

Desert Grove Retail Project

NOISE IMPACT ANALYSIS CITY OF VICTORVILLE

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11724-05 Noise Study



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LIST OF ABBREVIATED TERMS

Reference
Average Daily Traffic
American National Standards Institute
California Vehicle Noise
California Environmental Quality Act
Community Noise Equivalent Level
A-weighted decibels
Federal Highway Administration
Federal Transit Administration
Institute of Noise Control Engineering
Equivalent continuous (average) sound level
Maximum level measured over the time interval
Minimum level measured over the time interval
Miles per hour
Peak Particle Velocity
Desert Grove Retail Project
Reference Energy Mean Emission Level
Root-mean-square
Vibration Decibels



EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures, if any, for the proposed Desert Grove Retail Project ("Project"). The Project site is located at the southwest corner of the U.S. Highway (US-395) and Palmdale Road (SR-18), in the City of Victorville. The Project proposes development of approximately 96,300 square feet of commercial/retail uses on an approximately 14.8-acre site. This study has been prepared consistent with applicable City of Victorville noise standards, and identifies significance criteria based on guidance provided in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) Additionally, since receiver locations north of SR-18 are located within the City of Adelanto boundaries, applicable City of Adelanto standards are identified in this noise study.

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 10 roadway segments adjacent to the Project site entrance were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts provided in the *SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis*, prepared by TJW Engineering, Inc.. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2019, Interim Year, and General Plan 2040 conditions. The analysis shows that the unmitigated Project traffic noise level increases under all traffic scenarios will be *less than significant*.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the potential noise sources within Desert Grove Retail Project site, this analysis estimates the Project daytime operational (stationary-source) noise levels at the nearby receiver locations. The Project operational noise sources are expected to include roof-top air conditioning units, drive-through speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity.

OPERATIONAL NOISE LEVEL COMPLIANCE

The analysis shows that the unmitigated Project operational noise levels will satisfy the City of Victorville and Adelanto daytime and nighttime exterior noise level standards at the off-site receiver locations in the Project study area. Therefore, operational noise impacts will be *less than significant* at nearby sensitive receiver locations.



OPERATIONAL NOISE LEVEL CONTRIBUTIONS

This analysis demonstrates that the unmitigated Project noise level increases to the existing noise environment at all noise-sensitive receiver locations would be less than the Federal Interagency Committee on Noise (FICON) guidance for noise level increases, and thus would be *less than significant* during daytime and nighttime hours. Therefore, the operational noise level impacts associated with the proposed Project activities, such as the roof-top air conditioning units, drive-through speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity will be *less than significant*.

CONSTRUCTION NOISE ANALYSIS

Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of Desert Grove Retail Project site, this analysis estimates the Project construction noise levels at nearby sensitive receiver locations.

CONSTRUCTION NOISE LEVEL COMPLIANCE

Since the City of Victorville and Adelanto General Plans and Municipal Codes do not identify specific construction noise level thresholds, a threshold is identified based on the National Institute for Occupational Safety and Health (NIOSH) limits for construction noise. The Project short-term construction noise levels are expected to range from 35.9 to 78.6 dBA L_{eq} and will satisfy the 85 dBA L_{eq} threshold identified by NIOSH at all receiver locations, and as such, all nearby receiver locations will experience *less than significant* impacts due to temporary Project construction noise levels. The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location.

TEMPORARY CONSTRUCTION NOISE LEVEL CONTRIBUTIONS

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing daytime noise levels measurements at the off-site noise-sensitive receiver locations. A temporary noise level increase of 12 dBA L_{eq} is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used in this report to assess the Project-construction noise level increases. (3) The analysis shows that the Project will contribute unmitigated construction noise level increases ranging from 0.7 to 4.7 dBA L_{eq} when located at the closest point from primary Project construction activities to the nearby sensitive receiver locations. Since the worst-case temporary noise level increase during Project construction will satisfy the 12 dBA L_{eq} significance threshold, the unmitigated construction noise level increases are considered *less than significant* temporary noise impacts.



CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 54 to 1,289 feet from Project construction activity, construction vibration velocity levels are expected to range from 6.6 to 77.0 VdB. The Federal Transit Administration (FTA) threshold of 80 VdB is used in this analysis since the City of Victorville does not identify specific vibration level standards, and since it represents a more conservative threshold than the City of Adelanto vibration level standards. Project construction vibration levels of up to 77.0 VdB will remain below the 80 VdB FTA standard, and therefore, Project construction vibration levels are considered a *less than significant* vibration impact.

Further, vibration levels at the site of the closest receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

CONSTRUCTION NOISE AND VIBRATION BEST PRACTICES

The following best practices are not required but would help reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses.

- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the center).
- The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck noise.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

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



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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS



1 INTRODUCTION

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

1.1 SITE LOCATION

The proposed Desert Grove Retail Project is located at the southwest corner of the U.S. Highway (US-395) and Palmdale Road (SR-18) in the City of Victorville, as shown on Exhibit 1-A. The Project site is bounded by commercial uses and vacant land to the north (within the City of Adelanto), south, and east (within the City of Victorville); with existing residential homes located west of the Project site in the City of Victorville.

1.2 PROJECT DESCRIPTION

The Project proposes development of approximately 96,300 square feet of commercial/retail uses on an approximately 14.8-acre site, as shown on Exhibit 1-B.

The on-site Project noise sources are expected to include: roof-top air conditioning units, drivethrough speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity. This noise analysis describes and evaluates noise level impacts associated with 24-hour operational activities at the Project site.





EXHIBIT 1-A: LOCATION MAP



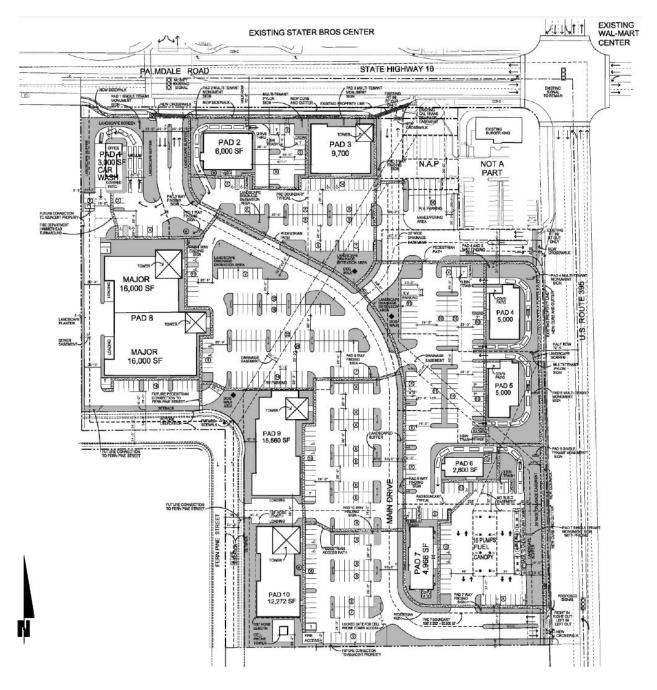


EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140	\mathbf{X}		
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		SPEECH INTERFERENCE	
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD		
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60			
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP	
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	VERY FAINT	NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VERT FAINT		

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

2.1 RANGE OF NOISE

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



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

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

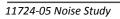
When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

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





sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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

2.5 Noise Barrier Attenuation

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

2.6 LAND USE COMPATIBILITY WITH NOISE

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

2.7 COMMUNITY RESPONSE TO NOISE

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

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

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

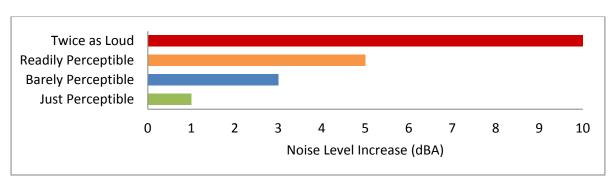


EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 EXPOSURE TO HIGH NOISE LEVELS

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

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

2.9 VIBRATION

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



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

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

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



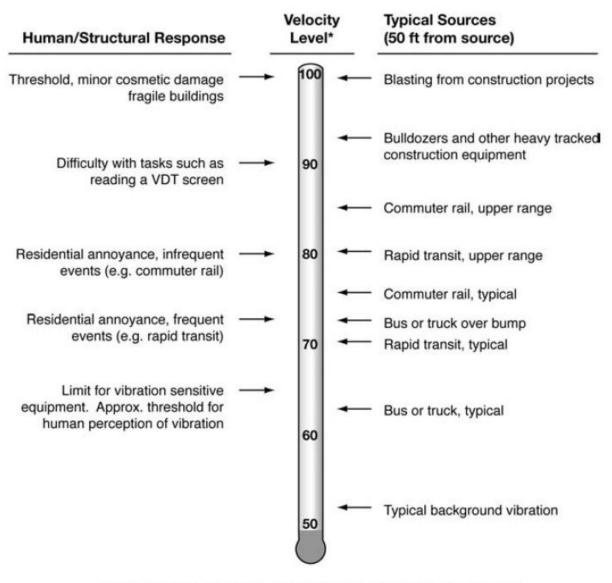


EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

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

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



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3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

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

3.2 STATE OF CALIFORNIA BUILDING STANDARDS

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (13) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).



3.3 CITY OF VICTORVILLE GENERAL PLAN NOISE ELEMENT

The City of Victorville General Plan Noise Element is intended to limit exposure of the community to excessive noise levels. (14) The City of Victorville General Plan Noise Element land use compatibility standards specify the noise levels allowable for new developments impacted by transportation noise sources. The City's compatibility criteria, found in Table N-3 of the General Plan, identify the criteria for commercial land uses such as the Project, as shown on Exhibit 3-A. When the unmitigated exterior noise levels approach 65 dBA CNEL commercial land use is considered normally acceptable. With exterior noise levels ranging from 70 to 75 dBA CNEL, commercial land uses are considered conditionally acceptable. With exterior noise levels may be developed. Residential uses are considered normally unacceptable. Residential uses are considered normally acceptable with exterior noise levels below 60 dBA CNEL, and conditionally acceptable when exterior noise levels exceed 65 dBA CNEL.

Table N-3 Victorville Land Use Compatibility S	tand	ards					
	Community Noise Exposure Ldn or CNEL, dB						
Land Use Categories	55	60	65	70	75	80 +	
Residential - Low Density, Single Family, Duplex, Multi- family, Mobile Home	1	1	2	2	3	4	4
Transient Lodging - Motels, Hotels	1	1	2	2	3	3	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	3	3	4	4
Auditoriums, Concert Halls, Amphitheaters	2	2	3	3	4	4	4
Sports Arena, Outdoor Spectator Sports	2	2	2	2	3	3	3
Playgrounds, Neighborhood Parks	1	1	1	2	3	3	3
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	2	2	4	4
Office Buildings, Business Commercial, Retail Commercial and Professional	1	1	1	2	2	3	3
Industrial, Manufacturing, Utilities	1	1	1	1	2	2	2
Agriculture	1	1	1	1	1	1	1
 Legend: NORMALLY ACCEPTABLE: Specified land use is satisfact that any buildings involved are of normal conventional con- noise insulation requirements. CONDITIONALLY ACCEPTABLE: New construction or dev only after a detailed analysis of the noise reduction require braries, Churches, Hospitals, Nursing Homes 1 needed no in the design. Conventional construction, with closed windo or air conditioning will normally suffice. NORMALLY UNACCEPTABLE: New construction or develo- couraged. If new construction or development does proceed noise reduction requirements must be made and needed no in the design. CLEARLY UNACCEPTABLE: New construction or develop undertaken. 	struct velopr ment bise in bws a opme ed, a noise	ion, v ment s is n nsula nd fr nt sh detail	witho shou nade tion f esh a ould led an ation	ut an Ild be and eatur air su gene nalys featu	y spe unde Scho res in pply s rally is of ires in	ecial ertake ols, L clude syster be di the nclud	en i- ed ms S-

EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA

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



3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Desert Grove Retail Project, stationary-source (operational) noise such as the expected rooftop air conditioning units, drive-through speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity are typically evaluated against standards established under a jurisdiction's Municipal Code.

Section 13.01.030 of the City of Victorville Municipal Code, establishes the noise level standards for stationary noise sources. Since the Project land use will potentially impact non-noise-sensitive commercial uses in addition to noise-sensitive uses in the Project study area, this noise study relies on the exterior noise level standards for all land uses identified by the City of Victorville Municipal Code. For industrial uses, exterior noise levels shall not exceed 75 dBA L_{eq} at any time; exterior noise levels at commercial uses shall not exceed 70 dBA L_{eq} at any time. For residential properties, the exterior noise level shall not exceed 65 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 55 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). (15) The operational noise level standards are shown on Table 3-1.

