	73.1		69.9		65.2		73.8	3	74.2
	ce to Noise Co	ontour (in feet)	70 -	10.4	05 -11			0.404		-/0.4
Centerline Distan				70 G	IBA	65 at	SA	6	лавА	55	aвя
Centerline Distan			I day	~	2	100			41E		04
Centerline Distan		~	Ldn:	89	9	193	ş ,		415	8	94 50

Thursday, November 19, 2020

	FHV	VA-RD-77-108 HIC	SHWAY	NOISE PR	REDICTIC	N MODEL			
Scenari Road Nam Road Segmer	o: 2040+Proje e: Tippecanoe nt: 3rd Street to	ect Avenue o Mill Street			Project N Job Nur	lame: Airpo mber: 1363	t Gateway S	Specific P	
SITE	SPECIFIC IN	IPUT DATA			NC	DISE MOD	EL INPUTS	5	
Highway Data				Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 5	53,690 vehicles		Mo	dium Truc	Autos	15		
Peak Hour	our Volume:	5 360 vohiclos		He	avv Truck	κ3 (2 Αλίδο)	. 15		
reak n	bicle Speed	45 mph		1100	avy muck	3 (3+ Axies)	. 13		
Near/Ear La	nicie Speeu.	45 mpn		Vehicle N	lix				
Neal/Fal La	le Distance.	67 leet		Vehi	cleType	Day	Evening	Night D	≀aily
Site Data					Au	itos: 77.5	% 12.9%	9.6% 97	′.86%
Bai	rier Height:	0.0 feet		Me	dium Tru	cks: 84.8	% 4.9%	10.3% 1	.28%
Barrier Type (0-W	all, 1-Berm):	0.0		E	leavy Tru	cks: 86.5	% 2.7%	10.8% C).86%
Centerline Dis	st. to Barrier:	50.0 feet		Noise So	urce Elev	vations (in	feet)		
Centerline Dist.	to Observer:	50.0 feet			Autos:	0.000	000		
Barrier Distance	to Observer:	0.0 feet		Modiur	n Trucke	2 207			
Observer Height (bserver Height (Above Pad): 5.0 feet				v Trucks:	2.207	Grade Adi	ustment [.] 0 (0
Pa	ad Elevation:	0.0 feet		incur,	y macks.	0.000	,		-
Roa	ad Elevation:	0.0 feet		Lane Equ	ivalent D	Distance (in	feet)		
I	Road Grade:	0.0%			Autos:	37.453			
	Left View:	-90.0 degrees		Mediur	n Trucks:	37.216			
	Right View:	90.0 degrees		Heav	y Trucks:	37.240			
FHWA Noise Mode	el Calculation:	s							
VehicleType	REMEL	Traffic Flow D	listance	Finite	Road	Fresnel	Barrier Atte	en Berm A	tten
Autos:	68.46	5.37	1.	78	-1.20	-4.65	0.0	000	0.000
Medium Trucks:	79.45	-13.47	1.	82	-1.20	-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-15.19	1.	82	-1.20	-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and ban	rier atte	nuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq N	ight	Ldn	CNEL	
Autos:	74	.4 72.5	5	70.7		64.7	73.3	3	73.9
Medium Trucks:	66	.6 65.1	I	58.7		57.2	65.6	6	65.9
Heavy Trucks:	69	.7 68.3	3	59.2		60.5	68.8	3	68.9
Vehicle Noise:	76	.2 74.4	ļ	71.3		66.6	75.1		75.6
Centerline Distance	e to Noise Co	ontour (in feet)							
			70) dBA	65 dE	BA	60 dBA	55 dB/	4
		Ldn	: 1	110 237 512 1,			1,102		
		CNEL	: '	118	255	5	549	1,182	

	FH)	WA-RD-77-108	HIGHV	VAY N	IOISE PI	REDICT		DEL				
Scenar	<i>io:</i> 2040+Proje				Project	Name: I	Airport	Gateway	/ Spe	cific F	,	
Road Nan	ne: Tippecano	e Avenue				Job N	umber: ·	13635				
Road Segme	nt: Orange Sh	ow Road/ San	Bernard	lino Av	enue to	Harrima	n Place	/ I-10 '	WB Ram	ρs		
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE		тs		
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	38,921 vehicle	s				,	Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	(xles):	15			
Peak H	lour Volume:	3,892 vehicle	s		He	avy Truc	:ks (3+ A	(xles)	15			
Ve	ehicle Speed:	45 mph		1	/ehicle	Nix						
Near/Far La	ane Distance:	67 feet		- F	Veh	icleTvne		Dav	Evening	Nie	aht	Daily
Site Data				-			utos:	77.5%	12.9%	6 9	9.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	6 10	0.3%	1.28%
Barrier Type (0-V	Vall 1-Rerm)	0.0 1001			ŀ	leavy Ti	ucks:	86.5%	2.7%	6 10	.8%	0.86%
Centerline Di	ist. to Barrier:	50.0 feet						- (i - 6	41			
Centerline Dist.	to Observer:	50.0 feet		-	voise Sc	ource El	evations	s (IN 16	eet)			
Barrier Distance	to Observer:	0.0 feet				Autos	5: U.U	JUU 207				
Observer Height	(Above Pad):	5.0 feet			Mealui	n Trucks	5. Z.4	297	Grade A	divet	nont	0.0
P	ad Elevation:	0.0 feet			Heav	y Trucks	5. 8.0	000	Graue A	ujusti	nent.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	e (in	feet)			
	Road Grade:	0.0%				Autos	s: 37.4	453				
	Left View:	-90.0 degre	es		Mediu	n Truck	s: 37.1	216				
	Right View:	90.0 degre	es		Heav	y Truck	s: 37.1	240				
ELIMA Noise Med	al Calaulatian											
VehicleType	REMEI	Traffic Flow	Dieta	nce	Finite	Road	Fresn	al	Rarrier A	tten	Rer	m Atten
Autos	68.46	3.97	21010	1.78	3	-1.20	110011	-4.65	0	000	2011	0.000
Medium Trucks:	79.45	-14.86		1.82	2	-1.20		-4.87		000		0.000
Heavy Trucks:	84.25	-16.59		1.82	2	-1.20		-5.43	C	0.000		0.000
Inmitigated Nois	o Lovole (with	out Topo and	harrior	atton	ustion)							
VehicleType	Lea Peak Ho	ur Lea Day		l ea Eu	venina	Lea	Niaht		l dn	_	CA	JEI
Autos	73	3.0	71.1	209 21	69.3	204	63.3		71	.9	0.	72.
Medium Trucks:	65	5.2	63.7		57.3		55.8		64	1.3		64.5
Heavy Trucks:	68	3.3	66.9		57.8		59.1		67	.4		67.6
Vehicle Noise:	74	1.8	73.0		69.9		65.2		73	8.8		74.3
Centerline Distan	ce to Noise C	ontour (in feet)									
		(70 a	iBA	65	dBA	e	60 dBA	Т	55	dBA
			Ldn:	89	9	19	92		413		8	89
		С	NEL:	9	5	20	06		443		9	54

Thursday, November 19, 2020

	FH\	NA-RD-77-108	HIGHWA	Y NO	OISE P	REDICTI		DEL	_	_	_	
Scenar Road Nam Road Segme	Scenario: 2040+Project Road Name: Del Rosa Drive Road Segment: SR-210 EB Ramps to Highland Av					Project Job N	Name: / umber: ^	Airport 13635	Gateway	Specific	P	
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5		
Highway Data				S	ite Col	nditions	(Hard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	28,538 vehicle	s		Autos: 15							
Peak Hour	Percentage:	10.00%			Me	edium Tru	icks (2 A	(xles)	15			
Peak H	lour Volume:	2,854 vehicle	s		He	eavy Truc	:ks (3+ A	(xles)	15			
Ve	hicle Speed:	45 mph		V	ohiclo	Mix						
Near/Far La	ne Distance:	27 feet		-	Vel	nicleType		Dav	Evenina	Niaht	Daily	
Site Data							Autos:	77.5%	12.9%	9.6%	97.86%	
Ba	rrier Heiaht:	0.0 feet			N	ledium Tr	ucks:	84.8%	4.9%	10.3%	5 1.28%	
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%	
Centerline Di	st. to Barrier:	50.0 feet		N	loise S	ource El	evation	s (in fe	pet)			
Centerline Dist.	to Observer:	50.0 feet			0.0000	Auto	s' 0 (000				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 20	297				
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	s: 8.0	206	Grade Adi	ustmen	t: 0.0	
P	ad Elevation:	0.0 feet				, , , , , , , , , , , , , , , , , , , ,	. 0.0		,			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	ce (in i	feet)			
	Road Grade:	0.0%				Autos	s: 48.4	402				
	Left View:	-90.0 degree	es		Mediu	im Trucks	s: 48.2	219				
	Right View:	90.0 degree	es		Hea	vy Truck	s: 48.2	237				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten	
Autos:	68.46	2.62		0.11		-1.20		-4.65	0.0	000	0.000	
Medium Trucks:	79.45	-16.21		0.13		-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	84.25	-17.94		0.13		-1.20		-5.43	0.0	000	0.000	
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType	Leq Peak Hou	ur Leq Day	/ Le	q Eve	ening	Leq	Night		Ldn	C	NEL	
Autos:	70	0.0	68.1		66.3	3	60.3		68.9)	69.5	
Medium Trucks:	62	2.2	60.7		54.3	3	52.8		61.2	2	61.5	
Heavy Trucks:	65	5.2	63.8		54.8	3	56.0)	64.4	-	64.5	
Vehicle Noise:	71	.8	70.0		66.9)	62.2	2	70.7	, 	71.2	
Centerline Distant	ce to Noise Co	ontour (in feet)			-						
			ட	70 dl	BA	65 0	dBA	6	60 dBA	55	5 dBA	
			Ldn:	56		12	20		260		559	
		Ci	NEL:	60	1	12	29		278		600	

	FHW	/A-RD-77-108	HIGHV	VAY NO	OISE PF	REDICTI		DEL			
Scenar Road Nam Road Segmei	io: 2040+Proje ne: Del Rosa Di nt: Pacific Stree			Project Job N	Name: / umber: '	Airport 13635	Gateway	Specific I	Þ		
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE		s	
Highway Data				S	ite Con	ditions	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	7,618 vehicles					,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	1,762 vehicles	;		He	avy Truc	ks (3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	27 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						F	utos:	77.5%	12.9%	9.6%	97.869
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.289
Barrier Type (0-W	all. 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet			laiaa Ca	uree El	vetion	in fe	of		
Centerline Dist.	to Observer:	50.0 feet		1	use sc	Autor	evauons		el)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucki	. 0.0	000			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	. 2.4 : 8(106	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			near	y mache	. 0.0	000	0/000/10	aotinoni	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in f	feet)		
	Road Grade:	0.0%				Autos	: 48.4	402			
	Left View:	-90.0 degree	s		Mediui	m Trucks	: 48.	219			
	Right View:	90.0 degree	s		Heav	y Trucks	. 48.	237			
FHWA Noise Mode	el Calculations	1									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	0.53		0.11		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-18.31		0.13		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-20.03		0.13		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (witho	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	1	Leq Eve	ening	Leq	Vight		Ldn	CI	NEL
Autos:	67.	9	56.0		64.2		58.2		66.8	3	67.
Medium Trucks:	60.	1	58.6		52.2		50.7		59.1	1	59.
Heavy Trucks:	63.	2	j1.7		52.7		53.9		62.3	3	62.
Vehicle Noise:	69.	7	57.9		64.8		60.1		68.6	j	69.
Centerline Distance	ce to Noise Co	ntour (in feet)		70 /							
				70 di	ВА	65 0	1BA	6	и авА	55	авА
			alua i			~	7		400		0.5
			dn:	41		8	7		188	4	05