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standard (dBA L _{eq}) ²
	Residential City of	Daytime (7:00 a.m 10:00 p.m.)	65
City of		Nighttime (10:00 p.m 7:00 a.m.)	55
Victorville ¹	Commercial	Anytime	70
	Industrial	Anytime	75

TABLE 3-1: OPERATIONAL NOISE STANDARDS

¹ Source: City of Victorville Municipal Code, Section 13.01.030 (Appendix 3.1).

L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.

3.5 CONSTRUCTION NOISE STANDARDS

Neither the City of Victorville General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*.

To evaluate whether the Project will generate potentially significant construction noise levels at off-site sensitive receiver locations, a construction noise level threshold is adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). (16) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This



results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (16) For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby receiver locations. Since this construction noise level threshold represents the energy average of the noise source over a given time, they are expressed as L_{eq} noise levels. Therefore, the noise level threshold of 85 dBA L_{eq} over a period of eight hours or more is used to evaluate the potential Project construction noise level impacts at the nearby receiver locations.

3.6 CONSTRUCTION VIBRATION STANDARDS

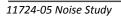
The City of Victorville has not identified or adopted specific vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep. (11) Operational and construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. The FTA guidelines of 80 VdB for sensitive land uses provide a substantiated basis for determining the relative significance of potential Expansion Project vibration impacts due to on-site operational and construction activities.

3.7 CITY OF ADELANTO STANDARDS

The City of Adelanto jurisdictional boundaries are located north of the Project site on the north side of SR-18. Therefore, this section includes a review of applicable City of Adelanto noise standards as they relate to the analysis presented herein at receiver location R1 and land uses adjacent to roadway segments conveying Project traffic in the City of Adelanto.

3.7.1 CITY OF ADELANTO TRANSPORTATION NOISE LEVEL STANDARDS

The City of Adelanto General Plan Noise Element identifies land use compatibility criteria in Table VIII-2. Table VIII-2 indicates residential uses require noise reduction analysis when exterior noise levels range from 65 to 70 dBA CNEL. (17) Commercial uses are considered *compatible* with exterior noise levels approaching 70 dBA CNEL. This criteria is generally consistent with the City of Victorville's General Plan compatibility criteria previously shown on Exhibit 3-A. As such, 65 dBA CNEL is considered the threshold of compatibility for residential uses, and 70 dBA CNEL for commercial uses, based on the City of Victorville and Adelanto General Plan Noise Elements for this noise study.





3.7.2 CITY OF ADELANTO OPERATIONAL NOISE LEVEL STANDARDS

The City of Adelanto Municipal Code, Section 17.90.020(b)(1) indicates that the General Plan Noise Element, Table VIII-2 Land Use Compatibility Guidelines Related to Noise Exposure shall apply to land uses city-wide and shall be used to define acceptable and unacceptable noise levels. The lowest exterior noise level criteria identified for the noise-sensitive residential use in the Project study area in Table VIII-2 of the General Plan Noise Element is 65 dBA L_{eq}, with 70 dBA L_{eq} identified for commercial uses. (17) These standards are, therefore, consistent with standards identified in Section 13.01.030 of the City of Victorville Municipal Code. As such, the 65 dBA L_{eq} and 70 dBA L_{eq} exterior noise level limits are used to evaluate Project operational noise levels at noise-sensitive residential uses in the Project study area in both the City of Victorville and Adelanto jurisdictions. However, the City of Victorville specifies more restrictive nighttime exterior noise level limits for noise-sensitive uses of 55 dBA L_{eq}, and as such, the analysis herein relies on the more restrictive City of Victorville standards for operational noise.

3.7.3 CITY OF ADELANTO CONSTRUCTION NOISE LEVEL STANDARDS

Similar to the City of Victorville, neither the City of Adelanto General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. Therefore, the NIOSH 85 dBA L_{eq} threshold previously identified in Section 3.5 is used in this analysis for all receiver locations.

3.7.2 CITY OF ADELANTO VIBRATION LEVEL STANDARDS

The City of Adelanto Code, Section 17.90.030 *Vibration*, identifies a vibration level standard of 0.2 in/sec PPV. (18) However, the FTA 80 VdB standard previously identified in Section 3.6 represents a more conservative threshold for this analysis since it equates to approximately 0.01 in/sec PPV, and therefore, the FTA threshold is used in this report.



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4 SIGNIFICANCE CRITERIA

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

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

While the City of Victorville 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 for use under Guideline A. CEQA Appendix G Guideline C applies to nearby public and private airports, if any, and the Project's land use compatibility.

The Project site is not located within two miles of a public airport or within an airport land use plan; nor is the Project within the vicinity of a private airstrip. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Guideline C.

4.1 NOISE INCREASES

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (19)

4.1.1 SUBSTANTIAL PERMANENT NOISE LEVEL INCREASES

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

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



(FICON) (20) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (19) For example, if the ambient noise environment is quiet (less than 60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

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

TABLE 4-1: SIGNIFICANCE OF LONG-TERM NOISE INCREASES AT NOISE-SENSITIVE RECEIVERS

Federal Interagency Committee on Noise (FICON), 1992.

4.1.2 SUBSTANTIAL TEMPORARY OF PERIODIC NOISE LEVEL INCREASES

Project construction activities could result in potentially significant, temporary and periodic noise increases. For the purposes of this analysis, the Caltrans *Traffic Noise Analysis Protocol* 12 dBA L_{eq} *substantial* noise level increase threshold is used to assess temporary noise level increases. (3) If the Project construction noise levels generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA L_{eq} , then the Project construction noise level increases will be considered a potentially significant impact. Although the Caltrans recommendations were specifically developed to assess traffic noise impacts, the 12 dBA L_{eq} substantial noise level increase threshold is used in California generally to address the potential significance of ambient noise level increases. (3)



4.2 SIGNIFICANCE CRITERIA SUMMARY

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

$\ensuremath{\mathsf{OFF}}\xspace{-}\ensuremath{\mathsf{S}}\xspace{-}\xspace{$

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

OPERATIONAL NOISE AND VIBRATION²

- If Project operational (stationary/area-source) noise levels would result in exceedances of the exterior noise level standards at receiving land use categories identified in Table 3-1.
- If the existing ambient noise levels at receiving noise-sensitive land uses:
 - $\circ~$ are less than 60 dBA L_{eq} and the Project creates a readily perceptible 5 dBA L_{eq} or greater noise level increase; or
 - $\circ~$ range from 60 to 65 dBA L_{eq} and the Project creates a *barely perceptible* 3 dBA L_{eq} or greater noise level increase; or
 - $\circ~$ already exceed 65 dBA $L_{eq},$ and the Project creates a noise increase ~ greater than 1.5 dBA $~~L_{eq}$ (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

- If Project construction activities:
 - create noise levels which exceed the 85 dBA L_{eq} at receiving land uses (NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998);
 - generate temporary Project construction noise level increases which exceed the 12 dBA L_{eq} substantial noise level increase threshold at noise-sensitive receiver locations (Caltrans, Traffic Noise Analysis Protocol).
- If Project construction-source vibration levels could exceed the FTA maximum acceptable vibration standard of 80 vibration decibels (VdB) at receiving land uses.

² Maximum potential vibration levels received at off-site land uses would occur during Project construction activities. The Project does not propose or require uses or activities that would result in potentially significant operational-source off-site vibration impacts.



¹ Maximum potential vibration levels received at off-site land uses would occur during Project construction activities. The Project does not propose or require uses or activities that would generate traffic resulting in potentially significant off-site vibration impacts.

Arrahusia	Receiving		Significance Criteria			
Analysis	Land Use	Condition(s)	Daytime	Nighttime		
• ((• • •		If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increa			
Off-Site Traffic ¹	Noise- Sensitive	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase			
Traffic	Jensitive	If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNE	L Project increase		
	Multiple	Exterior Noise Level Standards	See Table 3-1.			
Onenational	Noise- Sensitive ¹	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L _{eq} Project increase			
Operational		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L _{eq} Project increase			
	Jensitive	if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L _{eq} Project increase			
	All	Noise Level Threshold ²	85 (dBA L _{eq}		
Construction	Noise-Sensitive	Noise Level Increase ³	12 dBA L _{eq}			
	All	Vibration Level Threshold ⁴	80) VdB		

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

¹ Source: FICON, 1992.

² Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998.
 ³ Source: Caltrans Traffic Noise Analysis Protocol, May 2011.

⁴ Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "PPV" = peak particle velocity.



5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, six 24-hour noise level measurements were taken at receiver 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 Tuesday, October 30th, 2018. 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. (21)

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 any part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (4)* Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (11)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (11) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels



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

5.3 NOISE MEASUREMENT RESULTS

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

- Location L1 represents the noise levels on Pearmain Street northwest of the Project site near an existing commercial area and vacant lot. The noise level measurements collected show an overall 24-hour exterior noise level of 70.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 66.5 dBA L_{eq} with an average nighttime noise level of 62.7 dBA L_{eq}.
- Location L2 represents the noise levels east of the Project site on US 395 south of an existing ARCO gas station in a vacant lot. The noise level measurements collected show an overall 24-hour exterior noise level of 75.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.8 dBA L_{eq} with an average nighttime noise level of 68.7 dBA L_{eq}.
- Location L3 represents the noise levels east of the Project site on Camino Alto Way near an existing single-family residential neighborhood. The 24-hour CNEL indicates that the overall exterior noise level is 58.6 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 54.2 dBA L_{eq} with an average nighttime noise level of 51.2 dBA L_{eq}.
- Location L4 represents the noise levels south of the Project site on Fern Pine Road near an existing single-family residential neighborhood. The noise level measurements collected show an overall 24-hour exterior noise level of 57.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 51.8 dBA L_{eq} with an average nighttime noise level of 50.0 dBA L_{eq}.
- Location L5 represents the noise levels southwest of the Project site on Fair Hills Lane near an existing single-family residential neighborhood. The 24-hour CNEL indicates that the overall exterior noise level is 58.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 52.8 dBA L_{eq} with an average nighttime noise level of 51.1 dBA L_{eq}.
- Location L6 represents the noise levels west of the Project site on Mesa View Drive south of Palmdale Road. The noise level measurements collected show an overall 24-hour exterior noise level of 71.7 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 67.2 dBA L_{eq} with an average nighttime noise level of 64.3 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, 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 noise associated with the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

Location ¹	Distance to Project	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
	Boundary (Feet)		Daytime	Nighttime	
L1	475'	Located on Pearmain Street northwest of the Project site near an existing commercial area and vacant lot.	66.5	62.7	70.5
L2	95'	Located east of the Project site on US 395 south of an existing ARCO gas station in a vacant lot.	68.8	68.7	75.4
L3	2,355'	Located east of the Project site on Camino Alto Way near an existing single-family residential neighborhood.	54.2	51.2	58.6
L4	1,245'	Located south of the Project site on Fern Pine Road near an existing single-family residential neighborhood.	51.8	50.0	57.1
L5	975'	Located southwest of the Project site on Fair Hills Lane near an existing single-family residential neighborhood.	52.8	51.1	58.3
L6	1,685'	Located west of the Project site on Mesa View Drive south of Palmdale Road.	67.2	64.3	71.7

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

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

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

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



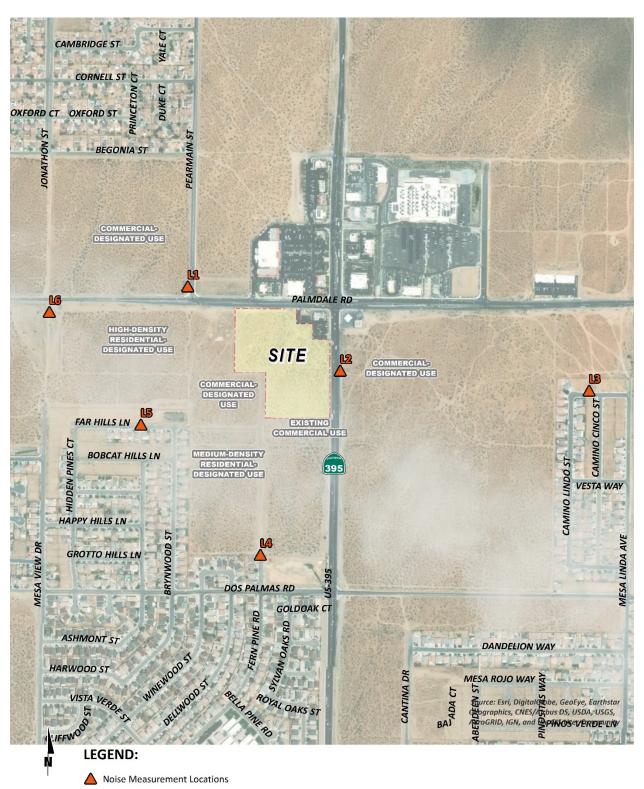


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (22) 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. (23) 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.

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 10 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Victorville General Plan Circulation Element, and the posted vehicle speeds. Exhibit 6-A shows the off-site roadway segments used in this analysis, which were selected based on the roadway segments conveying Project traffic as identified in the *Traffic Impact Analysis*.

The ADT volumes used in this study are presented on Tables 6-2 and 6-3 for the following traffic scenarios: Existing, Opening Year 2019, Interim Year, and General Plan 2040 conditions. (2) For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (24)

Table 6-4 presents the time of day vehicle splits and Table 6-5 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

9	Roadway	Segment	General Plan Land Use Designation (North/South or West/East) ¹	Existing Adjacent Land Use (North/South or West/East) ¹	Distance From Centerline To Receiving Land Use (Feet) ²	Vehicle Speed (mph) ³
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	Commercial/Vacant	84'	55
2	US-395	n/o Dos Palmas Rd.	Commercial	Commercial/Vacant	84'	55
3	US-395	n/o Luna Rd.	Residential/Commercial	Residential/Vacant	84'	55
4	US-395	n/o La Mesa Rd.	Commercial/Residential	Vacant/Vacant	40'	55
2	US-395	n/o Bear Valley Rd.	Commercial/Residential	Vacant/Commercial	40'	55
9	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	Vacant/Residential	72'	55
7	Luna Rd.	e/o US-395	Residential	Vacant/Residential	40'	40
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	Commercial/Vacant/Inst.	72'	55
6	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	Commercial/Residential	72'	55
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	Commercial/Residential	72'	55
1 a	nd use designations based on t	the City of Victorville General Plan La	¹ and use designations based on the City of Virtorville General Plan Land Use & Zoning Districts Man. and existing land uses based on Nearman aerial imagery dated August 15th 2018	e land uses hased on Nearman aeria	l imagery dated August 15	h. 2018.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

¹ Land use designations based on the City of Victorville General Plan Land Use & Zoning Districts Map, and existing land uses based on Nearmap aerial imagery dated August 15th, 2018. ² Distance to receiving land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element. ³ Posted vehicle speeds.





			Av	verage Daily T	raffic (1,000's)1
			Exis	ting	Opening \	/ear 2019
ID	Roadway	Segment	Without Project	With Project	Without Project	
1	SR-395	n/o Palmdale Rd. (SR-18)	30.2	31.0	32.1	32.8
2	SR-395	n/o Dos Palmas Rd.	33.8	38.5	36.0	40.5
3	SR-395	n/o Luna Rd.	29.0	32.6	30.7	34.4
4	SR-395	n/o La Mesa Rd.	27.3	28.3	29.0	30.0
5	SR-395	n/o Bear Valley Rd.	24.8	25.4	26.3	26.9
6	Palmdale Rd. (SR-18)	w/o SR-395	24.4	25.7	25.9	27.2
7	Luna Rd.	e/o SR-395	4.9	7.5	5.3	7.8
8	Palmdale Rd. (SR-18)	e/o Cantina St.	22.0	24.1	23.4	25.5
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	23.0	24.7	24.4	26.1
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	22.7	24.1	24.0	25.5

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES (1 OF 2)

¹ Source: SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis, TJW Engineering, Inc.

TABLE 6-3:	AVERAGE DAILY	TRAFFIC VOLU	JMES (2 OF 2)
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			A	Average Daily Traffic (1,000's) ¹ erim Year General Plan 2040		
			Interim Year		General F	Plan 2040
ID	Roadway	Segment	Without Project	With Project	Without Project	With Project
1	SR-395	n/o Palmdale Rd. (SR-18)	42.9	43.7	55.5	56.3
2	SR-395	n/o Dos Palmas Rd.	45.2	49.9	56.5	61.2
3	SR-395	n/o Luna Rd.	42.9	46.5	56.9	60.5
4	SR-395	n/o La Mesa Rd.	42.1	43.1	56.9	57.9
5	SR-395	n/o Bear Valley Rd.	38.2	38.8	51.7	52.3
6	Palmdale Rd. (SR-18)	w/o SR-395	25.8	27.1	27.1	28.4
7	Luna Rd.	e/o SR-395	5.2	7.7	5.5	7.9
8	Palmdale Rd. (SR-18)	e/o Cantina St.	25.6	27.7	29.2	31.3
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	26.8	28.6	30.7	32.5
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	26.2	27.6	29.7	31.1

¹ Source: SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis, TJW Engineering, Inc.



		Time of Day Splits ¹		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

TABLE 6-4: TIME OF DAY VEHICLE SPLITS

¹ Source: Typical Southern California vehicle mix.

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

TABLE 6-5: WITHOUT PROJECT CONDITIONS VEHICLE MIX

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

¹ Source: Typical Southern California vehicle mix.

6.3 CONSTRUCTION VIBRATION ASSESSMENT METHODOLOGY

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

Whereas, vehicular-source traffic vibration is rarely perceptible, construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-6. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) - 30\log(D/25)$



Equipment	Vibration Decibels (VdB) at 25 feet ¹
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87

TABLE 6-6: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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



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7 OFF-SITE TRAFFIC NOISE IMPACTS

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

- <u>Existing Conditions Without / With Project</u>: This scenario refers to the existing present-day noise conditions without and with the proposed Project.
- <u>Opening Year 2019 Without / With the Project</u>: This scenario refers to Opening Year noise conditions with ambient growth, without and with the proposed Project. This scenario includes all cumulative traffic volumes identified in the *Traffic Impact Analysis*.
- <u>Interim Year Without / With the Project</u>: This scenario refers to Interim Year noise conditions with ambient growth, without and with the proposed Project. This scenario includes all cumulative traffic volumes identified in the *Traffic Impact Analysis*.
- <u>General Plan 2040 Without / With the Project</u>: This scenario refers to Year 2040 noise conditions with ambient growth, without and with the proposed Project. This scenario includes all cumulative traffic volumes identified in the *Traffic Impact Analysis*.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic noise impacts at receiving land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA 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 to 7-12 present a summary of the exterior traffic noise levels, without barrier attenuation, for the study area roadway segments analyzed from the without Project to the with Project conditions under Existing, Opening Year 2019, Interim Year, and General Plan 2040 traffic conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.



			Receiving Land Use	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	70.8	95	205	441
2	US-395	n/o Dos Palmas Rd.	Commercial	71.3	102	221	475
3	US-395	n/o Luna Rd.	Residential/Commercial	70.6	92	199	429
4	US-395	n/o La Mesa Rd.	Commercial/Residential	74.5	80	172	371
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	74.1	75	161	348
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	70.6	79	170	366
7	Luna Rd.	e/o US-395	Residential	63.6	RW	RW	69
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	70.1	74	159	342
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	70.3	76	163	352
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	70.3	75	162	349

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

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.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS	ABLE 7-2:
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				CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	70.9	97	208	449
2	US-395	n/o Dos Palmas Rd.	Commercial	71.9	112	241	519
3	US-395	n/o Luna Rd.	Residential/Commercial	71.1	100	215	464
4	US-395	n/o La Mesa Rd.	Commercial/Residential	74.7	82	176	380
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	74.2	76	164	353
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	70.8	82	176	379
7	Luna Rd.	e/o US-395	Residential	65.4	RW	RW	92
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	70.5	78	168	363
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	70.6	79	171	369
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	70.5	78	168	363

¹ Source: City of Victorville General Plan Land Use & Zoning Districts Map.

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.

			Receiving Land Use	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	71.1	99	213	459
2	US-395	n/o Dos Palmas Rd.	Commercial	71.6	107	230	496
3	US-395	n/o Luna Rd.	Residential/Commercial	70.9	96	207	446
4	US-395	n/o La Mesa Rd.	Commercial/Residential	74.8	83	179	386
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	74.3	78	168	362
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	70.9	82	177	381
7	Luna Rd.	e/o US-395	Residential	63.9	RW	RW	73
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	70.4	77	165	356
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	70.6	79	170	366
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	70.5	78	168	362

TABLE 7-3: OPENING YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

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 Land Use	CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	71.2	100	216	466
2	US-395	n/o Dos Palmas Rd.	Commercial	72.1	116	249	536
3	US-395	n/o Luna Rd.	Residential/Commercial	71.4	104	223	481
4	US-395	n/o La Mesa Rd.	Commercial/Residential	74.9	85	183	395
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	74.4	79	170	367
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	71.1	85	183	393
7	Luna Rd.	e/o US-395	Residential	65.6	RW	RW	94
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	70.8	81	175	377
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	70.9	82	178	383
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	70.8	81	175	377

¹ Source: City of Victorville General Plan Land Use & Zoning Districts Map.

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.



			Receiving Land Use	CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	72.3	120	259	557
2	US-395	n/o Dos Palmas Rd.	Commercial	72.6	124	268	577
3	US-395	n/o Luna Rd.	Residential/Commercial	72.3	120	259	557
4	US-395	n/o La Mesa Rd.	Commercial/Residential	76.4	107	230	495
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	76.0	100	215	464
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	70.8	82	176	380
7	Luna Rd.	e/o US-395	Residential	63.8	RW	RW	72
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	70.8	81	175	378
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	71.0	84	181	390
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	70.9	83	178	384

TABLE 7-5: INTERIM YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

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 Land Use	CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	72.4	122	262	564
2	US-395	n/o Dos Palmas Rd.	Commercial		133	286	617
3	US-395	n/o Luna Rd.	Residential/Commercial	72.7	127	273	588
4	US-395	n/o La Mesa Rd.	Commercial/Residential	76.5	108	233	503
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	76.0	101	218	469
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	71.0	85	182	392
7	Luna Rd.	e/o US-395	Residential	65.5	RW	RW	94
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	71.1	86	185	398
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	71.3	88	189	407
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	71.1	86	184	397

¹ Source: City of Victorville General Plan Land Use & Zoning Districts Map.

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.

			Receiving Land Use	CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	73.4	143	307	662
2	US-395	n/o Dos Palmas Rd.	Commercial Residential/Commercial		144	311	670
3	US-395	n/o Luna Rd.	Residential/Commercial	73.6	145	312	673
4	US-395	n/o La Mesa Rd.	Commercial/Residential	77.7	130	281	605
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	77.3	122	263	568
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	71.0	85	182	392
7	Luna Rd.	e/o US-395	Residential	64.1	RW	RW	75
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	71.4	89	191	413
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	71.6	92	198	427
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	71.4	90	194	417

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

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.

TABLE 7-8: GENERAL PLAN 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

			Receiving Land Use	CNEL at Receiving		nce to Co enterline	
ID	Road	Segment	General Plan Designation ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	US-395	n/o Palmdale Rd. (SR-18)	Commercial	73.5	144	310	668
2	US-395	n/o Dos Palmas Rd.	Commercial	73.9	152	328	706
3	US-395	n/o Luna Rd.	Residential/Commercial	73.8	151	325	701
4	US-395	n/o La Mesa Rd.	Commercial/Residential	77.8	132	284	612
5	US-395	n/o Bear Valley Rd.	Commercial/Residential	77.3	123	266	572
6	Palmdale Rd. (SR-18)	w/o US-395	Commercial/Residential	71.3	87	188	405
7	Luna Rd.	e/o US-395	Residential	65.7	RW	RW	95
8	Palmdale Rd. (SR-18)	e/o Cantina St.	Commercial/Institutional	71.7	93	201	432
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	Commercial/Residential	71.8	95	206	443
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	Commercial/Residential	71.6	93	200	430

¹ Source: City of Victorville General Plan Land Use & Zoning Districts Map.

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.



7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

For informational purposes, an analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project scenario would not actually occur since the Project would not be fully constructed and operational until Opening Year conditions.

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.6 to 74.5 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 63.9 to 74.8 dBA CNEL. As shown on Table 7-9 the Project traffic generate a noise level increase of up to 0.3 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project traffic noise level increases would be *less than significant* under Existing with Project conditions.

ID	Road	Segment		EL at Receind Use (dE With Project	•	Noise- Sensitive Receiver Land Use?	Threshold Exceeded? ²
1	US-395	n/o Palmdale Rd. (SR-18)	70.8	71.1	0.3	No	No
2	US-395	n/o Dos Palmas Rd.	71.3	71.6	0.3	No	No
3	US-395	n/o Luna Rd.	70.6	70.9	0.2	Yes	No
4	US-395	n/o La Mesa Rd.	74.5	74.8	0.3	Yes	No
5	US-395	n/o Bear Valley Rd.	74.1	74.3	0.3	Yes	No
6	Palmdale Rd. (SR-18)	w/o US-395	70.6	70.9	0.3	Yes	No
7	Luna Rd.	e/o US-395	63.6	63.9	0.3	Yes	No
8	Palmdale Rd. (SR-18)	e/o Cantina St.	70.1	70.4	0.3	Yes	No
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	70.3	70.6	0.3	Yes	No
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	70.3	70.5	0.2	Yes	No

TABLE 7-9: EXISTING CONDITION OFF-SITE PROJECT TRAFFIC NOISE IMPACTS

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

² Significance Criteria (Section 4).