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PR	REDICTIC	ON MODEL			
Scenari Road Nam Road Segmer	o: 2040+Proje e: Del Rosa I nt: Highland A	ect Drive venue to Pacifi	c Street			Project N Job Nu	lame: Airpo mber: 1363	rt Gateway 5	Specific F	
SITE	SPECIFIC IN	NPUT DATA				NC	DISE MOD	EL INPUT	S	
Highway Data				S	ite Con	ditions (H	Hard = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	21,885 vehicle	s				Autos	s: 15		
Peak Hour	Percentage:	10.00%			Mee	dium Truc	cks (2 Axles): 15		
Peak H	our Volume:	2,189 vehicle	s		Hea	avy Truck	is (3+ Axles): 15		
Vei	hicle Speed:	35 mph		v	ehicle N	lix				
Near/Far Lar	ne Distance:	14 feet			Vehi	cleType	Day	Evening	Night	Daily
Site Data						AL	itos: 77.5	% 12.9%	9.6%	97.86%
Bar	rier Heiaht [.]	0.0 feet			Me	dium Tru	cks: 84.8	% 4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tru	cks: 86.5	% 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	33.0 feet		N	loise So	urce Ele	vations (in	feet)		
Centerline Dist.	to Observer:	33.0 feet				Autos:	0.000	1		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.297			
Observer Height (bserver Height (Above Pad): 5.0 feet				Heav	y Trucks:	8.006	Grade Ad	justment:	0.0
Pa	ad Elevation:	0.0 feet					Distance (is	64		
Roa	ad Elevation:	0.0 feet		L	ane Equ	livalent L	Jistance (II	i reet)		
,	Road Grade:	0.0%			Madium	Autos:	32.634			
	Right View:	-90.0 degre 90.0 degre	es es		Heav	y Trucks:	32.362			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresnel	Barrier Att	en Beri	m Atten
Autos:	64.30	2.56		2.68		-1.20	-4.52	2 0.0	000	0.000
Medium Trucks:	75.75	-16.27		2.73		-1.20	-4.86	5 0.0	000	0.000
Heavy Trucks:	81.57	-18.00		2.73		-1.20	-5.69	9 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	q Eve	ening	Leq N	light	Ldn	CI	IEL
Autos:	68	3.3	66.4		64.7		58.6	67.2	2	67.8
Medium Trucks:	61	1.0	59.5		53.1		51.6	60.1	1	60.3
Heavy Trucks:	65	5.1	63.7		54.6		55.9	64.2	2	64.4
Vehicle Noise:	70).5	68.8		65.4		61.0	69.	5	70.0
Centerline Distance	e to Noise C	ontour (in feet)	70 /	DA I	65 41	DA I	60 dBA	FF	ARA
			I dn:	31	DA	20 00	- M	142	35	07
		0	NEI ·	33 71 152 22			28			
		0		55		/ 1		102	0.	20

	FH\	NA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTI	ON MO	DEL					
Scena Road Nar	Scenario: 2040+Project Road Name: Del Rosa Drive Road Segment: Baseline Street to 9th Street					Project Name: Airport Gateway Specific P Job Number: 13635							
Road Segme	ent: Baseline Si	treet to 9th Stre	et										
SITE	SPECIFIC IN	IPUT DATA				N	OISE I	NODE	EL INPUT	S			
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)				
Average Daily	Traffic (Adt):	18,647 vehicle	s					Autos	: 15				
Peak Hour	r Percentage:	10.00%			Me	dium Tru	ıcks (2 /	Axles)	: 15				
Peak I	Hour Volume:	1,865 vehicle	s		He	avy Truc	:ks (3+ /	Axles)	: 15				
Ve	ehicle Speed:	45 mph		v	ehicle	Mix							
Near/Far La	ane Distance:	27 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data						A	lutos:	77.5%	6 12.9%	9.6	% 97.86%		
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	6 4.9%	10.3	% 1.28%		
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	6 2.7%	10.8	% 0.86%		
Centerline D	ist. to Barrier:	50.0 feet		N	nisa Si	ource El	ovation	e (in f	oot)				
Centerline Dist.	to Observer:	50.0 feet			0136 01	Autos	. 0	000	000				
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucki	. 0.	207					
Observer Height	bserver Height (Above Pad): 5.0 feet				Heavy Trucks: 8 006 Grade Adjustment: 0.0								
F	ad Elevation:	0.0 feet			near	ly much	. 0.	000		,			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)				
	Road Grade:	0.0%				Autos	s: 48.	402					
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 48.	219					
	Right View:	90.0 degre	es		Hear	/y Trucks	s: 48.	237					
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	ten B	erm Atten		
Autos	68.46	0.77		0.11		-1.20		-4.65	0.	000	0.000		
Medium Trucks:	79.45	-18.06		0.13		-1.20		-4.87	0.	000	0.000		
Heavy Trucks	84.25	-19.79		0.13		-1.20		-5.43	0.	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)								
VehicleType	Leq Peak Hou	ir Leq Day	/ l	Leq Ev	ening	Leq	Night		Ldn		CNEL		
Autos:	68	.1	66.2		64.5		58.4	4	67.	0	67.7		
Medium Trucks:	60	.3	58.8		52.5		50.9	9	59.	4	59.6		
Heavy Trucks	63	.4	62.0		52.9		54.2	2	62.	5	62.7		
Vehicle Noise:	69	1.9	68.2		65.0		60.3	3	68.	9	69.3		
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 dl	BA	65 0	dBA		60 dBA	5	i5 dBA		
			Ldn:	42 91 195				421					
		NEL:	45		9	7		210		452			

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH\	NA-RD-77-108	HIGHW	VAY NO	DISE P	REDICTIC	N MODE	L				
Scenai Road Nan Road Segme	Scenario: 2040+Project Road Name: Del Rosa Drive Road Segment: 9th Street to 6th Street					Project N Job Nu	<i>lame:</i> Airp mber: 136	ort Gateway 35	Specific	Ρ		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INPUT	S			
Highway Data				Si	ite Cor	nditions (I	lard = 10,	Soft = 15)				
Average Daily Peak Hour	Traffic (Adt): Percentage:	18,802 vehicle 10.00%	s		Ме	edium Truc	Aut ks (2 Axle	os: 15 s): 15				
Peak F	lour Volume:	1,880 vehicle	s		He	avy Truck	s (3+ Axle	s): 15				
Ve	hicle Speed:	45 mph		V	ehicle	Mix						
Near/Far La	ne Distance:	27 feet			VehicleType Day Evening Night Da							
Site Data						AL	itos: 77.	5% 12.9%	9.6%	97.86%		
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 84.	8% 4.9%	10.3%	1.28%		
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	cks: 86.	5% 2.7%	10.8%	0.86%		
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations (ii	n feet)				
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.000					
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297					
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks	8.006	Grade Ad	iustmen	t: 0.0		
P	ad Elevation:	0.0 feet				,						
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distance (in feet)				
	Road Grade:	0.0%				Autos:	48.402					
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219					
	Right View:	90.0 degre	es		Hear	vy Trucks:	48.237					
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier Att	en Be	rm Atten		
Autos:	68.46	0.81		0.11		-1.20	-4.6	65 0.0	000	0.000		
Medium Trucks:	79.45	-18.02		0.13		-1.20	-4.8	87 0.0	000	0.000		
Heavy Trucks:	84.25	-19.75		0.13		-1.20	-5.4	43 0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)							
VehicleType	Leq Peak Hou	ur Leq Daj	′ L	Leq Eve	ening	Leq N	ight	Ldn	C	NEL		
Autos:	68	3.2	66.3		64.5		58.5	67.	1	67.7		
Medium Trucks:	60).4	58.9		52.5		50.9	59.4	4	59.6		
Heavy Trucks:	63	3.4	62.0		53.0		54.2	62.6	3	62.7		
Vehicle Noise:	69	9.9	68.2		65.1		60.4	68.9	9	69.4		
Centerline Distan	ce to Noise Co	ontour (in feel)									
				70 dE	ЗA	65 di	BA	60 dBA	55	i dBA		
			Ldn:	42 91 196				423				
	CNEL:					98		211		454		

	FHW	A-RD-77-1001	light	WATN		LEDIOTI					
Scenari	Scenario: 2040+Project						Name: A	Airport	Gateway	Specific I	Þ
Road Nam	e: Sterling Ave	nue				Job Ni	imber: 1	3635			
Road Segmer	t: Base Line to	9th Street									
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				3	Site Con	ditions ('Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	6,871 vehicles					1	Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	cks (2 A	xles):	15		
Peak H	our Volume:	1,687 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Vel	nicle Speed:	40 mph		1	/ehicle N	lix					
Near/Far Lar	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	50.0 feet		-	Voise So	urce Ele	vations	: (in fe	ef)		
Centerline Dist. I	to Observer:	50.0 feet		i i	10,00 00	Autos	. 00	000			
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Trucks	20	997			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks	. 8.0	006	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet		L.							
Roa	d Elevation:	0.0 feet		4	ane Equ	iivalent	Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos	: 48.4	102			
	Left View:	-90.0 degrees	6		Mediur	n Trucks	48.2	219			
	Right View:	90.0 degrees	5		Heav	y Trucks	48.4	237			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el .	Barrier Att	en Ber	m Atten
Autos:	66.51	0.85		0.1	1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	77.72	-17.98		0.13	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-19.71		0.13	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and b	arrie	r atten	uation)						
VehicleType	Leq Peak Hour	· Leq Day		Leg Ev	/ening	Leq I	Vight		Ldn	CI	NEL
Autos:	66.	3 6	4.4		62.6		56.6		65.3	2	65
Medium Trucks:	58.	7 5	7.2		50.8		49.3		57.	r	57
Heavy Trucks:	62.	26	0.8		51.8		53.0		61.4	1	61.
Vehicle Noise:	68.	2 6	6.5		63.2		58.7		67.3	2	67.
Centerline Distanc	e to Noise Co	ntour (in feet)		70				-			10.4
			. L	70 0	вА	65 0	IBA	6	U dBA	55	aBA
		L	an:	3	3	70			101	3	20
							-				

Thursday, November 19, 2020

	FHV	VA-RD-77-108 H	IIGHW	AY N	IOISE PF	REDICT	ION MO	DEL				
Scenar	io: 2040+Proie	ct				Proiect	Name:	Airpor	t Gateway	Spe	cific F	2
Road Nan	ne: Del Rosa D	rive				Job N	umber:	13635				
Road Segme	nt: 6th Street to	o 3rd Street										
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPU	rs		
Highway Data				3	Site Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt): 1	14,758 vehicles						Autos:	15			
Peak Hour	Percentage:	10.00%			Me	dium Tru	ucks (2)	Axles).	15			
Peak H	our Volume:	1,476 vehicles			He	avy Truc	cks (3+)	Axles).	15			
Ve	hicle Speed:	45 mph			Vohiclo	liv						
Near/Far La	ne Distance:	27 feet		-	Venicie i Vehi	riix cleTvne		Dav	Evening	Ni	aht	Daily
Site Data				+	veni	cie i ype	Autos	77.5%	L Verning	14	9.6%	97.86%
one butu		0.0.6			Me	dium Ti	ucks:	84.8%	6 1 <u>2.0</u> %	1	0.3%	1.28%
Ba Barrier Type (0 M	rrier Height:	0.0 feet			F	leavv Ti	rucks:	86.5%	6 2.7%	1	J.8%	0.86%
Centerline Di	ist to Barrier	50.0 feet										
Centerline Dist	to Observer:	50.0 feet		/	Noise So	urce El	evation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto:	s: 0.	000				
Observer Height	(Above Pad):	5.0 feet			Mediur	n Truck	s: 2.	297				
P	Observer Height (Above Pad): 5.0 teet Pad Elevation: 0.0 feet				Heav	y Truck	s: 8.	006	Grade A	ajust	nent:	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	ivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 48.	402				
	Left View:	-90.0 degrees			Mediur	n Truck	s: 48.	219				
	Right View:	90.0 degrees			Heav	y Truck	s: 48.	237				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier A	tten	Berr	m Atten
Autos:	68.46	-0.24		0.1	1	-1.20		-4.65	C	.000	-	0.00
Medium Trucks:	79.45	-19.08		0.13	3	-1.20		-4.87	C	.000		0.00
Heavy Trucks:	84.25	-20.80		0.13	3	-1.20		-5.43	C	.000		0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	tten	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ev	vening	Leq	Night		Ldn		CN	VEL
Autos:	67	.1 6	5.2		63.5		57.4	1	66	.0		66.0
Medium Trucks:	59	.3 5	7.8		51.4		49.9	9	58	.4		58.0
Heavy Trucks:	62	.4 6	1.0		51.9		53.2	2	61	.5		61.
Vehicle Noise:	68	.9 6	7.1		64.0		59.3	3	67	.9		68.3
Centerline Distan	ce to Noise Co	ontour (in feet)										
-				70 c	dBA	65	dBA	(60 dBA		55	dBA
		L	dn:	3	6	7	8		167		30	60
		CN	EL:	3	9	8	3		179		3	86