7.3 OPENING YEAR 2019 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.9 to 74.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-4 shows the Opening Year with Project conditions will range from 65.6 to 74.9 dBA CNEL. As shown on Table 7-10 the Project traffic will generate a noise level increase of up to 1.7 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project traffic noise level increases would be considered *less than significant* under Opening Year with Project conditions at the land uses adjacent to roadways conveying Project traffic.

ID	Road	Segment		EL at Receind Use (dE	•	Noise- Sensitive Receiver Land	Threshold Exceeded? ²
			No With Project Project Project Addition		Use?		
1	US-395	n/o Palmdale Rd. (SR-18)	71.1	71.2	0.1	No	No
2	US-395	n/o Dos Palmas Rd.	71.6	72.1	0.5	No	No
3	US-395	n/o Luna Rd.	70.9	71.4	0.5	Yes	No
4	US-395	n/o La Mesa Rd.	74.8	74.9	0.1	Yes	No
5	US-395	n/o Bear Valley Rd.	74.3	74.4	0.1	Yes	No
6	Palmdale Rd. (SR-18)	w/o US-395	70.9	71.1	0.2	Yes	No
7	Luna Rd.	e/o US-395	63.9	65.6	1.7	Yes	No
8	Palmdale Rd. (SR-18)	e/o Cantina St.	70.4	70.8	0.4	Yes	No
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	70.6	70.9	0.3	Yes	No
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	70.5	70.8	0.3	Yes	No

TABLE 7-10: OPENING YEAR OFF-SITE PROJECT TRAFFIC NOISE IMPACTS

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use. ² Significance Criteria (Section 4).



7.4 INTERIM YEAR PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Interim Year without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.8 to 76.4 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-6 shows the Interim Year with Project conditions will range from 65.5 to 76.5 dBA CNEL. As shown on Table 7-11 the Project traffic will generate a noise level increase of up to 1.7 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project traffic noise level increases would be *less than significant* under Interim Year with Project conditions at the land uses adjacent to roadways conveying Project traffic.

ID	Road	Segment		EL at Receind Use (dE	•	Noise- Sensitive Receiver Land	Threshold Exceeded? ²
			No Project	With Project	Project Addition	Use?	
1	US-395	n/o Palmdale Rd. (SR-18)	72.3	72.4	0.1	No	No
2	US-395	n/o Dos Palmas Rd.	72.6	73.0	0.4	No	No
3	US-395	n/o Luna Rd.	72.3	72.7	0.3	Yes	No
4	US-395	n/o La Mesa Rd.	76.4	76.5	0.1	Yes	No
5	US-395	n/o Bear Valley Rd.	76.0	76.0	0.1	Yes	No
6	Palmdale Rd. (SR-18)	w/o US-395	70.8	71.0	0.2	Yes	No
7	Luna Rd.	e/o US-395	63.8	65.5	1.7	Yes	No
8	Palmdale Rd. (SR-18)	e/o Cantina St.	70.8	71.1	0.3	Yes	No
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	71.0	71.3	0.3	Yes	No
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	70.9	71.1	0.2	Yes	No

TABLE 7-11: INTERIM YEAR OFF-SITE PROJECT TRAFFIC NOISE IMPACTS

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use. ² Significance Criteria (Section 4).



7.5 GENERAL PLAN 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-7 presents the General Plan 2040 without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 64.1 to 77.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-8 shows the General Plan 2040 with Project conditions will range from 65.7 to 77.8 dBA CNEL. As shown on Table 7-12 the Project traffic will generate a noise level increase of up to 1.6 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project traffic noise level increases would be *less than significant* under General Plan 2040 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

ID	Road	Segment		EL at Receind Use (dE	•	Noise- Sensitive Receiver Land	Threshold Exceeded? ²
			No Project	With Project	Project Addition	Use?	
1	US-395	n/o Palmdale Rd. (SR-18)	73.4	73.5	0.1	No	No
2	US-395	n/o Dos Palmas Rd.	73.5	73.9	0.3	No	No
3	US-395	n/o Luna Rd.	73.6	73.8	0.3	Yes	No
4	US-395	n/o La Mesa Rd.	77.7	77.8	0.1	Yes	No
5	US-395	n/o Bear Valley Rd.	77.3	77.3	0.1	Yes	No
6	Palmdale Rd. (SR-18)	w/o US-395	71.0	71.3	0.2	Yes	No
7	Luna Rd.	e/o US-395	64.1	65.7	1.6	Yes	No
8	Palmdale Rd. (SR-18)	e/o Cantina St.	71.4	71.7	0.3	Yes	No
9	Palmdale Rd. (SR-18)	e/o Cobalt Rd.	71.6	71.8	0.2	Yes	No
10	Palmdale Rd. (SR-18)	e/o Amethyst Rd.	71.4	71.6	0.2	Yes	No

TABLE 7-12: GENERAL PLAN 2040 OFF-SITE PROJECT TRAFFIC NOISE IMPACTS

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use. ² Significance Criteria (Section 4).



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8 **RECEIVER LOCATIONS**

To assess the potential for long-term operational and short-term construction noise impacts, the following receiver locations as shown on Exhibit 8-A were identified as representative locations for focused 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, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Noise-sensitive receivers near the Project site include existing residential homes, and non-noisesensitive receiver locations include the existing commercial uses in the Project study area, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

- R1: Location R1 represents the existing, non-noise-sensitive commercial use located approximately 125 feet north of the Project site on the north side of Palmdale Road.
- R2: Location R2 represents the existing, non-noise-sensitive commercial-designated vacant land located approximately 128 feet east of the Project site on the east side of US-395.
- R3: Location R3 represents the existing, non-noise-sensitive commercial use located approximately 34 feet south of the Project site on the west side of US-395.
- R4: Location R4 represents existing, noise-sensitive residential homes south of the Project site at roughly 1,269 feet on Fern Pine Road. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents existing, noise-sensitive residential homes west of the Project site at roughly 727 feet on Brynwood Street. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing, non-noise-sensitive commercial-designated vacant land located approximately 90 feet south of the Project site.
- R7: Location R7 represents existing, noise-sensitive residential-designated vacant land west of the Project site at roughly 451 feet on the south side of Palmdale Road. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R8: Location R8 represents the existing, non-noise-sensitive commercial use located approximately 94 feet northeast of the Project site on the south side of Palmdale Road.





EXHIBIT 8-A: RECEIVER LOCATIONS

- Distance from receiver to Project site boundary (in feet)



9 OPERATIONAL-SOURCE NOISE IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site noise-sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project operational noise levels.

9.1 **REFERENCE NOISE LEVELS**

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 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 roof-top air conditioning units, drive-through speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity all operating simultaneously.

Noise Source	Reference Meas. Duration (hh:mm:ss)	Dist. From Source (Feet)	Noise Source Height (Feet)	Hourly Activity (Min.) ⁹	Reference Noise Levels (dBA L _{eq}) at Reference Meas. Distance	Reference Noise Levels (dBA L _{eq}) at Uniform 50 Feet
Roof-Top Air Conditioning Unit ¹	96:00:00	5'	5'	60	77.2	57.2
Drive-Through Speakerphone ²	02:00:00	15'	3'	60	62.0	51.5
Gas Station Activity ³	00:03:00	5'	5'	60	68.2	48.2
Parking Lot Vehicle Movements ⁴	00:15:00	5'	5'	60	60.1	45.1
Car Wash Tunnel Entrance/Exit (Air Blowers) ⁵	01:00:00	30'	10'	60	74.9	70.5
Car Wash Entry/Vacuum Activity ⁶	00:01:02	5'	5'	60	74.6	54.6
Loading Dock Activity ⁷	00:01:00	20'	8'	60	77.3	69.3
Shopping Car Corral ⁴	00:00:16	5'	3'	60	72.9	52.9
RV Idling/Parking Activity ⁸	00:01:00	10'	6'	60	76.4	65.9

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

¹As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

² As measured by Urban Crossroads, Inc. on 12/19/2014 at a Panera Bread drive-thru in the City of Brea.

³ As measured by Urban Crossroads, Inc. on 4/26/2016 at an ARCO gas station at 6501 Quail Hill Parkway in the City of Irvine.

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

⁵ As measured by Urban Crossroads, Inc. on 9/27/2018 at the Zaroo Express Car Wash in the City of Santa Ana.

⁶ As measured by Urban Crossroads, Inc. on 5/27/2011 at an express car wash located at 1195 Baker Street in Costa Mesa.

⁷ As measured at a Huntington Beach store with Walmart truck loading by Urban Crossroads, Inc. on 4/14/2011.

⁸ As measured by Urban Crossroads, Inc. on 9/16/2015 at the Giant RV located at 41150 Juniper Street in the City of Murrieta.

⁹ Anticipated duration (minutes within the hour) of noise activity during peak hourly conditions expected at the Project site.



9.1.1 ROOF-TOP AIR CONDITIONING UNITS

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

9.1.2 DRIVE-THROUGH SPEAKERPHONE

To describe the potential noise level impacts associated with potential drive-thru speakerphones and vehicle activities, a reference noise level measurement was collected on Friday, December 19th, 2014 at a Panera Bread restaurant located at 423 South Associated Road in the City of Brea. The reference noise levels collected at the Panera Bread restaurant are expected to reflect potential drive-thru speakerphone noise level activities at the Project site, since the reference measurement includes both drive-thru speakerphone and vehicle activity noise. The noise sources included in the reference noise level measurement consist of voices of the Panera Bread employees over the speakerphone, customers' voices ordering food, car engines idling, car radios playing music, and cars queuing in the drive-thru lane. At 50 feet from the speakerphone, a reference noise level of 51.5 dBA L_{eq} was measured. This reference noise level measurement overstates the actual average noise levels since it represents the average of 28 speakerphone menu board ordering events observed over a two-hour period. In other words, the Panera Bread speakerphone menu board reference noise level describes continuous drive-thru operations and does not include any periods of inactivity.

9.1.3 GAS STATION ACTIVITY

To describe the potential noise level impacts created by the gas station of the proposed Project uses, a reference noise level measurement was collected on Tuesday, April 26th, 2016 at an ARCO gas station located at 6501 Quail Hill Parkway in the City of Irvine. The reference noise level measurement includes six cars fueling at once, car doors closing, engines starting, fuel pump TV sounds, and background car pass-by events within a three-minute period. At a uniform reference noise level noise level distance of 50 feet, the reference noise level is 48.2 dBA Leq.



9.1.4 PARKING LOT VEHICLE MOVEMENTS

To determine the noise levels associated with commercial parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30, 2012. The 15-minute noise level measurement indicates that the parking lot vehicle movements generates noise levels of 45.1 dBA L_{eq} at a normalized distance of 50 feet, accounting for soft-site conditions from a line source. The parking lot noise levels are mainly due to cars travelling in the parking lot, pulling in and out of spaces, car alarms sounding, and customers moving shopping carts.

9.1.5 CAR WASH TUNNEL ENTRANCE/EXIT (AIR BLOWERS)

To determine potential noise levels created by the car wash tunnel at the Project site, reference noise levels measurements were taken at the Zaroo Express Car Wash in the City of Santa Ana on September 27^{th} , 2018. The reference noise level was measured at 70.5 dBA L_{eq} at the uniform distance of 50 feet during peak operating times at the express car wash, and represents a car in the car wash tunnel exit, water sprayers, and air blowers operating simultaneously. In addition, background parking lot vehicle movements and vacuum activities are included in this reference noise level measurement. To present a conservative approach, this analysis assumes the same reference noise source for both the car wash tunnel entrance and exit.

9.1.6 CAR WASH ENTRY/VACUUM ACTIVITY

To represent the vehicle entry and vacuum activity within the express car wash at the Project site, a reference noise level measurement was collected on May 27th, 2011 at an express car wash located at 1195 Baker Street in the City of Costa Mesa. The reference noise level measurement represents up to four vacuums operating simultaneously near the vehicle entry at the Costa Mesa express car wash. At a uniform reference distance of 50 feet, the vacuum reference noise level is 54.6 dBA L_{eq}.

9.1.7 LOADING DOCK ACTIVITIES

To evaluate the noise impacts associated with the delivery truck tractor trailer unloading/loading activities, a reference noise level measurement was taken at a large anchor store located at the southwest corner of Goldenwest Street and Edinger Avenue by Urban Crossroads Inc. on April 14th, 2011 in the City of Huntington Beach. The reference noise level measurement includes a Walmart truck approaching, backing-into, and docking in the loading area of the anchor store. The primary noise generated by tractor trailer unloading is the noise of the truck arriving, backing into the dock area, detaching the cab, attaching the cab to the empty trailer, and exiting the loading dock. The unmitigated noise levels were measured at 69.3 dBA L_{eq} at a uniform reference distance of 50 feet.



9.1.8 SHOPPING CART CORRAL (METAL CARTS)

To evaluate the noise level impacts from shopping carts placed by customers into assigned shopping cart areas, Urban Crossroads collected noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30th, 2012. The reference noise level at a uniform distance of 50 feet is 52.9 dBA Leq. The noise impacts are mainly due to the metal shopping carts crashing into other carts already placed in the corral as well as striking the side rails.

9.1.9 RV IDLING/PARKING ACTIVITY

On Wednesday, September 16th, 2015, Urban Crossroads, Inc. collected short-term operational noise level measurements at the Giant RV Parts and Service Center located at 41150 Juniper Street in the City of Murrieta. An RV engine idle and air brake noise reference measurement was taken over a one-minute period outside of the Giant RV Murrieta service garage, with background service garage and RV towing noise sources. The reference measurement results in a noise level of 65.9 dBA L_{eq} at a uniform distance of 50 feet.



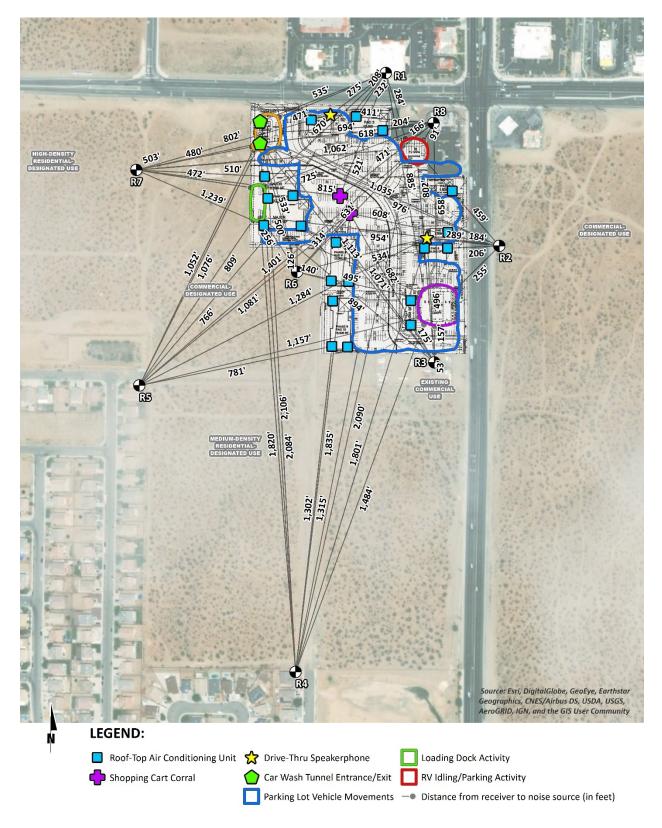


EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



9.2 OPERATIONAL-SOURCE NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each receiver location. The operational noise level calculations shown on Table 9-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL₁):

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

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 indicates that the unmitigated operational noise levels associated with the roof-top air conditioning units, drive-through speakerphones, gas station activity, parking lot vehicle movements, car wash tunnel, entry, and vacuum activities, loading dock activity, shopping cart corrals, and temporary RV idling/parking activity are expected to range from 44.6 to 62.2 dBA L_{eq} at nearby receiver locations. The unmitigated operational noise level calculation worksheets are included in Appendix 9.1.

9.3 OPERATIONAL-SOURCE NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, received Project operational-source noise levels are evaluated against City of Victorville and Adelanto exterior noise level standards. Table 9-3 shows the received operational-source noise levels associated with Desert Grove Retail Project would not exceed City of Victorville and Adelanto exterior noise level standards. On this basis, received Project operational-source noise levels impacts would not conflict with applicable noise regulations.

					Received	Received Noise Levels by Source ²	oy Source ²				Unmitigated Total Proiect
Receiver Location ¹	Land Use	Roof-Top Air Conditioning Unit	Drive-Through Speakerphone	Gas Station Activity	Parking Lot Vehicle Movements	Car Wash Tunnel Entrance/Exit (Air Blowers)	Car Wash Entry/Vacuum Activity	Loading Dock Activity	Shopping Cart Corral	RV Idling/Parking Activity	Operational Noise Levels (dBA L _{eq}) ³
R1	Commercial	44.8	36.7	23.2	35.1	49.9	35.1	31.1	32.5	54.6	56.3
R2	Commercial	44.9	36.3	34.0	36.6	44.1	28.8	28.0	31.2	51.5	53.3
R3	Commercial	46.3	31.6	38.3	44.7	43.5	28.0	28.6	30.2	47.8	52.2
R4	Residential	28.9	20.4	18.8	23.8	38.0	22.2	38.1	21.6	41.6	44.6
R5	Residential	33.3	23.4	20.9	27.3	43.8	28.1	45.2	26.2	44.2	49.4
R6	Commercial	48.3	31.0	28.3	39.1	49.9	34.6	39.3	36.9	49.4	54.5
R7	Residential	37.0	25.9	20.3	30.1	50.4	35.0	49.8	28.7	46.0	54.1
R8	Commercial	45.0	25.7	25.8	37.3	42.4	26.6	30.4	33.4	62.0	62.2
¹ See Evhihit	¹ See Exhibit 9-A for the receiver and noise source locations	r and noice cource	a locations								

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

¹ See Exhibit 9-A for the receiver and noise source locations. ² Reference noise sources as shown on Table 9-1. ³ Calculations for each noise source are provided in Appendix 9.1.



		Unmitigated Total Project		shold . L _{eq}) ³		shold eded?
Receiver Location ¹	Land Use	Operational Noise Levels (dBA L _{eq}) ²	Daytime	Nighttime	Daytime	Nighttime
R1	Commercial	56.3	70	70	No	No
R2	Commercial	53.3	70	70	No	No
R3	Commercial	52.2	70	70	No	No
R4	Residential	44.6	65	55	No	No
R5	Residential	49.4	65	55	No	No
R6	Commercial	54.5	70	70	No	No
R7	Residential	54.1	65	55	No	No
R8	Commercial	62.2	70	70	No	No

TABLE 9-3: UNMITIGATED PROJECT OPERATIONAL-SOURCE NOISE LEVEL COMPLIANCE

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

² Calculations for each noise source presented in Table 9-2 and are provided in Appendix 9.1.

³ Exterior noise level standards (Table 3-1).

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

9.4 **PROJECT OPERATIONAL-SOURCE NOISE CONTRIBUTION**

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

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

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. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at noise-sensitive receiver locations when unmitigated Project-source noise is added to the ambient daytime and nighttime conditions are presented on Tables 9-3 and 9-4, respectively.

As indicated on Table 9-4, the Project will contribute an unmitigated operational noise level increase during the daytime hours ranging from 0.2 to 1.6 dBA L_{eq} and during the nighttime hours ranging from 0.4 to 2.3 dBA L_{eq} . Based on the without Project (ambient) noise levels, the Project operational noise level increases will, therefore, satisfy the significance criteria discussed in Section 4, and as such, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a



substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

Noise- Sensitive Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R4	44.6	L4	51.8	52.6	0.8	5.0	No
R5	49.4	L5	52.8	54.4	1.6	5.0	No
R7	54.1	L6	67.2	67.4	0.2	1.5	No

TABLE 9-4: UNMITIGATED DAYTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

¹ See Exhibit 9-A for the sensitive 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 Criteria as defined in Section 4.

TABLE 9-5: UNMITIGATED NIGHTTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Noise- Sensitive Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R4	44.6	L4	50.0	51.1	1.1	5.0	No
R5	49.4	L5	51.1	53.4	2.3	5.0	No
R7	54.1	L6	64.3	64.7	0.4	3.0	No

¹ See Exhibit 9-A for the sensitive 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 Criteria as defined in Section 4.



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10 CONSTRUCTION-SOURCE NOISE IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearby sensitive receiver locations.

10.1 CONSTRUCTION-SOURCE NOISE LEVELS

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

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

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages and equipment used in this analysis are consistent with the *Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (25)



10.2 CONSTRUCTION REFERENCE NOISE LEVELS

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

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

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

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

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

⁵ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario. ⁴ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

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





EXHIBIT 10-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS

Distance from receiver to construction activity (in feet)



10.3 CONSTRUCTION NOISE ANALYSIS

Tables 10-2 to 10-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-7 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the Project construction noise levels when the highest reference noise level is operating at the edge of primary construction activity nearest each sensitive receiver location will range from 35.9 to 78.6 dBA L_{eq} at the sensitive receiver locations, as shown on Table 10-7.

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Highest Reference Noise Level at 50 Feet (dBA Leq):	64.2

TABLE 10-2: SITE PREPARATION EQUIPMENT NOISE LEVELS

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	145'	-9.2	0.0	54.9
R2	148'	-9.4	0.0	54.7
R3	54'	-0.7	0.0	63.5
R4	1,289'	-28.2	0.0	35.9
R5	747'	-23.5	0.0	40.7
R6	110'	-6.8	0.0	57.3
R7	471'	-19.5	0.0	44.7
R8	93'	-5.4	0.0	58.8

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

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

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

⁴ Estimated barrier/berm attenuation from existing barriers/berms in the Project study area.

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

TABLE 10-3: GRADING EQUIPMENT NOISE LEVELS

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	145'	-9.2	0.0	70.0
R2	148'	-9.4	0.0	69.8
R3	54'	-0.7	0.0	78.6
R4	1,289'	-28.2	0.0	51.0
R5	747'	-23.5	0.0	55.8
R6	110'	-6.8	0.0	72.4
R7	471'	-19.5	0.0	59.8
R8	93'	-5.4	0.0	73.9

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

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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

⁴ Estimated barrier/berm attenuation from existing barriers/berms in the Project study area.



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

TABLE 10-4: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	145'	-9.2	0.0	58.9
R2	148'	-9.4	0.0	58.7
R3	54'	-0.7	0.0	67.5
R4	1,289'	-28.2	0.0	39.9
R5	747'	-23.5	0.0	44.7
R6	110'	-6.8	0.0	61.3
R7	471'	-19.5	0.0	48.7
R8	93'	-5.4	0.0	62.8

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

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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

⁴ Estimated barrier/berm attenuation from existing barriers/berms in the Project study area.

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

TABLE 10-5: PAVING EQUIPMENT NOISE LEVELS

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	145'	-9.2	0.0	62.4
R2	148'	-9.4	0.0	62.2
R3	54'	-0.7	0.0	70.9
R4	1,289'	-28.2	0.0	43.4
R5	747'	-23.5	0.0	48.1
R6	110'	-6.8	0.0	64.8
R7	471'	-19.5	0.0	52.1
R8	93'	-5.4	0.0	66.2

 $^{1}\,\mathrm{Reference}$ construction noise level measurements taken by Urban Crossroads, Inc.

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

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

⁴ Estimated barrier/berm attenuation from existing barriers/berms in the Project study area.

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

TABLE 10-6: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	145'	-9.2	0.0	58.2
R2	148'	-9.4	0.0	58.0
R3	54'	-0.7	0.0	66.8
R4	1,289'	-28.2	0.0	39.2
R5	747'	-23.5	0.0	44.0
R6	110'	-6.8	0.0	60.6
R7	471'	-19.5	0.0	48.0
R8	93'	-5.4	0.0	62.1

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

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

 $^{\rm 3}$ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier/berm attenuation from existing barriers/berms in the Project study area.

10.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. As shown on Table 10-7, the unmitigated construction noise levels are expected to range from 35.9 to 78.6 dBA L_{eq} at the nearby receiver locations.

		Const	ruction Hourly	Noise Level (dBA L _{eq})	
Receiver Location ¹	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Construction Noise Levels ²
R1	54.9	70.0	58.9	62.4	58.2	70.0
R2	54.7	69.8	58.7	62.2	58.0	69.8
R3	63.5	78.6	67.5	70.9	66.8	78.6
R4	35.9	51.0	39.9	43.4	39.2	51.0
R5	40.7	55.8	44.7	48.1	44.0	55.8
R6	57.3	72.4	61.3	64.8	60.6	72.4
R7	44.7	59.8	48.7	52.1	48.0	59.8
R8	58.8	73.9	62.8	66.2	62.1	73.9

TABLE 10-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

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

² Estimated construction noise levels during peak operating conditions.

Table 10-8 shows the highest construction noise levels at the potentially impacted receiver locations are expected to approach 78.6 dBA L_{eq} and, therefore, will satisfy the construction noise level threshold of 85 dBA L_{eq} at all receiver locations. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *less than significant* impact at all receiver locations.

TABLE 10-8: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE

. .	Constr	uction Noise Levels (d	BA L _{eq})
Receiver Location ¹	Highest Activity Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	70.0	85	No
R2	69.8	85	No
R3	78.6	85	No
R4	51.0	85	No
R5	55.8	85	No
R6	72.4	85	No
R7	59.8	85	No
R8	73.9	85	No

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

² Highest construction noise levels during peak operating conditions, as shown on Table 10-7.

³ Construction noise level threshold as shown on Table 4-2.