	FH1	WA-RD-77-108	HIGHV	NAY N	NOISE PE	REDICTI	ON MO	DEL				
Scenario: 2040+Project					Project Name: Airport Gateway Specific P							
Road Name: Sterling Avenue						Job N	umber:	13635				
Road Segme	nt: 9th Street 1	to 6th Street										
SITE		NOISE MODEL INPUTS										
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily	16,551 vehicles			Autos: 15								
Peak Hour	10.00%			Medium Trucks (2 Axles): 15								
Peak H	1,655 vehicles			Heavy Trucks (3+ Axles): 15								
Ve	hicle Speed:	40 mph		5	Vehicle I	Nix						
Near/Far La	ne Distance:	27 feet		-	Veh	cleTvpe		Dav	Evenina	Nia	ht	Dailv
Site Data							Autos:	77.5%	6 12.9%	9.	.6%	97.86%
Ba	rrier Height	0.0 feet			Me	edium Ti	ucks:	84.8%	6 4.9%	10.	.3%	1.28%
Barrier Type (0-V	/all. 1-Berm):	0.0			ŀ	leavy Ti	ucks:	86.5%	6 2.7%	10.	.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		H	N- i 0-			- 6- 4	41			
Centerline Dist. to Observer:		50.0 feet		Ľ	Noise Sc	ource El	evation	s (in t	eet)			
Barrier Distance	0.0 feet				Autos	s: 0.0	000					
Observer Height	5.0 feet			Mediui	n Truck	s: 2.2	297	Out de A				
P	0.0 feet			Heav	y Trucks	s: 8.0	006	Grade Ad	ijustri	ient:	0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)							
Road Grade:		0.0%			Autos: 48.402							
Left View:		-90.0 degrees			Mediu	n Truck	s: 48.	219				
Right View:		90.0 degrees			Heavy Trucks: 48.237							
FHWA Noise Mod	el Calculation	S Troffic Flow	Diete		Finite	Bood	Ereen		Parriar At	ton	Borr	Atton
venicie rype	REIVIEL	Trainic Flow	Dista	0.1	1 Finite	1 20	Flesh	4 65	Darrier Al	000	Derri	
Autos. Madium Truaka	27.70	19.07		0.1	۱ ۵	-1.20		4.00	0.	000		0.000
Heavy Trucks.	92.00	-10.07		0.1	3 9	-1.20		-4.07	0.	000		0.000
neavy mucks.	02.99	-19.79		0.1	3	-1.20		-9.45	0.	000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	' atten	uation)							
VehicleType	Leq Peak Hou	ur Leq Day	1	Leq E	vening	Leq	Night		Ldn		CN	IEL
Autos:	Autos: 66.2		64.3		62.5	56.5		5	65.1		65.7	
Medium Trucks: 58		.6 57.1			50.7	49.2		57.6		57.9		
Heavy Trucks: 6		2.1	60.7		51.7	52.9		9	61.3		61.4	
Vehicle Noise:	68	3.1	66.4		63.1		58.6	6	67.	1		67.6
Centerline Distan	ce to Noise C	ontour (in feet)									
70					dBA	A 65 dBA		1	60 dBA		55 dBA	
			Ldn:	3	2	6	9		149		32	21
		C	NEL:	3	4	7	4		160		34	14

Thursday, November 19, 2020
	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE P	REDICTIO	ON MODE	L		
Scenai Road Nan Road Segme	rio: 2040+Proj ne: Sterling Av nt: 6th Street				Project N Job Nu	lame: Air mber: 136	oort Gateway	Speci	fic P	
SITE	SPECIFIC II	NPUT DATA				N	DISE MO	DEL INPUT	s	
Highway Data				Si	ite Cor	nditions (l	Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	19,001 vehicle	s				Au	tos: 15		
Peak Hour	Percentage:	10.00%			Me	aium Truc	CKS (2 AXI	es): 15		
Peak F	lour Volume:	1,900 vehicle	s		He	eavy Truck	(S (3+ AXI	es): 15		
Ve	enicie Speed:	40 mpn		V	ehicle	Mix				
Near/Far La	ine Distance:	27 feet			Veh	nicleType	Da	y Evening	Nigł	nt Daily
Site Data						A	utos: 77	.5% 12.9%	9.	5% 97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 84	.8% 4.9%	10.	3% 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 86	.5% 2.7%	10.	8% 0.86%
Centerline D	ist. to Barrier:	50.0 feet		N	oise S	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.000)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.297	,		
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks	8.006	Grade Ad	ljustm	ent: 0.0
P	ad Elevation:	0.0 feet		-					-	
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	48.402	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.219	9		
	Right View:	90.0 degre	es		Hea	vy Trucks:	48.23	/		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier At	ten	Berm Atten
Autos:	66.51	1.37		0.11		-1.20	-4.	65 O.	000	0.000
Medium Trucks:	77.72	-17.47		0.13		-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	82.99	-19.19		0.13		-1.20	-5.	43 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Day	/ 1	Leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	66	3.8	64.9		63.1		57.1	65.	7	66.3
Medium Trucks:	59	9.2	57.7		51.3		49.8	58.	2	58.5
Heavy Trucks:	62	2.7	61.3		52.3		53.5	61.	9	62.0
Vehicle Noise:	68	3.7	67.0		63.7		59.2	67.	7	68.2
Centerline Distan	ce to Noise C	ontour (in feet)	70 /	2.4			60 - ID A	-	55 - 1D A
				70 dE	sА	65 d	ва	oU dBA	1	oo aba
		~	Lan:	35		76		104		352
		C	NEL:	38		81		175		3//

	FHV	/A-RD-77-108	HIGH	WAY NO	DISE PR	EDICTI	ION MC	DEL			
Scenari	o: 2040+Proje	ct				Project	Name:	Airpor	t Gateway	Specific I	2
Road Nam	e: Victoria Ave	nue				Job N	umber:	13635			
Road Segmer	t: Pacific Stree	et to Base Line	•								
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	: 10, Se	oft = 15)		-
Average Daily	Traffic (Adt): 2	2,899 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tru	icks (2	Axles):	15		
Peak H	our Volume:	2,290 vehicles	s		Hea	avy Truc	cks (3+	Axles):	15		
Vel	nicle Speed:	40 mph		v	ehicle N	lix					-
Near/Far Lar	ne Distance:	24 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						#	Autos:	77.5%	5 12.9%	9.6%	97.869
Bar	rier Heiaht:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			h	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	44.0 feet		A	laisa Sa	urco El	ovation	e (in f	nof)		
Centerline Dist. t	to Observer:	44.0 feet		N	0136 30	Auto		000	eeŋ		
Barrier Distance t	o Observer:	0.0 feet			Modiur	n Truck	5. U	207			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Truck	5. Z. e' 8	006	Grade Ad	liustment	.00
Pa	d Elevation:	0.0 feet			nour,	,	. 0			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos	s: 42	.626			
	Left View:	-90.0 degree	es		Mediun	n Trucks	s: 42	.418			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 42	.439			
FHWA Noise Mode	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	ten Ber	m Atten
Autos:	66.51	2.18		0.94		-1.20		-4.61	0.	000	0.00
Medium Trucks:	77.72	-16.66		0.97		-1.20		-4.87	0.	000	0.00
Heavy Trucks:	82.99	-18.38		0.96		-1.20		-5.50	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						-
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	68.	4	66.5		64.8		58.	7	67.	3	67.
Medium Trucks:	60.	8	59.3		53.0		51.	4	59.	9	60.
Heavy Trucks:	64.	4	63.0		53.9		55.	2	63.	5	63.
venicie Noise:	70.	4	68.6		65.4		60.	8	69.	4	69.
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 -	DA 1	67			C dBA		dD A
			l dai	70 01	5A	050	uBA c		10E	55	UDA
		~	Lun:	40		8	0		100	3	99
		0	VLL.	43	8	9	~		150	4	Z 1

	FH\	WA-RD-77-108	HIGH	I YAWH	NOISE PI	REDICTI	ON MO	DEL			
Scenari Road Nam Road Segmer	o: 2040+Proje e: Victoria Av nt: Highland A	eet		Project Job N	Name: umber:	Airport 13635	Gateway	Speci	ric P		
SITE	SPECIFIC IN	NPUT DATA				N	OISE I	MODE	L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	30,874 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2)	Axles):	15		
Peak H	our Volume:	3,087 vehicles	6		He	avy Truc	:ks (3+)	Axles):	15		
Vel	hicle Speed:	40 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	24 feet		-	Veh	icleTvne		Dav	Evenina	Niał	nt Daily
Site Data					1011		lutos:	77.5%	12.9%	9.0	6% 97.86%
Ba	wier Height	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3	3% 1.28%
Barrier Type (0-W	all 1-Berm)	0.0 1001			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.	8% 0.86%
Centerline Dis	all, 1-Derrin).	44.0 feet		-							
Centerline Dist	to Observer:	44.0 feet		H	Noise Sc	burce El	evation	s (in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	s: 0.	000			
Observer Height (Above Pad);	5.0 feet			Mediui	m Trucks	s: 2.	297	0		
Pa	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8.	006	Grade Ad	ijustm	ent: 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos	s: 42.	.626			-
	Left View:	-90.0 degree	s		Mediu	m Trucks	s: 42.	418			
	Right View:	90.0 degree	s		Heav	y Trucks	5: 42.	439			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	ten l	Berm Atten
Autos:	66.51	3.48		0.9	94	-1.20		-4.61	0.	000	0.00
Medium Trucks:	77.72	-15.36		0.9	97	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	82.99	-17.09		0.9	96	-1.20		-5.50	0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hou	ur Leq Day		Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	69	9.7	67.8		66.1		60.0	D	68.	6	69.3
Medium Trucks:	62	2.1	60.6		54.3		52.7	7	61.	2	61.4
Heavy Trucks:	65	5.7	64.3		55.2		56.5	5	64.	8	64.9
Vehicle Noise:	71	1.7	69.9		66.7		62.1	1	70.	7	71.
Centerline Distance	e to Noise C	ontour (in feet)									
				70	dBA	65 (dBA	6	60 dBA		55 dBA
			Ldn:	4	19	10	05		226		487
		CI	VEL:	5	52	11	12		242		521

	FH	WA-RD-77-108	HIGHW	AY NC	DISE P	REDICTIC	N MOD	DEL			
Scenario Road Name Road Segment	2040+Proje Victoria Av Base Line	ect enue to 9th Street				Project N Job Nui	lame: A nber: 1	irport 3635	Gateway	Specifi	сP
SITE S	PECIFIC II	IPUT DATA				NC	ISE M	ODE	L INPUT	5	
Highway Data				Si	te Con	ditions (H	lard = 1	10, Sc	oft = 15)		
Average Daily T Peak Hour F	raffic (Adt): Percentage:	18,319 vehicle 10.00%	s		Ме	dium Truc	A ks (2 A	utos: xles):	15 15		
Peak Ho	ur Volume:	1,832 vehicle	s		He	avy Truck	s (3+ A)	xles):	15		
Veh	icle Speed:	45 mph		Ve	hicle	Mix					
Near/Far Lan	e Distance:	24 feet			Veh	icleType	L	Day	Evening	Night	Daily
Site Data						Au	tos: 7	7.5%	12.9%	9.6	% 97.86%
Barr	ier Heiaht:	0.0 feet			М	edium Tru	cks: 8	34.8%	4.9%	10.3	% 1.28%
Barrier Type (0-Wa	II, 1-Berm):	0.0			1	Heavy Tru	cks: 8	86.5%	2.7%	10.8	% 0.86%
Centerline Dist	to Barrier:	44.0 feet		No	oise So	ource Elev	ations	(in fe	eet)		
Centerline Dist. to	o Observer:	44.0 feet				Autos:	0.0	00	,		
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height (A	bove Pad):	5.0 feet			Hear	/y Trucks:	8.0	06	Grade Adj	iustme	nt: 0.0
Pac	d Elevation:	0.0 feet									
Road	d Elevation:	0.0 feet		La	ne Eq	uivalent L	vistance	e (in i	teet)		
R	oad Grade:	0.0%				Autos:	42.6	26			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	42.4	18			
	Right View:	90.0 degre	es		Heat	/y Trucks:	42.4	39			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	9/	Barrier Att	en B	erm Atten
Autos:	68.46	0.70		0.94		-1.20	-	4.61	0.0	000	0.000
Medium Trucks:	79.45	-18.14		0.97		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	84.25	-19.86		0.96		-1.20	-	5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType L	eq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leg N	ight		Ldn		CNEL
Autos:	68	3.9	67.0		65.2		59.2		67.8	3	68.4
Medium Trucks:	61	.1	59.6		53.2		51.7		60.1	I	60.4
Heavy Trucks:	64	.2	62.7		53.7		54.9		63.3	3	63.4
Vehicle Noise:	70).7	68.9		65.8		61.1		69.6	6	70.1
Centerline Distance	e to Noise C	ontour (in feet)			-					
				70 dE	BA	65 dE	BA	e	60 dBA	1	55 dBA
			Ldn:	42		90			193		416
		C	NEL:	45		96			207		446