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



10.5 TEMPORARY CONSTRUCTION NOISE LEVEL CONTRIBUTIONS

To describe the temporary Project construction noise level contributions to the existing ambient noise environment at noise-sensitive receiver locations, the Project construction noise levels were combined with the existing ambient noise levels measurements at the off-site sensitive receiver locations. The difference between the combined Project-construction and ambient noise levels are used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the ambient daytime conditions are presented on Table 10-9. A temporary noise level increase of 12 dBA L_{eq} is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used in this report to assess the Project-construction noise level increases. (3)

As indicated in Table 10-9, the Project will contribute unmitigated, worst-case construction noise level increases approaching 4.7 dBA L_{eq} at the closest sensitive receiver location, R5. Since the worst-case temporary noise level increases during Project construction are below the 12 dBA L_{eq} significance threshold, the unmitigated construction noise level increases are considered *less than significant* temporary noise impacts at the noise-sensitive receiver locations.

Receiver Location ¹	Highest Project Construction Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Temporary Worst-Case Project Contribution ⁶	Threshold (12 dBA L _{eq}) Exceeded? ⁷
R4	51.0	L4	51.8	54.4	2.6	No
R5	55.8	L5	52.8	57.5	4.7	No
R7	59.8	L6	67.2	67.9	0.7	No

TABLE 10-9: TEMPORARY CONSTRUCTION NOISE LEVEL INCREASES

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

² Unmitigated Project construction noise levels as shown on Table 10-8.

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

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

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

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

 7 Based on the 12 dBA L_{eq} temporary increase significance criteria as defined in Section 4.



10.6 CONSTRUCTION VIBRATION IMPACTS

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

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

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

At distances ranging from 54 to 1,289 feet from Project construction activity, construction vibration velocity levels are expected to range from 6.6 to 77.0 VdB. Based on the Federal Transit Administration (FTA) threshold of 80 VdB for residential uses, Project construction vibration levels of up to 77.0 VdB are considered a *less than significant* vibration impact. Further, vibration levels at the site of the closest receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.



	Distance to		Receiver V	ibration Leve	ls (VdB) ²		
Receiver Location ¹	Construction Activity (Feet)	Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	Threshold Exceeded? ³
R1	145'	35.1	56.1	63.1	64.1	64.1	No
R2	148'	34.8	55.8	62.8	63.8	63.8	No
R3	54'	48.0	69.0	76.0	77.0	77.0	No
R4	1,289'	6.6	27.6	34.6	35.6	35.6	No
R5	747'	13.7	34.7	41.7	42.7	42.7	No
R6	110'	38.7	59.7	66.7	67.7	67.7	No
R7	471'	19.7	40.7	47.7	48.7	48.7	No
R8	93'	40.9	61.9	68.9	69.9	69.9	No

TABLE 10-10: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

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

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

³ Does the peak vibration exceed the FTA maximum acceptable vibration standard of 80 VdB?



11 REFERENCES

- 1. **State of California.** *California Environmental Quality Act, Appendix G & Amendments and Additions to the State CEQA Guidelines.* 2019.
- 2. TJW Engineering, Inc. SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis. January 2019.
- 3. California Department of Transportation. *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects.* May 2011.
- 4. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
- 5. Environmental Protection Agency Office of Noise Abatement and Control. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974. EPA/ONAC 550/9/74-004.
- 6. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. June, 1995.
- 7. U.S. Department of Transportation, Federal Highway Administration. *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
- 8. U.S. Environmental Protection Agency Office of Noise Abatement and Control. *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
- 9. Occupational Safety and Health Administration. Standard 29 CRF, Part 1910.
- 10. **Center for Disease Control and Prevention.** About Hearing Loss. [Online] [Cited: 04 15, 2016.] http://www.cdc.gov/healthyschools/noise/signs.htm.
- 11. U.S. Department of Transportation, Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*. September 2018.
- 12. Office of Planning and Research. State of California General Plan Guidlines. 2018.
- 13. State of California. California Green Building Standards Code. 2016.
- 14. City of Victorville. General Plan Noise Element. 2008.
- 15. —. *Municipal Code, Section 13.01.030*.
- 16. National Institute for Occupational Safety and Health. Criteria for Recommended Standard: Occupational Noise Exposure. June 1998.
- 17. City of Adelanto. General Plan Noise Element. 1993.
- 18. —. Municipal Code, Chapter 17.90 Performance Standards, Sections 17.90.020 Noise & 17.90.030 Vibration.
- 19. California Court of Appeal. *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; Cal.Rptr.3d, October 2008.
- 20. Federal Interagency Committee on Noise. Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.
- 21. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.



- 22. U.S. Department of Transportation, Federal Highway Administration. FHWA Highway Traffic Noise Prediction Model. December 1978. FHWA-RD-77-108.
- 23. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 24. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 25. Urban Crossroads, Inc. Desert Grove Air Quality Impact Analysis. January 2019.



12 CERTIFICATION

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

Bill Lawson, P.E., INCE 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 VICTORVILLE MUNICIPAL CODE



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Chapter 13.01 - NOISE CONTROL

Sections:

13.01.010 - Purpose and intent.

- (a) The purpose of this chapter is to establish criteria and standards for the regulation of noise levels within the city of Victorville.
- (b) The city council declares and finds that excessive noise levels are detrimental to the public health, welfare and safety and contrary to the public interest. It is the intent of this chapter to protect persons from excessive levels of noise from sources including, but not limited to; persons, animals, or fowl; automobiles, motorcycles, engines, machines, or other mechanical devices; loudspeakers, musical instruments, radios, televisions, phonographs, or other amplifying devices.
- (c) This chapter includes standards for the measurement of noise levels to ensure that noise levels do not disturb and interfere with the peace, comfort or repose of the residents of the neighborhood from which the noise is emitted.

(Ord. 1962 § 2 (part), 2002)

13.01.020 - Definitions.

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

- "A-weighted sound level" means the sound pressure level in decibels as measured on a sound level meter using A-weighting network. The level to read is designated db(A) or dB(A).
- (2) "Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding any intrusive noise.
- (3) "Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.
- (4) "Decibel" means a unit of measure of sound level noise.
- (5) "Noise level" means the same as "sound level" and the terms may be used interchangeably herein.
- (6) "Sound level" (noise level) in decibels is the quantity measured using the frequency weighting of A of a sound level meter as defined herein.
- (7) "Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 for type 1 or type 2 sound level meters or an instrument

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and the associated recording and analyzing equipment which will provide equivalent data.

(Ord. 1962 § 2 (part), 2002)

13.01.030 - Noise measurement criteria.

Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter as defined in this chapter. The location selected for measuring exterior noise levels shall be at any point on the property line of the offender or anywhere on the affected property.

(Ord. 1962 § 2 (part), 2002)

13.01.040 - Base ambient noise levels.

All ambient noise measurements shall commence in decibels within the respective zones and times as follows:

Zone	Time	Sound Level Decibels
All residential zones	10:00pm to 7:00am	55 dB(A)
	7:00am to 10:00pm	65 dB(A)
All commercial zones	Anytime	70 dB(A)
All industrial zones	Anytime	75 dB(A)

If the ambient noise level exceeds the applicable limit as noted in the above table, the ambient noise level shall be the standard.

(Ord. 1962 § 2 (part), 2002)

13.01.050 - Noise levels prohibited.

Noise levels shall not exceed the ambient noise levels in <u>Section 13.01.040</u> by the following dB(A) levels for the cumulative period of time specified:

(1) Less than 5dB(A) for a cumulative period of more than thirty minutes in any hour;

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- (2) Less than <u>10</u> dB(A) for a cumulative period of more than fifteen minutes in any hour;
- (3) Less than <u>15</u> dB(A) for a cumulative period of more than five minutes in any hour;
- (4) Less than 20 dB(A) for a cumulative period of more than one minute in any hour;
- (5) 20 dB(A) or more for any period of time.

(Ord. 1962 § 2 (part), 2002)

13.01.060 - Noise source exemptions.

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

- (1) All mechanical devices, apparatus or equipment used, related to or connected with emergency machinery, vehicle or work.
- (2) The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation projects, public works projects or essential public works services and facilities, including those utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.
- (3) Activities conducted on the grounds of any elementary, intermediate or secondary school or college.
- (4) Outdoor gatherings, public dances and shows, provided said events are conducted pursuant to a permit as required by this code.
- (5) Activities conducted in public parks and public playgrounds, provided said events are conducted pursuant to a permit as required by this code.
- (6) Any activity to the extent regulation thereof has been preempted by state or federal law.
- (7) Traffic on any roadway or railroad right-of-way.
- (8) The operation of the Southern California Logistics Airport.
- (9) Construction activity on private properties that are determined by the director of building and safety to be essential to the completion of a project.

(Ord. 1962 § 2 (part), 2002)

13.01.070 - Notice and penalties.

Any person violating any of the provisions, or failing to comply with the requirements of this chapter, is guilty of a civil penalty, punishable in accordance with <u>Chapter 1.05</u>. In addition, in the discretion of the city attorney and based upon the specific facts and circumstances presented to him or her, any such violation may be charged as an infraction subject to the penalties contained in <u>Section 1.04.010</u>.

(Ord. 1962 § 2 (part), 2002)

13.01.080 - Severability.

If any provision of the ordinance codified in this chapter or the application thereof to any person or circumstance is held invalid, the remainder of the ordinance, and the application of such provision to other persons or circumstances, shall not be affected thereby.

(Ord. 1962 § 2 (part), 2002)

APPENDIX 5.1:

STUDY AREA PHOTOS



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L1 East 34, 30' 25.490000", 117, 24' 14.320000"



L1 North 34, 30' 25.520000", 117, 24' 14.290000"



L1 South 34, 30' 25.500000", 117, 24' 14.290000"



L1 West 34, 30' 25.490000", 117, 24' 14.320000"



L2 East 34, 30' 18.200000", 117, 23' 57.670000"



L2 North 34, 30' 18.200000", 117, 23' 57.670000"



L2 South 34, 30' 18.130000", 117, 23' 57.640000"



L2 West 34, 30' 18.100000", 117, 23' 57.640000"



L3 East 34, 30' 16.580000", 117, 23' 30.590000"



L3 North 34, 30' 16.560000", 117, 23' 30.620000"



L3 South 34, 30' 16.580000", 117, 23' 30.590000"



L3 West 34, 30' 16.560000", 117, 23' 30.620000"



L4 East 34, 30' 1.500000", 117, 24' 6.080000"



L4 North 34, 30' 1.480000", 117, 24' 6.100000"



L4 South 34, 30' 1.480000", 117, 24' 6.050000"



L4 West 34, 30' 1.480000", 117, 24' 6.100000"



L5 East 34, 30' 13.020000", 117, 24' 19.230000"



L5 North 34, 30' 13.070000", 117, 24' 19.200000"



L5 South 34, 30' 13.010000", 117, 24' 19.260000"



L5 West 34, 30' 13.020000", 117, 24' 19.230000"



L6 East 34, 30' 23.090000", 117, 24' 29.260000"



L6 North 34, 30' 23.060000", 117, 24' 29.280000"



L6 South 34, 30' 23.090000", 117, 24' 29.260000"



L6 West 34, 30' 23.070000", 117, 24' 29.260000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



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JN: 11724 Analyst: R. Saber	0.29	52	Adj. Adj. L _{eq} 10.0 67.7	10.0 66.4 10.0 67.1			10.0 73.7 0.0 65.1			0.0 64.4		0.0 64.4 0.0 65.5		0.0 65.8 0.0 66.7			5.0 71.8 5.0 73.0		10.0 77.0		Dayume Nignume	66.5 62.7	(dB)		20.5	
	8.88 0.88	20 21	L eq 57.7	56.4 57.1	60.6	60.7 63.6	63.7 65.1	64.2	63.5	62.9 64.4	62.7	64.4 65.5	66.6	65.8 66.7	72.6	66.1	66.8 68.0	65.0	67.0		24-nour	65,4	24-Hou			1
	9 ^{.2} 2	18 19	199%	44.0 45.0	45.0	47.0 50.0	51.0	51.0	49.0	49.0 48.0	48.0	49.0 50.0	50.0	53.0 54.0	57.0	53.0	51.0 50.0	51.0	45.0	48.0	57.0	51.0 	50.0 53.0	51.3	44.0	47.0
Meter: Piccolo I	2 :99		46.0	45.0 45.0	46.0	49.0 53.0	53.0 58.0	54.0	52.0	0.1.0 50.0	51.0	51.0 53.0	53.0	55.0 57.0	59.0	55.0	54.0 53.0	52.0	49.0	50.0	59.0	53.7	53.0 55.0	54.0	45.0	48.7
	9.99 8.29	15 16	47. 0	45.0 45.0	47.0	50.0 54.0	56.0	56.0	54.0	52.0	53.0	53.0 56.0	55.0	57.0 58.0	60.09	57.0	56.0 55.0	53.0	51.0	52.0	60.0	55.5	55.0 57.0	56.0	45.0	49.8
ummary e Project site	5.29	13 14	L50% 52.0	49.0 49.0	56.0	58.0 61.0	62.0	62.0	61.0	60.0 59.0	59.0	59.0 61.0	61.0	62.0 63.0	64.0	63.0	63.0 62.0	61.0	59.0	59.0	64.0	61.2	62.0 63.0	62.7	49.0	56.3
Measurement Summary et northwest of the Project sit rea and vacant lot.	<u> </u>		57. 0	55.0 56.0	60.0	61.0 64.0	64.0	64.0	64.0	63.U 62.0	62.0	63.0 64.0	64.0	65.0 65.0	67.0	66.0	65.0 65.0	64.0	63.0	62.0 62.0	67.0	64.0 2- 2	65.0 66.0	65.3	55.0	60.4
	6.29	10 11 Hour B	L8% 62.0	61.0 61.0	64.0	64.0 67.0	66.0 67.0	67.0	67.0 55.0	67.0	65.0	67.0 68.0	68.0	68.0 68.0	70.0	69.0	68.0 68.0	67.0	68.0	65.0	70.0	67.3	68.0 69.0	68.3	61.0 52.0	64.4
24-Hour Noise Level Located on Pearmain Stre r an existing commercial a HourlyL dBA R	S'E9	- - -	L5% 63.0	62.0 62.0	65.0	65.0 68.0	68.0	68.0	68.0	68.0 68.0	67.0	69.0 70.0	0.69	69.0 69.0	71.0	70.0	70.0 70.0	0.69	69.0	67.0 67.0	71.0	68.6 	70.0 70.0	70.0	62.0	65.7
	7.29	7 8	L2% 65.0	65.0 65.0	68.0	68.0 70.0	70.0	71.0	70.0	71.0	70.0	72.0 73.0	73.0	73.0 72.0	75.0	73.0	73.0 74.0	71.0	73.0	69.0	75.0	71.6	73.0 74.0	73.3	65.0 72.0	68.3
Location:	۲.٤٩ د		L1% 67.0	67.0 67.0	69.0	69.0 72.0	71.0	72.0	71.0	74.0	72.0	75.0	76.0	75.0 74.0	79.0	75.0	76.0	74.0	76.0	71.0	79.0	73.8	75.0	76.0	67.0 36.0	70.2
	9.59	4 -	L min 44.5	44.2 44.6	45.2	46.0 48.2	47.9 51.9	47.4	47.5	40.7	45.2	47.0 46.4	48.3	49.8 50.8	54.1	51.2	50.6 49.2	48.9	44.2	L min 44.7	54.1	Average:	49.2 51.2	Average:	44.2	48.9 Average:
2018	9'09 T'ZS	5 3	L max 75.0	72.9 76.9	83.0	75.4 79.8	80.4 81.2	76.7	81.2	88.0	83.0	86.3 83.6	91.7	87.7 90.8	102.4	82.8	88.2 92.7	86.6	92.0	L max 76.7	102.4	A S	82.8 92.7	A	72.9	92.U A
October 30, 2 ? Retail	26.4		L eq 57.7	56.4 57.1	60.6	60.7 63.6	63.7 65.1	64.2	63.5	62.9 64.4	62.7	64.4 65.5	66.6	65.8 66.7	72.6	66.1	66.8 68.0	65.0	67.0	ь еа 62.7	72.6	66.4	66.1 68.0	67.0	56.4	62.7
<i>Date:</i> Tuesday, October 30, 2018 <i>oject:</i> Victorville Retail	88800000000000000000000000000000000000	-	ie Hour 0	7 7	ŝ	4 7	9	~ ∞	б С	01 11	12	13	15	16 17	18		21 20	22		Min	Max	Energy Average	Max	Energy Average	Min	Energy Average
Date: Project:	(A8b) ₀∍J γlruoH ∞∞∠∠∞∞Ω2244⊻		Timeframe		Night						Dav						Evening	Nich+	INIBIIL	auniauu	лау	Ener	Evening	Ener	Night	Ener

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11724 R. Saber	53 67.4	Adj. L _{eq}	78.8	75.2 76.0	77.8	79.8 81 5	80.5	67.9 52.7	68./ 67.1	07.1 68.1	67.7	68.2	68.9 60.3	2.60 0.69	69.0	70.1 7.07	73 1	74.0	74.2	77.8	77.4		Nighttime	68.7		BA)			
JN: Analyst:	2. <u>66</u> 12 8.70 2.20 2.20	Adj.	10.0	10.0 10.0	10.0	10.0	10.0 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	10.0	10.0 I (dBA)	formal ba -	Daytime	8 89	0.00	24-Hour CNEL (dBA)		75.4	
	6 <u>.</u> 0	L ea	68.8	65.2 66.0	67.8	69.8 71 5	70.5	67.9 52.7	62./ 67.1	07.1 68.1	67.7	68.2	68.9	2.60 0.09	0.69	70.1 70.7	70.2 68 1	0.69	69.2	67.8	67.4		24-Hour	8 89	0.00	24-			
	10 2.07 10 1	%661	45.0	44.0 45.0	48.0	52.0 55.0	55.0	53.0	0.02	49.0	50.0	51.0	50.0	53.0 53.0	53.0	54.0	0.00	51.0	51.0	51.0	46.0 1 99%	49.0	54.0	51.5	51.0	52.0	51.3	44.0 55.0	49.0
Meter: Piccolo I	1 7	L95%	50.0	46.0 47 0	52.0	55.0 59.0	59.0 59.0	56.0 53.0	53.U	52.0 52.0	53.0	54.0	53.0	56.0	56.0	57.0 57.0	0.10 55 0	54.0	53.0	53.0	50.0 1 95%	52.0	57.0	54.6	53.0	55.0	54.0	46.0 59.0	52.3
Meter:	0.e9 51 0.e9 61 61	%067	52.0	48.0 49.0	54.0	58.0 61.0	0.09	57.0	55.0 55.0	55.0	55.0	56.0	56.0	58.0 58.0	58.0	59.0	0.95	56.0	55.0	54.0	52.0 190%	55.0	59.0	56.7	55.0	57.0	56.0	48.0 61.0	54.2
mmary h of an	2.6 3	150%	60.0	56.0 58.0	62.0 62.0	66.0 67.0	67.0 67.0	64.0 67.0	63.0 63.0	64.0	64.0	64.0	64.0	65.0	65.0	66.0 65.0	65.0	65.0	64.0	62.0	61.0 150%	63.0	66.0	64.4	64.0	65.0	64.7	56.0 67.0	62.1
Measurement Summary t site on US 395 south of an vacant lot. codings (unadjusted)	12 12 13 13 13 13 13 13 13 13 13 13 13 13 13	L25%	66.0	63.0 65.0	67.0	69.0 70.0	70.0	68.0 50.0	69.0 67.0	07.0 68.0	68.0	68.0	67.0	0.00	0.69	69.0 60.0	0.60	68.0 68.0	68.0	67.0	66.0 125%	67.0	0.69	68.3	68.0	68.0	68.0	63.0 70.0	67.0
vel Measure oject site on U in a vacant lot. A <i>Readings (un</i>	Hour Beginning	78%	72.0	70.0 70.0	72.0	74.0	73.0	72.0	71.0	72.0	72.0	72.0	72.0	73.0	73.0	73.0	0.67	72.0	73.0	72.0	71.0	71.0	73.0	72.3	71.0	73.0	72.0	70.0 74.0	71.9
24-Hour Noise Level I Located east of the Projec ting ARCO gas station in a <i>Hourly</i> L _{eg} dBA R e	<mark>. წ.89</mark> წ. მ. მ. მ	T5%	74.0	72.0	74.0	75.0	74.0	73.0	73.0	73.0	73.0	73.0	73.0	74.0	74.0	75.0	73.0	74.0	74.0	73.0	73.0	73.0	75.0	73.5	73.0	74.0	73.7	72.0 76.0	73.7
24-Hour Noise Level Measurement Summar L2 - Located east of the Project site on US 395 south of an existing ARCO gas station in a vacant lot. <i>Hourly</i> L _{eq} <i>dBA Readings (unadjusted)</i>	∠.89 ∞	L2%	77.0	74.0 75.0	76.0	77.0	76.0	75.0	74.0	75.0	75.0	75.0	0.77	76.0	76.0	77.0	75.0	76.0	77.0	75.0	76.0	74.0	77.0	75.8	75.0	77.0	76.0	74.0 78.0	76.0
Location:	6 ² 29 ► 5'0∠ ∞	11%	79.0	76.0 76.0	77.0	78.0	20.0 78.0	76.0	75.0	76.0	76.0	77.0	79.0	78.0	77.0	80.0	76.0	78.0	78.0	77.0	78.0	75.0	80.0	77.3	76.0	78.0	77.3	76.0 80.0	77.7
	8.69 4 2.17 v	L _{min}	43.4	42.4 44 1	43.6	48.5 52.0	52.4	50.8	47.4 15.0	46.4	48.3	48.1	48.0	49.9	50.1	51.9	5.1C	49.1	47.8	49.5	44.9	45.9	51.9		47.8	49.1	•••	42.4 52.4	age:
∞	8.7a	L _{max}	92.0	85.5 81 8	85.5	90.9 04 E	92.5	85.5 25.5	8.c8 81 A	4.10 89.68	82.5	87.2	91.0	94.U 87.4	87.9	90.7 24 7	94.7 87 7	89.8	91.2	89.9	83.9	- max 81.4	94.7	Average	87.7	91.2	Average	81.8 94.5	Average:
ober 30, 201 etail	→ 66.0	L eq	68.8	65.2 66.0	67.8	69.8 71 E	70.5	67.9	62./	68.1	67.7	68.2	68.9 60.3	2.60 0.09	0.69	70.1 2 07	70.2 68 1	0.09	69.2	67.8	67.4	<i>с еа</i> 67.1	70.2	68.8	68.1	69.2	68.8	65.2 71.5	68.7
Tuesday, October 30, 2018 Victorville Retail	8.89 0	Hour	0	1 0	4 M	4 ⊓	ر 6	2	∞ σ	ر 10	11	12	13	15	16	17	10	20	21	22	23 Hour	Min	Мах	Energy Average	Min	Max	Average	Min Max	Average
Date: Project:	(A8b) ₀, J γlruoH 8000000000000000000000000000000000000	Timeframe			Night							Day						Evening)	Night	Timeframe		Day	Energy /	Evening	0	Energy Average	Night	Energy Average

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	JN: 11724 Analyst: R. Saber				0.52 9.6t		1	Adj. Adj. L _{eq}				10.0 59.6 10.0		_	0.0 54.0 53.6		0.0 51.3		0.0 51.9			0.0 52.5			5.0 57.9 5.0 60.3		10.0 62.0	L _{eq} (dBA)	Daytime Nighttime	EA 2 E1 2		24-nuul Civel (uda)	28.6	
					6.22			L eq	54.2	49.8	48.6	49.0 49.8	51.0	52.8	54.0 53.6	51.8	51.3	51.2	51.9 55.0	53.0	52.7	52.5 57.4	58.7	53.6	52.9 55.3	49.6	52.0		24-Hour	52 2		1.47		
					<mark>9.62</mark>	18		%667	44.0	43.0	43.0	44.U	46.0	47.0	48.0	43.0	43.0	42.0	42.0	42.0	42.0	44.0	47.0	46.0	45.0 44.0	43.0	43.0	%667	42.0 48.0	43.8	44.0	45.0	43.0	47.0 44.2
	<i>Meter:</i> Piccolo I				₽. 22	16 17		767	45.0	44.0	44.0	45.0	47.0	48.0	49.0 48.0	44.0	44.0	43.0	43.0 44.0	43.0	43.0	45.0 46.0	49.0	47.0	46.0 44.0	44.0	43.0	195%	49.0	45.1	44.0	41.0	43.0	45.1
					7.23			%061	46.0	44.0	44.0	45.0	47.0	48.0	50.0 48.0	45.0	45.0	44.0	44.0 44.0	43.0	44.0	46.0	49.0	47.0	45.0	44.0	44.0	%067	43.0 50.0	45.8	45.0	47.0	44.0	48.0
Summary	L2 - Located east of the Project site on Camino Alto Way near an existing single-family residential neighborhood.	d)			0.82	13		720%	49.0	47.0	46.0	46.0	50.0	50.0	51.0	49.0	48.0	47.0	47.0	47.0	48.0	50.0	52.0	50.0	50.0 48.0	47.0	47.0	150%	47.0 52.0	49.1	48.0	49.3	46.0	50.0 48.1
easurement Summary	e on Camino , Il neighborho	dings (unadjusted)			6.13		Hour Beginning	L25%	52.0	49.0	48.0	0.02	51.0	52.0	54.0 53.0	51.0	50.0	49.0	50.0	50.0	51.0	52.0	54.0	52.0	52.0 49.0	49.0	50.0	L25%	54.0 54.0	51.4	49.0	51.0	48.0	52.0 50.1
	L2 - Located east of the Project site on Camino Alto an existing single-family residential neighborhood.	Hourly L _{eq} dBA Readin			5.1.2 5.1.3			% 8 7	56.0	52.0	51.0	0.25	53.0	54.0	55.0	55.0	53.0	52.0	53.0	54.0	55.0	56.0	57.0	56.0	56.0	52.0	54.0	7 7 0 87	58.0	54.9	52.0	54.7	51.0	56.0
24-Hour Noise Level M	ated east of tl ng single-fam	Hourly L			<u>8.13</u>			L5%	58.0			53.0			56.0 56.0				55.0			57.0 60.0			57.0	-	-	L5%			54.0	+	-	58.0
24-					0.42			L2%	_			54.0 54.0			0.09 60.0		58.0		57.0			58.0 65.0) 59.0			L2%				58.3	-) 61.0 56.2
	Location:				8.23			, 11%	1 65.0	_		1 55.0		+	63.0 5 63.0				1 60.0 63.0			59.0 69.0			5 61.0 4 58.0		-	, L1%				1 03.U 60.7	-	2 65.0 58.2
					8.et		-	_{ax} L _{min}				0 43.4 7 44.1			6 47.6 9 46.5				0 41.1 0 409			1 43.3 9 43.3			2 44.5 4 42.4		-	zx L min		Average:	2 42.4	Average:		<u>.1</u> 46.2 Average:
	30, 2018				9.6t			q L max				0.c0 0. 7 0.7 8			.0 b/.b .6 71.9				.9 75.4 0 85.0			.5 67.1 4 80.9			.9 70.2 .3 86.4		-	a Lmax				.3 00.4	-	.2 75.1 .2
	Tuesday, October 30, 2018 Victorville Retail				54.2			ur L _{eq}				49.6			53.6				2 51.9 3 55.0			6 52.5 7 57.4			0 52.9 1 55.3			ur L _{eq}				ax 54.1	_	ax 54.2 e 51.2
	<i>Date:</i> Tuesda <i>Project:</i> Victorv		85.0 85.0 75.0 75.0	Led (df 60.0 1 − (df 60.0	۲۰۱۹ کا ۲۰			Timeframe Hou	0		_		t υ		~ ∞	. 0	10	11	Day 12	14	15	17	18		Evening 20	-		Timeframe Hour	Day Max	Energy Average	Evening Min	Energy Average	Night Min	Energy Average