Thursday, November 19, 2020

Thursday, November 19, 2020

	FH\	VA-RD-77-108	HIGHWA	Y NO	DISE P	REDICTI		DEL		_	
Scenar Road Nam Road Segme	Scenario: 2040+Project Road Name: Victoria Avenue Road Segment: 9th Street to 6th Street						Name: A umber: 1	Airport 13635	Gateway S	Specific	P
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	15,558 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	1,556 vehicle	s		He	eavy Truc	:ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	24 feet			Veł	nicleTyne		Dav	Evenina	Niaht	Daily
Site Data					101	A	Autos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	/all_1-Berm)	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	44.0 feet						. C	41		
Centerline Dist.	to Observer:	44.0 feet		N	oise S	ource El	evations		eet)		
Barrier Distance	to Observer:	0.0 feet			M	Autos	s: 0.0	000			
Observer Height	(Above Pad):	5.0 feet			Mediu	ITT TTUCKS	5. 2.2	197	Crada Adi	untmont	
P	ad Elevation:	0.0 feet			неа	vy Trucks	5. 8.0	006	Graue Auj	usuneni	. 0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	luivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos	s: 42.6	626			
	Left View:	-90.0 degre	es		Mediu	im Trucks	s: 42.4	118			
	Right View:	90.0 degre	es		Hea	vy Trucks	s: 42.4	139			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distand	ce	Finite	Road	Fresne	el 🛛	Barrier Atte	en Bei	m Atten
Autos:	68.46	-0.01		0.94		-1.20		4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.85		0.97		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	84.25	-20.57		0.96		-1.20		-5.50	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier at	tenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	/ Le	q Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	68	.2	66.3		64.5	5	58.5		67.1		67.7
Medium Trucks:	60	.4	58.9		52.5	5	51.0		59.4		59.7
Heavy Trucks:	63	.4	62.0		53.0)	54.2		62.6	i	62.7
Vehicle Noise:	69	.9	68.2		65.1		60.4		68.9		69.4
Centerline Distant	ce to Noise Co	ontour (in feet)								
				70 dE	BA	65 (dBA	6	60 dBA	55	dBA
		_	Ldn:	37		8	0		173	3	373
		C	NEL:	40		8	6		186	4	100

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PE	REDICTI	ON MOI	DEL			
Scenari Road Nam Road Segmer	io: 2040+Proje e: 6th Street nt: Tippecanoe	ct Avenue to De	Rosa	Drive		Project Job N	Name: A umber: 1	Airport 3635	Gateway	Specific I	Þ
SITE	SPECIFIC IN	PUT DATA				N	OISE N	IODE		s	
Highway Data				S	Site Con	ditions	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	6,601 vehicles	s				A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	660 vehicles	s		He	avy Truc	ks (3+ A	xles):	15		
Vei	hicle Speed:	40 mph		v	/ehicle l	Mix					
Near/Far La	ne Distance:	20 feet		_	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	30.0 feet			loiso Sc	urco El	wations	(in fo	of		
Centerline Dist.	to Observer:	30.0 feet			10/30 00	Autos	. 0.0	00	.00		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	. 0.0	97			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	. 8.0	06	Grade Ad	iustment	: 0.0
Pa	ad Elevation:	0.0 feet		_		,					
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in f	feet)		
F	Road Grade:	0.0%				Autos	:: 28.7	23			
	Left View:	-90.0 degree	es		Mediui	m Trucks	. 28.4	13			
	Right view:	90.0 degree	es		Heav	у тиска	. 28.4	44			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	66.51	-3.22		3.51	1	-1.20		4.49	0.0	000	0.00
Medium Trucks:	77.72	-22.06		3.58	3	-1.20		4.86	0.0	000	0.00
Heavy Trucks:	82.99	-23.78		3.57	7	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	rening	Leq I	Vight		Ldn	CI	NEL
Autos:	65	.6	63.7		61.9		55.9		64.5	5	65.
Medium Trucks:	58	.0	56.5		50.2		48.6		57.1	1	57.
Heavy Trucks:	61	.6	60.2		51.1		52.4		60.7	7	60.
	67	.6	65.8		62.5		58.0		66.5	5	67.
Vehicle Noise:											
Vehicle Noise: Centerline Distance	e to Noise Co	ntour (in feet,)	70	0.4	07	04		0 -0 4		-10.4
Centerline Distance	e to Noise Co	ntour (in feet,) L dni	70 d	IBA	65 0	iBA	6	0 dBA	55	dBA
Vehicle Noise: Centerline Distanc	ce to Noise Co	ntour (in feet,) Ldn:	70 d	IBA B	65 d	1BA 8	6	0 dBA 82	55	dBA 76

	FH	WA-RD-77-108	HIGH	WAY NC	DISE P	REDICT	ION MO	DEL			
Scenar Road Nam Road Segmei	io: 2040+Proje e: Victoria Av nt: 6th Street t	ect enue to 3rd Street				Project Job N	t Name: . lumber:	Airport 13635	Gateway	Specific	Ρ
SITE	SPECIFIC II	NPUT DATA				1	NOISE	NODE		S	
Highway Data				Si	te Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	13,593 vehicle 10.00% 1,359 vehicle	s		Me He	edium Tr eavy Tru	ucks (2) ucks (3+)	Autos: Axles): Axles):	15 15 15		
Ve	hicle Speed:	45 mph		Ve	ehicle	Mix					
Near/Far La	ne Distance:	24 feet		_	Veh	nicleType	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.86%
Ba	rrior Hoiaht	0.0 feet			М	ledium T	rucks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.86%
Centerline Di	st. to Barrier:	44.0 feet		N	oise S	ource E	levation	s (in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Auto	os: 0.	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	(s: 2.)	297			
Observer Height (Above Pad):	5.0 feet			Hea	vy Truck	(s: 8.	006	Grade Ad	justmen	t: 0.0
Pa	ad Elevation:	0.0 feet		1.	no Fo	winden	t Diatan	na (in i	feet)		
Roa	ad Elevation:	0.0 feet		Le	ine Eq	uivaien	UIStant		eel)		
	Road Grade:	0.0%			Madiu	AUIO	NS: 42.	020			
	Right View:	90.0 degre	es es		Hea	vy Truck	(s: 42. (s: 42.	418 439			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresr	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-0.60		0.94		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-19.43		0.97		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-21.16		0.96		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	·	Leq Eve	ening	Leq	Night		Ldn	0	NEL
Autos:	67	7.6	65.7		63.9		57.9)	66.	5	67.1
Medium Trucks:	59	9.8	58.3		51.9		50.4	ł	58.8	3	59.1
Heavy Trucks:	62	2.9	61.4		52.4		53.6	6	62.0)	62.1
Vehicle Noise:	69	9.4	67.6		64.5	;	59.8	3	68.3	3	68.8
Centerline Distant	ce to Noise C	ontour (in feet)								
			. <i>.</i> L	70 dE	ЗA	65	dBA	6	i0 dBA	5	5 dBA
			Ldn:	34			73		158		341
		C	VEL:	37			/9		170		366

	FH	WA-RD-77-10	8 HIGH	IWAY N	OISE P	REDICTIC	ON MOE	DEL			
Scena Road Nar Road Segme	rio: 2040+Proj ne: 6th Street ent: Del Rosa [g Aven	ue		Project N Job Nu	lame: A mber: 1	irport 3635	Gateway S	pecific I	þ	
SITE	SPECIFIC II	NPUT DATA				NO	DISE M	ODE	L INPUTS	5	
Highway Data				S	Site Cor	nditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	10,461 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Truc	cks (2 A	xles):	15		
Peak I	Hour Volume:	1,046 vehicle	es		He	avy Truck	(S (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		L.	(ohiclo	Miy					
Near/Far La	ane Distance:	20 feet			Veh	icleTyne		Dav	Evenina	Night	Daily
Site Data				-	Ven	Ai	itos: 7	77 5%	12.9%	9.6%	97.86%
one pata		0.0.6			м	edium Tru	icks: 8	34.8%	4.9%	10.3%	1.28%
Barrier Type (0 k	Vall 1 Rerm):	0.0 feet				Heavy Tru	icks: 8	36.5%	2.7%	10.8%	0.86%
Centerline D	ist to Barrier	30.0 feet		_							
Centerline Dist	to Observer:	30.0 feet		N	loise S	ource Ele	vations	(in fe	et)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	00			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Trucks:	2.2	97			
F	ad Elevation:	0.0 feet			Hea	vy Trucks:	8.0	06	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Autos:	28.7	23	,		
	Left View:	-90.0 deare	es		Mediu	m Trucks:	28.4	13			
	Right View:	90.0 degre	es		Hea	vy Trucks:	28.4	44			
FHWA Noise Moo	lel Calculatior	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos	66.51	-1.2	2	3.51	1	-1.20	-	4.49	0.0	00	0.000
Medium Trucks:	77.72	-20.06	3	3.58	3	-1.20	-	4.86	0.0	00	0.000
Heavy Trucks	82.99	-21.79	9	3.57	,	-1.20	-	5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	l barrie	er attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Ev	rening	Leq N	light		Ldn	CI	VEL
Autos	6	7.6	65.7		63.9		57.9		66.5		67.1
Medium Trucks	60	0.0	58.5		52.2		50.6		59.1		59.3
Heavy Trucks:	6	3.6	62.2		53.1		54.4		62.7		62.9
Vehicle Noise:	6	9.6	67.8		64.5		60.0		68.5		69.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 d	BA	6	0 dBA	55	dBA
			Ldn:	24	1	52			111	2	40
		(NEL:	26	3	55			119	2	57

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	FH	WA-RD-77-108	HIGHV	VAY NC	DISE P	REDICTIO		EL		
Scenai Road Nan Road Segme	rio: 2040+Proj ne: 6th Street nt: Sterling Av	a Avenu	e		Project I Job Nu	Name: Ai mber: 13	rport Gatev 635	way Spe	cific P	
SITE	SPECIFIC II	NPUT DATA				N	DISE MO	DEL INF	PUTS	
Highway Data				Si	te Cor	nditions (Hard = 1	0, Soft = 1	5)	
Average Daily	Traffic (Adt):	14,810 vehicle	s				AL	itos: 15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	cks (2 Ax	les): 15		
Peak F	lour Volume:	1,481 vehicle	s		He	eavy Truck	ks (3+ Ax	<i>les):</i> 15		
Ve	ehicle Speed:	40 mph		Ve	ehicle	Mix				
Near/Far La	ane Distance:	20 feet			Veh	nicleType	D	ay Even	ning Nig	ght Daily
Site Data						A	utos: 7	7.5% 12	.9% 9	9.6% 97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 84	4.8% 4.	.9% 10	0.3% 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 8	6.5% 2.	.7% 10	0.8% 0.86%
Centerline D	ist. to Barrier:	30.0 feet		N	oise S	ource Ele	vations	(in feet)		
Centerline Dist.	to Observer:	30.0 feet				Autos.	0.00	0		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7		
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks.	8.00	6 Grad	e Adjusti	ment: 0.0
P	ad Elevation:	0.0 feet		_					-	
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent	Distance	(in feet)		
	Road Grade:	0.0%				Autos.	28.72	23		
	Left View:	-90.0 degre	es		Mediu	m Trucks	28.41	3		
	Right View:	90.0 degre	es		Hea	vy Trucks.	28.44	14		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrie	er Atten	Berm Atten
Autos:	66.51	0.29		3.51		-1.20	-4	1.49	0.000	0.000
Medium Trucks:	77.72	-18.55		3.58		-1.20	-4	.86	0.000	0.000
Heavy Trucks:	82.99	-20.28		3.57		-1.20	-5	5.77	0.000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Daj	/ 1	Leq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	69	9.1	67.2		65.4		59.4		68.0	68.6
Medium Trucks:	6	1.5	60.0		53.7		52.1		60.6	60.8
Heavy Trucks:	6	5.1	63.7		54.6	i	55.9		64.2	64.4
Vehicle Noise:	7	1.1	69.3		66.0	1	61.5		70.1	70.5
Centerline Distan	ce to Noise C	ontour (in feet)		_					-
			∟	70 dE	ЗA	65 d	BA	60 dBA	1	55 dBA
		-	Ldn:	30		65	5	140		302
		С	NEL:	32		70)	150		324

	FHW	/A-RD-77-108	HIGH	WAY N	OISE PF	EDICTI	ом мо	DEL			
Scenari	o: 2040+Proje	ct				Project	Name:	Airport	Gateway	Specific I	>
Road Nam	e: 5th Street					Job Ni	imber:	13635			
Road Segmer	t: I-215 NB Ra	amps to E Stre	et								
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE	L INPUT	s	
Highway Data				s	ite Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 4	9,877 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	cks (2 /	Axles):	15		
Peak H	our Volume:	4,988 vehicle	s		Hea	avy Truc	ks (3+ /	Axles):	15		
Vel	nicle Speed:	45 mph		V	ehicle N	lix					
Near/Far Lar	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bar	rier Heiaht:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	t. to Barrier:	50.0 feet			laisa Sa	urco Ek	wation	e (in f	nof)		
Centerline Dist. t	o Observer:	50.0 feet			0130 00	Autor	. 0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Trucks	. 0.	207			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks	. 2.	006	Grade Ad	iustment	· 0.0
Pa	d Elevation:	0.0 feet			mour	,	. 0.			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	: 48.	402			
	Left View:	-90.0 degree	es		Mediur	n Trucks	: 48.	219			
	Right View:	90.0 degre	es		Heav	y Trucks	: 48.	237			
FHWA Noise Mode	l Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	5.05		0.11		-1.20		-4.65	0.	000	0.000
Medium Trucks:	79.45	-13.79		0.13		-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-15.51		0.13		-1.20		-5.43	0.	000	0.000
Unmitigated Noise	Levels (witho	out Topo and	barrie	er attenı	uation)						
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Ev	ening	Leq I	Vight		Ldn	CI	NEL
Autos:	72.	4	70.5		68.8		62.7	7	71.	3	71.9
Medium Trucks:	64.	6	63.1		56.7		55.2	-	63.	5 D	63.9
Heavy Trucks:	67.	7	66.2		57.2		58.5	5	66.	3	66.9
Vehicle Noise:	74.	2	72.4		69.3		64.6	5	73.	2	73.6
Centerline Distanc	e to Noise Co	ntour (in feet)	70.4							
			L	70 d	ВА	65 0	IBA	6	O aBA	55	aBA
			Lan:	81		17	5		3//	8	70
		0			,	40					

FH	WA-RD-77-108 HIG	HWAY I	NOISE PF	REDICTIO	N MODE	L			
Scenario: 2040+Proj Road Name: 6th Street Road Segment: Victoria Av	ect renue to Central Ave	enue		Project N Job Nur	ame: Air nber: 136	oort Gate	way Spe	ecific P	
SITE SPECIFIC II	NPUT DATA			NC	ISE MO	DEL IN	PUTS		
Highway Data			Site Con	ditions (H	lard = 10	, Soft = 1	5)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	12,715 vehicles 10.00% 1,272 vehicles 40 mph		Me He	dium Truc avy Truck	Aut ks (2 Axle s (3+ Axle	bos: 15 es): 15 es): 15	5 5		
Near/Far Lane Distance:	20 feet		Vehicle I	Nix					
Hour a Earo Biotanoo.	20 1001		Vehi	icleType	Da	y Ever	ning N	ight Daily	Ý
Site Data				Au	tos: 77	.5% 12	.9%	9.6% 97.86	39
Barrier Height:	0.0 feet		Me	edium Tru	cks: 84	.8% 4	.9% 1	0.3% 1.28	3%
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	leavy Tru	cks: 86	.5% 2	7% 1	0.8% 0.86	39
Centerline Dist. to Barrier:	30.0 feet	ŀ	Noise Sc	ource Elev	ations (i	n feet)			-
Centerline Dist. to Observer:	30.0 feet	ŀ		Autos:	0.000)			-
Barrier Distance to Observer:	0.0 feet		Mediu	n Trucks	2.297	,			
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.006	Grad	le Adiust	ment: 0.0	
Pad Elevation:	0.0 feet		nour	y maono.	0.000				
Road Elevation:	0.0 feet	-	Lane Eq	uivalent E	Distance	(in feet)			
Road Grade:	0.0%			Autos:	28.723	3			
Left View:	-90.0 degrees		Mediur	n Trucks:	28.413	3			
Right View:	90.0 degrees		Heav	y Trucks:	28.444	1			
FHWA Noise Model Calculation	ıs								-
VehicleType REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	Barrie	er Atten	Berm Atte	n
Autos: 66.51	-0.38	3.5	51	-1.20	-4.	49	0.000	0.0	0
Medium Trucks: 77.72	-19.21	3.5	58	-1.20	-4.	86	0.000	0.0	00
Heavy Trucks: 82.99	-20.94	3.5	57	-1.20	-5.	77	0.000	0.0	10
Unmitigated Noise Levels (with	out Topo and barr	rier atter	nuation)						-
VehicleType Leq Peak Ho	ur Leq Day	Leq E	vening	Leq N	ight	Ldn		CNEL	
Autos: 6	8.4 66.5		64.8		58.7		67.3	68	в.
Medium Trucks: 6	0.9 59.4		53.0		51.5		59.9	60	0.:
Heavy Trucks: 6	4.4 63.0		54.0		55.2		63.6	63	3.
Vehicle Noise: 7	0.4 68.7		65.4		60.9		69.4	69	9.
Centerline Distance to Noise C	ontour (in feet)								
		70	dBA	65 dE	BA	60 dB/	4	55 dBA	
	Ldn:	2	27	59		127		273	
	CNEL:	2	29	63		136		292	

	FH\	WA-RD-77-108 H	IGHWAY	NOISE PR	REDICTI	ON MODE	L		
Scenar Road Nam Road Segme	io: 2040+Proje ne: 5th Street nt: E Street to	ect Waterman Avenu	ie		Project I Job Nu	Vame: Air Imber: 136	oort Gateway i35	Specific F	Þ
SITE	SPECIFIC IN	IPUT DATA			N	OISE MO	DEL INPUT	s	
Highway Data				Site Con	ditions (Hard = 10	Soft = 15)		
Average Daily	Traffic (Adt):	35,053 vehicles				Aut	os: 15		
Peak Hour	Percentage:	10.00%		Me	dium Tru	cks (2 Axle	es): 15		
Peak H	lour Volume:	3,505 vehicles		He	avy Truc	ks (3+ Axle	es): 15		
Ve	hicle Speed:	45 mph		Vehicle I	Mix				
Near/Far La	ne Distance:	27 feet		Veh	icleType	Da	y Evening	Night	Daily
Site Data					A	utos: 77	.5% 12.9%	9.6%	97.86%
Ba	rrier Heiaht:	0.0 feet		Me	edium Tru	ucks: 84	.8% 4.9%	10.3%	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0		ŀ	leavy Tri	ucks: 86	.5% 2.7%	10.8%	0.86%
Centerline Di	st. to Barrier:	50.0 feet		Noise So	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	50.0 feet			Autos	: 0.000)		
Barrier Distance	to Observer:	0.0 feet		Mediu	n Trucks	2.297	,		
Observer Height ((Above Pad):	5.0 feet		Heav	v Trucks	: 8.006	Grade Ad	ljustment.	0.0
Pa	ad Elevation:	0.0 feet						-	
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	in feet)		
	Road Grade:	0.0%			Autos	: 48.402	<u>'</u>		
	Left View:	-90.0 degrees		Mediui	m Trucks	48.219)		
	Right view:	90.0 degrees		Heav	y Trucks	48.23			
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	68.46	3.52	0.	.11	-1.20	-4.	65 0.	000	0.000
Medium Trucks:	79.45	-15.32	0.	.13	-1.20	-4.	87 0.	000	0.000
Heavy Trucks:	84.25	-17.05	0.	.13	-1.20	-5.	43 0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and ba	rrier atte	enuation)					
VehicleType	Leq Peak Hou	ur Leq Day	Leq	Evening	Leq N	light	Ldn	CI	VEL
Autos:	70).9 69	.0	67.2		61.2	69.	8	70.4
Medium Trucks:	63	8.1 61	.6	55.2		53.6	62.	1	62.3
Heavy Trucks:	66	64 64	.7	55.7		56.9	65.	3	65.4
Vehicle Noise:	72	2.6 70	.9	67.8		63.1	71.	6	72.1
Centerline Distant	ce to Noise C	ontour (in feet)							
			70) dBA	65 a	'BA	60 dBA	55	dBA
		Ld	n:	64	13	8	298	6	41
		CNE	L:	69	14	8	319	6	88

Thursday, November 19, 2020

	FH	NA-RD-77-108	HIGHW	AY NO	DISE P	REDICTI		DEL			
Scenai Road Nan Road Segme	rio: 2040+Proje ne: 5th Street nt: Waterman	pecanoe	Avenu	ie	Project Job Ni	Name: / umber: *	Airpor 13635	Gateway	Specific	P	
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	ite Cor	nditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	26,783 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Tru	icks (2 A	xles).	15		
Peak H	lour Volume:	2,678 vehicle	s		He	eavy Truc	ks (3+ A	xles).	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	14 feet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Ba	rrier Height:	0.0 feet			М	ledium Tr	ucks:	84.8%	4.9%	10.3%	5 1.28%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline D	ist. to Barrier:	33.0 feet		N	oise S	ource Ele	evations	s (in f	eet)		
Centerline Dist.	to Observer:	33.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	: 8.0	006	Grade Adj	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 32.0	534			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 32.0	362			
	Right View:	90.0 degre	es		Hea	vy Trucks	32.	389			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	2.35		2.68		-1.20		-4.52	0.0	000	0.000
Medium Trucks:	79.45	-16.49		2.73		-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	84.25	-18.21		2.73		-1.20		-5.69	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	72	2.3	70.4		68.6		62.6		71.2	2	71.8
Medium Trucks:	64	.5	63.0		56.6	i	55.1		63.5	5	63.8
Heavy Trucks:	67	.6	66.1		57.1		58.4		66.7	,	66.8
Venicle Noise:	14	1.1	72.3		69.2		64.5		73.0)	73.5
Centerline Distan	ce to Noise C	ontour (in feet)	70 -4	24		10.4		0 10 4		- 10 4
			L day	70 db	ЪА	050	DA 2	L '	244	55	DUBA FOF
		~	LUII: NEL	53		11	0		244		525 564
		C	NEL.	90		12			202		004

	FHV	VA-RD-77-108	BHIG	HWAY N	OISE PF	REDICT		ODEL			
Scenari	o: 2040+Proje	ct				Project	Name	: Airpor	t Gateway	Specific	Р
Road Nam	e: 5th Street					Job N	lumber	: 13635			
Road Segmer	nt: Del Rosa Di	rive to Sterling	g Aver	nue							
SITE	SPECIFIC IN	PUT DATA				1	IOISE	MODE	EL INPUT	S	
Highway Data				5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt): 3	31,191 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	2 Axles).	15		
Peak H	our Volume:	3,119 vehicle	s		He	avy Tru	cks (3-	+ Axles).	15		
Vei	hicle Speed:	45 mph		1	/ehicle l	Nix					
Near/Far La	ne Distance:	27 feet			Veh	cleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.869
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet			loise Sr	urce F	levatic	ns (in f	eef)		
Centerline Dist.	to Observer:	50.0 feet				Auto	e'	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	S.	2 297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s	8.006	Grade Ad	liustment	: 0.0
Pa	ad Elevation:	0.0 feet		_		, ···					
Roa	ad Elevation:	0.0 feet		L	ane Eq	uvalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 4	8.402			
	Left View:	-90.0 degre	es		Mediui	n Truck	S: 4	8.219			
	Right View:	90.0 degre	es		Heav	у ттиск	S: 4	8.231			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:	68.46	3.01		0.11		-1.20		-4.65	0.	000	0.00
Medium Trucks:	79.45	-15.83		0.13	3	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	84.25	-17.55		0.13	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	V	Leq Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	70.	.4	68.5		66.7		60	0.7	69.	3	69.
Medium Trucks:	62.	.6	61.0		54.7		53	3.1	61.	6	61.
Heavy Trucks:	65.	.6	64.2		55.2		50	5.4	64.	8	64.
venicie Noise:	72.	.1	70.4		67.3		62	2.6	/1.	1	/1.
Centerline Distanc	e to Noise Co	ntour (in feet	t)	70	0.4		-0.4		CO -/D 4		-10.4
			I da:	/0 0	IBA	65	aBA		DU dBA	55	aBA
			Lan:	55	9	1	28		210	5	933
		0	NICL -	6	4	4	27		205	6	200

	FHV	VA-RD-77-108 H	IGHWAY	NOISE PI	REDICTIO	ON MOE	DEL			
Scenar Road Nan Road Segme	io: 2040+Proje ne: 5th Street nt: Tippecanoe	ct Avenue to Del F	Rosa Drive	9	Project N Job Nu	lame: A mber: 1	Airport 3635	Gateway	Specific	Ρ
SITE	SPECIFIC IN				N		ODE		9	
Highway Data	SPECIFIC IN	FUI DATA		Site Con	ditions (i	Hard = 1	10. So	ft = 15	3	
Average Daily Peak Hour Peak F Ve	Traffic (Adt): 2 Percentage: lour Volume: hicle Speed:	29,430 vehicles 10.00% 2,943 vehicles 45 mph		Me He	dium Truc avy Truck	A cks (2 A (s (3+ A	Autos: xles): xles):	15 15 15		
Near/Far La	ne Distance:	14 feet		Venicie i	VIIX		Dav	Evening	Night	Daily
Site Data				Ven	icie i ype Ai	itos: 1	77 5%	12.9%	9.6%	97.86%
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0		M	edium Tru Heavy Tru	icks: 8 icks: 8	84.8% 86.5%	4.9%	10.3% 10.8%	1.28% 0.86%
Centerline Di	ist. to Barrier:	33.0 feet		Noise So	ource Ele	vations	(in fe	et)		
Centerline Dist. Barrier Distance Observer Height	to Observer: to Observer: (Above Pad): ad Elevation:	33.0 feet 0.0 feet 5.0 feet 0.0 feet		Mediul Heav	Autos: m Trucks: ry Trucks:	0.0 2.2 8.0	100 197 106	Grade Adj	justmeni	t: 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distanc	e (in f	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees		Mediui Heav	Autos: m Trucks: y Trucks:	32.6 32.3 32.3	34 62 889			
FHWA Noise Mod	el Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	e/	Barrier Att	en Bei	rm Atten
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	2.76 -16.08 -17.80	2. 2. 2.	68 73 73	-1.20 -1.20 -1.20	-	-4.52 -4.86 -5.69	0.0 0.0 0.0	000 000 000	0.00 0.00 0.00
Unmitigated Nois	e Levels (with	out Topo and ba	nrrier atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	light		Ldn	С	NEL
Autos: Medium Trucks: Heavy Trucks:	72. 64. 68.	.7 70 .9 63 .0 66	1.8 1.4 1.6	69.0 57.0 57.5		63.0 55.5 58.8		71.6 63.9 67.1	6 9 1	72. 64. 67.
Vehicle Noise:	74	.5 72	.7	69.6		64.9		73.4	1	73.
Centerline Distan	ce to Noise Co	ntour (in feet)								
		La	70 In:	0 dBA 56	65 d	BA 1	6	0 dBA 260	55	6 <i>dBA</i>
		CNE	:L:	60	12	a		279	6	500

	FH\	WA-RD-77-108	HIGH	NAY N	IOISE PF	REDICTI	ON MO	DDEL			
Scenar Road Nan Road Segme	ne: 2040+Proje ne: 5th Street nt: Sterling Av	Je	Project Name: Airport Gateway Specific P Job Number: 13635 ie								
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard :	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	30,469 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	ıcks (2	Axles):	15		
Peak H	lour Volume:	3,047 vehicle	s		He	avy Truc	:ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		1	/ehicle I	Nix					
Near/Far La	ne Distance:	14 feet		-	Vehi	cleTvpe	1	Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%	12.9%	9.6	% 97.86%
Ba	rrior Hoight:	0.0 foot			Me	edium Ti	ucks:	84.8%	4.9%	10.3	% 1.28%
Barrier Type (0-V	/all 1-Berm)	0.0 1001			F	leavy Ti	ucks:	86.5%	2.7%	10.8	% 0.86%
Centerline Di	ist to Barrier:	33.0 feet		H							
Centerline Dist.	to Observer:	33.0 feet		'	voise So	urce El	evatio	ns (in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	s: ()	0000			
Observer Height	(Above Pad):	5.0 feet			Mediur	n Truck	S: 2	.297	Grade Ac	liustmo	nt: 0.0
P	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8	.000	Graue Au	jusine	nt. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Autos	s: 32	2.634			
	Left View:	-90.0 degre	es		Mediur	n Truck:	s: 32	2.362			
	Right View:	90.0 degre	es		Heav	y Truck:	s: 32	2.389			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier At	ten B	erm Atten
Autos:	68.46	2.91		2.68	3	-1.20		-4.52	0.	000	0.000
Medium Trucks:	79.45	-15.93		2.73	3	-1.20		-4.86	0.	000	0.000
Heavy Trucks:	84.25	-17.65		2.73	3	-1.20		-5.69	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	<i>'</i>	Leq Ev	/ening	Leq	Night		Ldn		CNEL
Autos:	72	2.8	70.9		69.2		63	.1	71.	7	72.4
Medium Trucks:	65	5.1	63.5		57.2		55	.6	64.	1	64.3
Heavy Trucks:	68	3.1	66.7		57.7		58	.9	67.	3	67.4
Vehicle Noise:	74	1.6	72.9		69.7		65	.0	73.	6	74.0
Centerline Distan	ce to Noise Co	ontour (in feet)								
			L	70 a	iBA	65 (dBA	(50 dBA	5	55 dBA
		-	Ldn:	5	7	12	23		266		573
		C	NEL:	6	1	13	52		285		614

Thursday, November 19, 2020

	FH	WA-RD-77-10	B HIGHV	NAY NC	DISE P	REDICTIO		EL			
Scenar Road Nan Road Segme	Scenario: 2040+Project Road Name: 5th Street Road Segment: Victoria Avenue to Central Avenue SITE SPECIFIC INPUT DATA					Project N Job Nu	<i>lame:</i> Ai mber: 13	rport Gate 635	way Spe	cific P	
SITE	SPECIFIC I	IPUT DATA				N	DISE MO	DEL IN	PUTS		
Highway Data				Si	te Cor	nditions (l	Hard = 1	0, Soft = 1	5)		
Average Daily	Traffic (Adt):	34,273 vehicle	s				AL	itos: 15	5		
Peak Hour	Percentage:	10.00%			IVIE	aium Truc	CKS (2 AX	les): 15			
Peak F	lour Volume:	3,427 vehicle	s		He	eavy Truck	(S (3+ AX	les): 15)		
Ve	enicle Speed:	45 mpn		Ve	ehicle	Mix					
Near/Far La	ne Distance:	27 feet			Veh	nicleType	D	ay Ever	ning Ni	ght D	Daily
Site Data						A	utos: 7	7.5% 12	.9% 9	9.6% 97	7.86%
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 84	4.8% 4	.9% 10	0.3% ⁻	1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	icks: 8	6.5% 2	.7% 10	0.8% ().86%
Centerline Di	st. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	(in feet)			
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks	8.00	6 Grad	le Adjusti	ment: 0.	0
P	ad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	48.40)2			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	48.21	9			
	Right View:	90.0 degre	es		Hear	vy Trucks:	48.23	37			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrie	er Atten	Berm A	Atten
Autos:	68.46	3.42		0.11		-1.20	-4	.65	0.000		0.000
Medium Trucks:	79.45	-15.42		0.13		-1.20	-4	.87	0.000		0.000
Heavy Trucks:	84.25	-17.14		0.13		-1.20	-5	5.43	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light	Ldn		CNEL	-
Autos:	70).8	68.9		67.1		61.1		69.7		70.3
Medium Trucks:	63	3.0	61.5		55.1		53.6		62.0		62.2
Heavy Trucks:	66	3.0	64.6		55.6	i	56.8		65.2		65.3
Vehicle Noise:	72	2.5	70.8		67.7	,	63.0		71.5		72.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 d	BA	60 dB/	4	55 dB.	A
		_	Ldn:	63 136 293			632				
	CNEL:					68 146 315 678					

	FHW	/A-RD-77-108	HIGH	HWAY N	IOISE PI	REDICT	ION MO	DDEL			
Scenari	o: 2040+Proje	ct				Project	t Name:	Airpor	t Gateway	Specific	P
Road Nam	e: 5th Street					Job N	lumber:	13635	i í		
Road Segmer	t: Palm Avenu	e to SR-210 E	B Ra	mps							
SITE	SPECIFIC IN	PUT DATA				1	OISE	MODE	EL INPUT	s	
Highway Data				5	Site Con	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt): 5	9,869 vehicles	s					Autos	: 15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles)	: 15		
Peak H	our Volume:	5,987 vehicles	s		He	avy Tru	cks (3+	Axles)	: 15		
Vel	nicle Speed:	45 mph		١	/ehicle	Mix					
Near/Far Lar	ne Distance:	27 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86
Bar	rier Heiaht:	0.0 feet			M	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.86
Centerline Dis	t. to Barrier:	50.0 feet			Voise Sr	urce F	lovatio	ne (in f	oof)		
Centerline Dist. t	o Observer:	50.0 feet		<u>'</u>	10/30 00	Auto		000	000		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck	13. U	207			
Observer Height (J	Above Pad):	5.0 feet			Heav	N Truck	ю. 2 re: Я	006	Grade Ad	iustment	.00
Pa	d Elevation:	0.0 feet			near	y much		.000	0/000/10	Juotimoni	. 0.0
Roa	d Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distar	nce (in	feet)		
F	Road Grade:	0.0%				Auto	os: 48	3.402			
	Left View:	-90.0 degree	es		Mediu	m Truck	is: 48	3.219			
	Right View:	90.0 degree	es		Heav	ry Truck	:s: 48	3.237			
FHWA Noise Mode	l Calculations	1									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atter
Autos:	68.46	5.84		0.11	1	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-12.99		0.13	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.72		0.13	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Ev	/ening	Leq	Night		Ldn	C	NEL
Autos:	73.	2	71.3		69.5		63	.5	72.	1	72
Medium Trucks:	65.	4	63.9		57.5		56	.0	64.4	4	64
Heavy Trucks:	68.	5	67.0		58.0		59	.3	67.0	o S	67
Vehicle Noise:	75.	0	73.2		70.1		65	.4	73.9	9	74
Centerline Distanc	e to Noise Co	ntour (in feet,)	70 -	ID A	65	dBA		60 dBA	55	dD A
			I dn'	70 0	1DA 2	00	07	1	425	1 35	UDA 16
		0		9.	<u>د</u>	1	10		420	5	010
		CI	VEL.	90	0	2	12		+00		00

	FH\	WA-RD-77-108	HIGHWA	AY NOIS	SE PR	REDICT	ION M	DDEL			
Scenari Road Nam Road Segmer	io: 2040+Proje e: 5th Street nt: Central Ave	ect enue to Palm A	venue			Project Job N	t Name. lumber.	Airpor 13635	t Gateway	Specific	Ρ
SITE	SPECIFIC IN	NPUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data				Site	Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	37,004 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tr	ucks (2	Axles).	15		
Peak H	lour Volume:	3,700 vehicles	6		Hea	avy Tru	cks (3+	Axles).	15		
Ve	hicle Speed:	45 mph		Veh	icle N	<i>lix</i>					
Near/Far La	ne Distance:	27 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.86%
Bai	rrior Hoight	0.0 feet			Me	edium T	rucks:	84.8%	6 4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			E	łeavy T	rucks:	86.5%	6 2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		Nois		uree E	lovatio	na (in f	in of l		
Centerline Dist.	to Observer:	50.0 feet		NOIS	se 30	Auto	levalio		eelj		
Barrier Distance	to Observer:	0.0 feet			lodium	Auto	13. (207			
Observer Height (Above Pad):	5.0 feet		N/	Heav	n Truck	.S. 4		Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet			i ieav	y TTUCK	.a. (0.000	0/000/10	actinoni	. 0.0
Roa	ad Elevation:	0.0 feet		Lan	e Equ	iivalen	t Dista	nce (in	feet)		
I	Road Grade:	0.0%				Auto	s: 48	3.402			
	Left View:	-90.0 degree	es	М	lediur	n Truck	:s: 48	3.219			
	Right View:	90.0 degree	es		Heav	y Truck	:s: 48	3.237			
FHWA Noise Mode	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Distan	ce F	inite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos:	68.46	3.75		0.11		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-15.08		0.13		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-16.81		0.13		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenuati	ion)						
VehicleType	Leq Peak Hou	ur Leq Day	Le	q Eveni	ng	Leq	Night		Ldn	C	NEL
Autos:	71	l.1	69.2		67.5		61	.4	70.0)	70.6
Medium Trucks:	63	3.3	61.8		55.4		53	.9	62.3	3	62.6
Heavy Trucks:	66	5.4	65.0		55.9		57	.2	65.	5	65.6
Vehicle Noise:	72	2.9	71.1		68.0		63	.3	71.9	Э	72.3
Centerline Distance	ce to Noise Ce	ontour (in feet)									
				70 dBA		65	dBA	1	60 dBA	55	dBA
			Ldn:	66		1	43		309	6	65
		CI	VEL:	71		1	54		331	7	/13

	FH\	NA-RD-77-108	HIGHW	AY NO	OISE PR	EDICTIC	ON MO	DEL			
Scenar Road Narr	io: 2040+Proje ne: 3rd Street				Project N Job Nu	lame: mber:	Airport 13635	Gateway	Specific	P	
Road Segme	nt: Waterman	Avenue to Tipp	ecanoe /	Avenu	le						
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUT	s	
Highway Data				S	ite Cond	litions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,847 vehicles						Autos:	15		
Peak Hour	Percentage:	10.00%			Med	lium Truc	cks (2 A	Axles):	15		
Peak H	lour Volume:	1,485 vehicles			Hea	avy Truck	(3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		v	ehicle N	lix					
Near/Far La	ne Distance:	27 feet		-	Vehi	leTvpe		Dav	Evenina	Niaht	Daily
Site Data				-		A	utos:	77.5%	12.9%	9.6%	6 97.86%
Ba	rrior Hoight:	0.0 foot			Me	dium Tru	icks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0			Н	leavy Tru	icks:	86.5%	2.7%	10.8%	6 0.86%
Centerline Di	st. to Barrier:	50.0 feet		N	loise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	50.0 feet				Autos	0.	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediun	1 Trucks	2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	/ Trucks:	8.0	006	Grade Ac	ljustmen	nt: 0.0
P	ad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distand	ce (in i	feet)		
	Road Grade:	0.0%				Autos:	48.	402			
	Left View:	-90.0 degree	s		Mediun	1 Trucks:	48.	219			
	Right View:	90.0 degree	s		Heavy	/ Trucks:	48.	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite I	Road	Fresn	el	Barrier At	ten Be	erm Atten
Autos:	68.46	-0.22		0.11		-1.20		-4.65	0.	000	0.000
Medium Trucks:	79.45	-19.05		0.13		-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-20.78		0.13		-1.20		-5.43	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and I	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Ev	ening	Leq N	light		Ldn	0	CNEL
Autos:	67	.2 6	35.3		63.5		57.4	Ļ	66.	1	66.7
Medium Trucks:	59	.3 5	57.8		51.5		49.9)	58.	4	58.6
Heavy Trucks:	62	.4 6	51.0		51.9		53.2	<u>.</u>	61.	6	61.7
Vehicle Noise:	68	1.9 6	67.2		64.0		59.3	3	67.	9	68.3
Centerline Distant	ce to Noise Co	ontour (in feet)		70						-	
				/0 dl	ВA	65 d	ВА	6	ou dBA	55	5 dBA
			_an:	36 78 168				302			
		CN	IEL:	39		84			180		300

Thursday, November 19, 2020

	FH\	NA-RD-77-108	HIGH	WAY N	IOISE P	REDICT		DEL		_	
Scenar Road Nan Road Segme	Scenario: 2040+Project Road Name: 3rd Street Road Segment: Tippecanoe Avenue to Del Ros					Projec Job N	t Name: . Number:	Airpor 13635	Gateway	Specific	P
SITE	SPECIFIC IN	IPUT DATA					NOISE I	NODE	L INPUT	5	
Highway Data				5	Site Cor	nditions	; (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	31,093 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	edium Ti	rucks (2)	Axles).	15		
Peak F	lour Volume:	3,109 vehicle	s		He	eavy Tru	icks (3+ /	Axles).	15		
Ve	hicle Speed:	45 mph		1	/ohiclo	Mix					
Near/Far La	ne Distance:	27 feet		-	Veh	nicleTvp	e	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.86%
Ba	rrier Height:	0.0 feet			M	ledium 1	Trucks:	84.8%	4.9%	10.3%	6 1.28%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy 1	rucks:	86.5%	2.7%	10.8%	6 0.86%
Centerline Di	st. to Barrier:	50.0 feet		7	Voise S	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet		Ē		Auto	os: 0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	(s: 2)	297			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Truck	ks: 8.	006	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	os: 48.	402			
	Left View:	-90.0 degre	es		Mediu	m Truck	(s: 48.	219			
	Right View:	90.0 degre	es		Hea	vy Truck	(S.' 48.	237			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresr	iel	Barrier Atte	en Be	rm Atten
Autos:	68.46	3.00		0.1	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-15.84		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.57		0.13	3	-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leg Ev	/ening	Leq	Night		Ldn	0	NEL
Autos:	70).4	68.5		66.7		60.6	6	69.3	3	69.9
Medium Trucks:	62	2.5	61.0		54.7		53.1		61.6	6	61.8
Heavy Trucks:	65	5.6	64.2		55.2		56.4	ļ	64.8	3	64.9
venicie ivoise.	12		70.4		07.2		02.0	,	71.1		/1.0
Centerline Distan	ce to Noise Co	ontour (in feel	2	70 6		65	dBA		SO dPA	5	5 dBA
			I dn	700	0	1	128	<u> </u>	275	50	502
		C	NEL ·	6	4	1	137		295		635
		0		0					200		000

	FHV	VA-RD-77-108	HIGH	IWAY N	IOISE PI	REDICTI	ON MO	DEL			
Scenari Road Nam Road Segmer	io: 2040+Proje e: 3rd Street nt: Sterling Ave	nue		Project I Job Nu	Name: Imber:	Airport 13635	Gateway	Specific F	Þ		
SITE	SPECIFIC IN	PUT DATA				N	OISE I	NODE		s	
Highway Data				-1	Site Con	ditions (Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 2	7,383 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2)	Axles):	15		
Peak H	our Volume:	2,738 vehicles	s		He	avy Truc	ks (3+)	Axles):	15		
Vei	hicle Speed:	45 mph		1	Vehicle I	Mix					
Near/Far La	ne Distance:	27 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.86%
Bai	rier Height	0.0 feet			M	edium Tru	ucks:	84.8%	4.9%	10.3%	1.28%
Barrier Type (0-W	all. 1-Berm):	0.0			1	Heavy Tri	ucks:	86.5%	2.7%	10.8%	0.86%
Centerline Dis	st. to Barrier:	50.0 feet		H	Naiaa Cr	uree Ele	wation	a (in fa	ati		
Centerline Dist.	to Observer:	50.0 feet		4	NUISe St	Autoo	vauon	s (III le	elj		
Barrier Distance	to Observer:	0.0 feet			Modiu	Autos m Trucks	. U. 	207			
Observer Height (Above Pad):	5.0 feet			Heav	n Trucks	. 2. . g	006	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet			near	y mucho	. 0.	000	0,000,10	aounom	0.0
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in f	eet)		
F	Road Grade:	0.0%				Autos	: 48.	402			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 48.	219			
	Right View:	90.0 degree	es		Heav	ry Trucks	: 48.	237			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel .	Barrier Att	en Ber	m Atten
Autos:	68.46	2.44		0.1	1	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-16.39		0.13	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.12		0.13	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	r	Leq Ev	vening	Leq N	light		Ldn	CI	VEL
Autos:	69	.8	67.9		66.1		60.		68.7	7	69.3
Medium Trucks:	62	.0	60.5		54.1		52.6	6	61.0)	61.3
Heavy Trucks:	65	.1	63.6		54.6		55.9)	64.2	2	64.3
Vehicle Noise:	71	.6	69.8		66.7		62.0)	70.8	5	71.0
Centerline Distanc	e to Noise Co	ntour (in feet,)					-			
			L	70 0	JBA 1	65 a	BA 7	6	U dBA	55	aBA
Ldn:			5	54 117 252 544			44				
	CNEL:				58 126 271 584						

	FHW	/A-RD-77-108	HIGH	IWAY	NOISE P	REDICT	ION MO	DEL						
Scena Road Nar Road Segme	nio: 2040+Projec me: 3rd Street ent: Del Rosa Dr	ct ive to Sterling	Aven	ue		Project Job N	t Name: lumber:	Airport 13635	Gateway	Specific	P			
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S				
Highway Data					Site Cor	nditions	(Hard =	= 10, So	oft = 15)					
Average Daily	/ Traffic (Adt): 4	4,963 vehicles	5		Autos: 15									
Peak Hou	r Percentage:	10.00%			Medium Trucks (2 Axles): 15									
Peak	Hour Volume:	4,496 vehicles	S		He	eavy Tru	cks (3+	Axles):	15					
V	ehicle Speed:	45 mph			Vehicle	Mix								
Near/Far L	ane Distance:	27 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Dailv			
Site Data							Autos:	77.5%	12.9%	9.69	% 97.86%			
B	arriar Haight	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.39	% 1.28%			
Barrier Type (0-V	Nall, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.89	% 0.86%			
Centerline D	ist. to Barrier:	50.0 feet			Noise S	ource E	levatior	ns (in fi	eet)					
Centerline Dist	to Observer:	50.0 feet			Autos: 0.000									
Barrier Distance	e to Observer:	0.0 feet			Mediu	m Truck	s 2	297						
Observer Height	(Above Pad):	5.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0									
F	Pad Elevation:	0.0 feet				,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.0. 0	.000						
Ro	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ice (in	feet)					
	Road Grade:	0.0%				Auto	s: 48	.402						
	Left View:	-90.0 degree	es		Mediu	m Truck	:s: 48	.219						
	Right View:	90.0 degree	es		Hea	vy Truck	:s: 48	.237						
FHWA Noise Mod	del Calculations													
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten			
Autos	68.46	4.60		0.	11	-1.20		-4.65	0.	000	0.000			
Medium Trucks	: 79.45	-14.24		0.	13	-1.20		-4.87	0.	000	0.000			
Heavy Trucks	: 84.25	-15.96		0.	13	-1.20		-5.43	0.0	000	0.000			
Unmitigated Nois	e Levels (witho	ut Topo and	barrie	er atte	nuation)									
VehicleType	Leq Peak Hour	 Leq Day 	r	Leq E	Evening	Leq	Night		Ldn	(CNEL			
Autos	: 72.	0	70.1		68.3		62.	2	70.	Э	71.5			
Medium Trucks	: 64.	1	62.6		56.3		54.	7	63.	2	63.4			
Heavy Trucks	67.	2	65.8		56.8		58.	0	66.	4	66.5			
Venicle Noise	Vehicle Noise: 73.7 72.0				68.8		64.	2	72.	(73.2			
Centerline Distar	ice to Noise Co	ntour (in feet,)	70	70 dPA 65 dPA 60 dPA 5			5 dBA						
			I dn	,0	76 163 351			757						
		CI	VEL:		 81	1	75		377		812			
			81 175 377 812											

	FHV	VA-RD-77-108	B HIGH	IWAY N	OISE P	REDICTIC	N MODI	EL					
Scenai Road Nan Road Segme	rio: 2040+Proje ne: 3rd Street ent: Victoria Ave	ect enue to Palm A	Avenue	e	Project Name: Airport Gateway Specific P Job Number: 13635								
SITE	SPECIFIC IN	IPUT DATA				NC	ISE MO	DDEL	INPUTS	5			
Highway Data				S	Site Con	ditions (H	lard = 10	0, Soft	= 15)				
Average Daily Peak Hour Peak H	Traffic (Adt): 2 Percentage: Hour Volume:	24,799 vehicle 10.00% 2,480 vehicle	is is		Me He	dium Truc avy Truck	AL ks (2 Ax s (3+ Ax	ıtos: les): les):	15 15 15				
Ve	ehicle Speed:	45 mph		1	/ohiclo	Mix							
Near/Far La	ane Distance:	27 feet			Veh	icleType	D	av F	venina	Night	Daily		
Site Data					VCII	Au	tos: 7	7.5%	12.9%	9.6%	97.86%		
Barrier Type (0-V	vrrier Height: Vall, 1-Berm):	0.0 feet 0.0			м	edium Tru Heavy Tru	cks: 84 cks: 86	4.8% 6.5%	4.9% 2.7%	10.3% 10.8%	1.28% 0.86%		
Centerline D	ist. to Barrier:	50.0 feet			loise Se	ource Elev	ations	(in feet)				
Centerline Dist. Barrier Distance Observer Height P	to Observer: to Observer: (Above Pad): Pad Elevation:	50.0 feet 0.0 feet 5.0 feet			Mediu Heav	Autos: m Trucks: vy Trucks:	0.00 2.29 8.00	10 17 16 Gi	rade Adji	ustment	: 0.0		
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent E	istance	(in fee	et)				
	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre	es es		Mediu Heav	Autos: m Trucks: ıy Trucks:	48.40 48.21 48.23)2 19 37					
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresnel	Ba	rrier Atte	en Ber	rm Atten		
Autos:	68.46	2.01		0.11	1	-1.20	-4	1.65	0.0	00	0.000		
Medium Trucks:	79.45	-16.82		0.13	3	-1.20	-4	1.87	0.0	00	0.000		
Heavy Trucks:	84.25	-18.55		0.13	3	-1.20	-5	5.43	0.0	00	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)								
VehicleType	Leq Peak Hou	Ir Leq Da	V	Leq Ev	rening	Leq N	ight	Lo	dn	C	NEL		
Autos:	69	.4	67.5		65.7		59.7		68.3		68.9		
Medium Trucks:	61	.6	60.1		53.7		52.1		60.6		60.8		
Heavy Trucks:	64	.6	63.2		54.2		55.4		63.8		63.9		
Vehicle Noise:	71	.1	69.4		66.3		61.6		70.1		70.6		
Centerline Distan	ce to Noise Co	ontour (in fee	t)										
				70 d	IBA	65 dE	BA	60 0	dBA	55	dBA		
			Ldn:	51	1	110		23	36	5	509		
	CNEL:				55 118 254 546						546		

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APPENDIX 9.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS

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13635 - Airport Gateway Specific Plan CadnaA Noise Prediction Model: 13635-05.cna

CadnaA Noise Prediction Model: 13635-05.cna Date: 02.12.20 Analyst: S. Shami

Calculation Configuration

Configurat	ion
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Lir	nit. Valı	ue		Land	l Use	Height Coordinates			oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	62.9	62.9	69.5	65.0	65.0	0.0				5.00	а	6256637.16	2349146.71	5.00
RECEIVERS		R2	62.6	62.6	69.3	65.0	65.0	0.0				5.00	а	6259544.97	2349113.29	5.00
RECEIVERS		R3	62.6	62.6	69.3	65.0	65.0	0.0				5.00	а	6264103.35	2349115.17	5.00
RECEIVERS		R4	62.5	62.5	69.2	65.0	65.0	0.0				5.00	а	6267732.52	2349100.33	5.00
RECEIVERS		R5	60.9	60.9	67.5	65.0	65.0	0.0				5.00	а	6269011.54	2349027.90	5.00
RECEIVERS		R6	62.2	62.2	68.9	65.0	65.0	0.0				5.00	а	6272676.47	2349038.75	5.00
RECEIVERS		R7	62.5	62.5	69.1	65.0	65.0	0.0				5.00	а	6255701.79	2347355.30	5.00
RECEIVERS		R8	61.5	61.5	68.2	65.0	65.0	0.0				5.00	а	6255536.86	2348596.62	5.00

Area Source(s)

Name	M.	ID	R	Result. PWL			Result. PWL"			Lw / Li			Operating Time			
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
SITEBOUNDARY		SITEBOUNDARY00001	129.9	129.9	129.9	65.7	65.7	65.7	Lw"	65.7					8	

Name	ł	lei	ght		Coordinates								
	Begin		End	х	у	z	Ground						
	(ft) (ft)		(ft)	(ft)	(ft)	(ft)	(ft)						
SITEBOUNDARY	8.00	а		6255662.66	2349093.07	8.00	0.00						
				6257652.24	2349051.41	8.00	0.00						
				6257652.24	2348410.78	8.00	0.00						

Name	Height			Coordinat	es	
	Begin	End	x	у	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6259173.07	2348363.91	8.00	0.00
			6259178.28	2349030.57	8.00	0.00
			6266455.19	2349010.93	8.00	0.00
			6268807.27	2348982.11	8.00	0.00
			6268810.75	2348551.56	8.00	0.00
			6268859.36	2348530.73	8.00	0.00
			6270151.02	2348947.39	8.00	0.00
			6270373.25	2349013.36	8.00	0.00
			6270532.97	2349044.61	8.00	0.00
			6270751.72	2349065.45	8.00	0.00
			6271085.05	2349041.14	8.00	0.00
			6271651.02	2349006.42	8.00	0.00
			6272269.08	2348950.86	8.00	0.00
			6272630.19	2348919.61	8.00	0.00
			6272953.11	2348891.84	8.00	0.00
			6273314.22	2348916.14	8.00	0.00
			6273578.11	2348940.45	8.00	0.00
			6273776.02	2348975.17	8.00	0.00
			6273842.00	2349002.95	8.00	0.00
			6274026.02	2349138.36	8.00	0.00
			6274154.50	2349263.36	8.00	0.00
			6274182.27	2349242.53	8.00	0.00
			6274223.94	2349107.11	8.00	0.00
			6274248.25	2348836.28	8.00	0.00
			6274293.39	2348093.23	8.00	0.00
			6274265.61	2347423.09	8.00	0.00
			6272318.78	2347444.50	8.00	0.00
			6271463.74	2347127.66	8.00	0.00
			6270882.14	2347105.96	8.00	0.00
			6270322.25	2346936.69	8.00	0.00
			6270348.29	2347448.84	8.00	0.00
			6270257.14	2347466,20	8,00	0.00
			6268989.78	2347553,01	8.00	0.00
			6266585.27	2347661.51	8.00	0.00
			6265851.76	2347696.24	8.00	0.00
			6264050.55	2347713.60	8.00	0.00
			6262735 44	2347722.28	8.00	0.00
			6260955.93	2347761.34	8.00	0.00
			6260673.81	2347752.66	8.00	0.00
			6260339.61	2347600 75	8.00	0.00
			6259506 28	2347140 68	8.00	0.00
			6259332.66	2347032.17	8.00	0.00
			6259189 44	2346975 75	8.00	0.00
			6259102.63	2346954.05	8.00	0.00
		+ +	6258703 32	2346962 73	8.00	0.00
			6256008.01	2346988 77	8.00	0.00
		+ +	6256021 03	2347066.89	8.00	0.00
			6255630.41	2347561 69	8.00	0.00
			020000.41	234/301.03	0.001	0.001

APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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13635 - Airport Gateway Specific Plan CadnaA Noise Prediction Model: 13635_Construction.cna Date: 24.11.20 Analyst: S. Shami

Calculation Configuration

Configurat	tion
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Lir	nit. Valı	ue		Land	l Use	Height	t Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	72.5	72.5	79.1	60.0	55.0	0.0				5.00	а	6256637.16	2349146.71	5.00
RECEIVERS		R2	72.2	72.2	78.9	60.0	55.0	0.0				5.00	а	6259544.97	2349113.29	5.00
RECEIVERS		R3	72.2	72.2	78.9	60.0	55.0	0.0				5.00	а	6264103.35	2349115.17	5.00
RECEIVERS		R4	72.1	72.1	78.8	60.0	55.0	0.0				5.00	а	6267732.52	2349100.33	5.00
RECEIVERS		R5	70.5	70.5	77.1	60.0	55.0	0.0				5.00	а	6269011.54	2349027.90	5.00
RECEIVERS		R6	71.8	71.8	78.5	60.0	55.0	0.0				5.00	а	6272676.47	2349038.75	5.00
RECEIVERS		R7	72.1	72.1	78.7	60.0	55.0	0.0				5.00	а	6255701.79	2347355.30	5.00
RECEIVERS		R8	71.1	71.1	77.8	60.0	55.0	0.0				5.00	а	6255536.86	2348596.62	5.00

Area Source(s)

Name	M.	ID	R	Result. PWL			Result. PWL"			Lw/L	i	Op	Height		
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
SITEBOUNDARY		SITEBOUNDARY00001	139.5	139.5	139.5	75.3	75.3	75.3	Lw"	75.3					8

Name	ł	lei	ght			Coordinat	es	
	Begin End				х	У	z	Ground
	(ft)	(ft) (ft)		(ft)	(ft)	(ft)	(ft)	
SITEBOUNDARY	8.00	а			6255662.66	2349093.07	8.00	0.00
					6257652.24	2349051.41	8.00	0.00
					6257652.24	2348410.78	8.00	0.00

Name	Н	eight	Coordinates								
	Begin	End	x	У	Z	Ground					
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)					
			6259173.07	2348363.91	8.00	0.00					
			6259178.28	2349030.57	8.00	0.00					
			6266455.19	2349010.93	8.00	0.00					
			6268807.27	2348982.11	8.00	0.00					
			6268810.75	2348551.56	8.00	0.00					
			6268859.36	2348530.73	8.00	0.00					
			6270151.02	2348947.39	8.00	0.00					
			6270373.25	2349013.36	8.00	0.00					
			6270532.97	2349044.61	8.00	0.00					
			6270751.72	2349065.45	8.00	0.00					
			6271085.05	2349041.14	8.00	0.00					
			6271651.02	2349006.42	8.00	0.00					
			6272269.08	2348950.86	8.00	0.00					
			6272630.19	2348919.61	8.00	0.00					
			6272953.11	2348891.84	8.00	0.00					
			6273314.22	2348916.14	8.00	0.00					
			6273578.11	2348940.45	8.00	0.00					
			6273776.02	2348975.17	8.00	0.00					
			6273842.00	2349002.95	8.00	0.00					
			6274026.02	2349138.36	8.00	0.00					
			6274154.50	2349263.36	8.00	0.00					
			6274182.27	2349242.53	8.00	0.00					
			6274223.94	2349107.11	8.00	0.00					
			6274248.25	2348836.28	8.00	0.00					
			6274293.39	2348093.23	8.00	0.00					
			6274265.61	2347423.09	8.00	0.00					
			6272318.78	2347444.50	8.00	0.00					
			6271463.74	2347127.66	8.00	0.00					
			6270882.14	2347105.96	8.00	0.00					
			6270322.25	2346936.69	8.00	0.00					
			6270348.29	2347448.84	8.00	0.00					
			6270257.14	2347466.20	8.00	0.00					
			6268989.78	2347553.01	8.00	0.00					
		+ +	6266585.27	2347661.51	8.00	0.00					
			6265851.76	2347696,24	8.00	0.00					
			6264050.55	2347713.60	8.00	0.00					
			6262735.44	2347722.28	8.00	0.00					
			6260955.93	2347761.34	8.00	0.00					
			6260673.81	2347752,66	8.00	0.00					
			6260339.61	2347600.75	8.00	0.00					
			6259506.28	2347140.68	8.00	0.00					
			6259332.66	2347032.17	8.00	0.00					
		+ +	6259189 44	2346975 75	8.00	0.00					
		+	6259102.63	2346954.05	8.00	0.00					
			6258703 32	2346962 73	8.00	0.00					
			6256008.01	2346988 77	8.00	0.00					
		+ +	6256021 02	2340300.77	8.00	0.00					
			6255630 41	2347561 60	8.00	0.00					
			1 0233030.41	234/301,09	0,001	0.001					