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The control of the c							24-Hd	24-Hour Noise Level N		easurement Summary	ummary						
Control Control <t< td=""><th></th><td>Tuesday, C Victorville</td><td>)ctober 30, 20 Retail</td><td>18</td><td></td><td>Location.</td><td></td><td>d south of th single-family</td><td>ie Project site / residential r</td><td>e on Fern Pin 1eighborhoo</td><td>e Road near d.</td><td>Meter:</td><td>Piccolo I</td><td></td><td></td><td>JN. Analyst</td><td></td></t<>		Tuesday, C Victorville)ctober 30, 20 Retail	18		Location.		d south of th single-family	ie Project site / residential r	e on Fern Pin 1eighborhoo	e Road near d.	Meter:	Piccolo I			JN. Analyst	
Mont La L								Hourly L _{eq}	dBA Readings	s (unadjusted)							
	85.C 80.C																
	A8b 75.0																
1 1	0.0 1 € 60.0																
6 6 6 6 6 6 6 6 6 7 4 6 7 6 7 6 7 6 7 6 7 6 7 6 7 1	20:0 20:0 20:0 0 0 0 0 0			S	HE	9.		Þ			+	+	+	H	6	H	8
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Ho 45.0			°97		775		<mark>.81</mark> .							TS		78.
Image: manual sector (a) Image (a)		-	-	°.	_	9	_	-	_	_	-	-	-	-	20	_	23
Hout 1-x Las 1-x Las Las <thlas< th=""> <thlas< th="" th<=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Hour B</th><th>eginning</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></thlas<></thlas<>									Hour B	eginning							
0 642 614	Timeframe	Hour	L eq	L _{max}	L _{min}	L1%	L2%	T5 %	%8 7	L25%	720%	%067	<i>762%</i>	%667	L _{eq}	Adj.	Adj. L _{eq}
		0	46.2	61.4	39.1	54.0	52.0	50.0	49.0	46.0	44.0	41.0	40.0	39.0	46.2	10.0	56.2
2 653 610 301 540 520 600 470 450 430		7	45.0	61.5	39.1	52.0	50.0	48.0	47.0	45.0	43.0	40.0	40.0	39.0	45.0	10.0	55.0
		2	45.3	61.9	39.1	54.0	52.0	49.0	47.0	45.0	43.0	41.0	40.0	39.0	45.3	10.0	55.3
4 50 61 420 570 550 540	Night	m	46.5	60.7	40.6	54.0	53.0	50.0	49.0	46.0	44.0	42.0	42.0	41.0	46.5	10.0	56.5
6 54.0 75.0 55.0 57.0 5		4 u	50.6	64.2 68 1	42.1	57.0	56.0	54.0	54.0	51.0	49.0	45.0	44.0	43.0	50.6 51 7	10.0	60.6 61 7
		n y	54.6	1.00 75,9	44.0	0.0 65.0	0.76	57.0	56.0	53.0	51.0	47.0	40.0	46.0	54.6	10.0	01.10 64.6
8 001 733 400 540 530 520 510 480 470 470 430		2	51.4	66.7	44.4	59.0	57.0	55.0	54.0	51.0	49.0	46.0	46.0	45.0	51.4	0.0	51.4
		∞	49.1	73.3	42.0	54.0	53.0	52.0	51.0	48.0	46.0	44.0	43.0	43.0	49.1	0.0	49.1
		6	48.4	70.2	40.9	56.0	55.0	52.0	51.0	48.0	46.0	43.0	42.0	42.0	48.4	0.0	48.4
		10	49.1	67.2	40.9	58.0	55.0	52.0	51.0	48.0	47.0	44.0	43.0	42.0	49.1	0.0	49.1
		11 5	49.9 56 0	63.3 82.7	41.8	55.0 61 0	54.0	53.0	52.0	50.0	48.0	46.0	45.0	43.0	49.9 56.0	0.0	49.9 F6 0
	Day	13 1	50.3	2.00 70.07	40.8	58.0	56.0	54.0	53.0	50.0	48.0	45.0	44.0	42.0	50.3	0.0	50.3
		14	51.2	67.8	42.8	59.0	57.0	55.0	53.0	51.0	49.0	45.0	45.0	43.0	51.2	0.0	51.2
		15	50.9	67.1	43.0	57.0	56.0	54.0	53.0	51.0	49.0	46.0	45.0	44.0	50.9	0.0	50.9
		16	50.9	65.1 72.1	43.1	58.0	56.0	55.0	54.0	51.0	49.0	46.0	45.0	44.0	50.9	0.0	50.9
		1/	53.3 52.6	/2.1 65.3	45.5 44.1	0.09 60.0	58.0 58.0	56.0	55.0	53.0 53.0	51.0	48.U 48.0	47.0 47.0	46.0 46.0	53.3 52.6	0.0	53.3 52.6
		19	51.5	67.8	43.4	58.0	57.0	55.0	54.0	52.0	49.0	46.0	46.0	45.0	51.5	5.0	56.5
21 51.6 60.1 58.0 56.0 57.0 51.0 49.0 45.0 45.0 51.4 51.6 51.6 51.6 51.6 51.6 51.6 51.0	Evening	20	51.9	71.5	42.7	60.0	58.0	55.0	54.0	51.0	49.0	46.0	45.0	43.0	51.9	5.0	56.9
		71 71	51.6	T'/Q	41.2	60.U	58.0	0.02	54.0	51.0	49.0	45.U	45.0	43.0	0.12	0.0	50.0 61 A
Hour La Land La La <t< th=""><th>Night</th><th>23</th><th>48.3</th><th>62.5</th><th>39.1</th><th>57.0</th><th>55.0</th><th>53.0</th><th>52.0</th><th>48.0</th><th>45.0</th><th>41.0</th><th>40.0</th><th>39.0</th><th>48.3</th><th>10.0</th><th>58.3</th></t<>	Night	23	48.3	62.5	39.1	57.0	55.0	53.0	52.0	48.0	45.0	41.0	40.0	39.0	48.3	10.0	58.3
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Timeframe	Hour	L eq	L _{max}	L _{min}	L1%	L2%	L5%	78%	L25%	150%	%067	767	%667		L eq (dBA)	
Max 55.9 83.2 45.5 61.0 58.0 56.0 55.0 53.0 53.0 51.0 48.0 46.0 46.0 y Average 51.5 67.1 41.2 58.0 56.1 54.0 53.0 53.0 43.5 43.5 43.6 43.0 45.0 43.6 45.0 43.0 45.0 51.2 51.8 51.8 51.2 51.8 51.2 51.8 51.2 51.8 51.2 51.8 51.2 51.8 <t< th=""><th>Day</th><th>Min</th><th>48.4</th><th>63.3</th><th>40.8</th><th>54.0</th><th>53.0</th><th>52.0</th><th>51.0</th><th>48.0 </th><th>46.0</th><th>43.0</th><th>42.0</th><th>42.0</th><th>24-Hour</th><th>Daytime</th><th>Nighttime</th></t<>	Day	Min	48.4	63.3	40.8	54.0	53.0	52.0	51.0	48.0 	46.0	43.0	42.0	42.0	24-Hour	Daytime	Nighttime
y Average 31.3 Average 37.3 30.1 37.4 43.0 51.2 51.8 51.9 51.8		NIAX	50.9 71.0			010	58.0	56.0	0.55	53.0	51.U	48.U	47.0	46.U			
Will 31.3 91.4 41.4 30.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 37.0 47.0 <th< td=""><th>LIICIBY</th><td>AVCIABC</td><td>11.7 7 F</td><td></td><td></td><td>0.07</td><td>1.00</td><td>04.0</td><td>072</td><td>0.17</td><td>0.04</td><td>40.0 AF 0</td><td>44.7</td><td>0.04</td><td>51.2</td><td>51.8</td><td>50.0</td></th<>	LIICIBY	AVCIABC	11.7 7 F			0.07	1.00	04.0	072	0.17	0.04	40.0 AF 0	44.7	0.04	51.2	51.8	50.0
gy Average 51.7 Average: 59.3 57.7 55.3 54.0 51.3 49.0 45.7 45.3 43.7 Min 45.0 60.7 39.1 52.0 50.0 48.0 47.0 45.0 43.0 40.0 40.0 30.0 39.0 Max 54.6 75.9 45.0 57.0 56.0 53.0 43.0 40.0 40.0 30.0 Wax 54.6 75.9 45.0 51.0 53.0 51.0 48.0 46.0 46.0 Yaverage 50.0 51.0 51.4 48.6 48.0 46.0 46.0	Evening	Max	51.9	71.5	43.4	0.00	58.0	56.0	54.0	52.0	49.0	46.0	46.0	45.0	24-	Hour CNEL (dBA)
Min 45.0 60.7 39.1 52.0 50.0 48.0 47.0 45.0 43.0 40.0 39.0 39.0 Max 54.6 75.9 45.5 65.0 61.0 57.0 56.0 53.0 51.0 48.0 46.0 46.0 gy Average 50.0 Average: 56.0 51.4 48.6 48.0 46.0 46.0 51.0 51.0 48.0 46.0 51.0 51.0 48.0 46.0 51.0 51.0 48.0 46.0 51.0 51.0 51.0 48.0 46.0 51.0 51.0 51.0 48.0 46.0 51.0 51.0 51.0 40.3 42.7 41.6 51.0 51.0 51.0 40.0 <	Energy	Average	51.7			59.3	57.7	55.3	54.0	51.3	49.0	45.7	45.3	43.7			
Max 54.6 75.9 45.5 65.0 57.0 56.0 53.0 51.0 48.0 48.0 46.0 Sy Average 50.0 Average: 56.6 54.8 52.4 51.4 48.6 43.3 42.7 41.6	+4~:14	Min	45.0			52.0	50.0	48.0	47.0	45.0	43.0	40.0	40.0	39.0			
50.0 Average: 56.6 54.8 52.4 51.4 48.6 46.3 43.3 42.7	Nignt	Max	54.6	75.9		65.0	61.0	57.0	56.0	53.0	51.0	48.0	48.0	46.0		J. I.	
	Energy	Average	50.0	Ave	rage:	56.6	54.8	52.4	51.4	48.6	46.3	43.3	42.7	41.6			

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	JN: 11724 Analyst: R. Saber						E:67 9:E5 2.T5 2.T5 2.T5	18 19 20 21 22 23		L99% L _{eq} Adj. Adj. L _{eq}	50.3 10.0	46.3 10.0	41.0 48.8 I.0.0 58.8 43.0 49.4 10.0 59.4	51.0 10.0	47.0 51.8 10.0 61.8 40.0 54.0 40.0 54.0	52.6 0.0	49.0 0.0	48.8 0.0	0.0	49.5 53.2	49.5 0.0	53.0 0.0	46.0 52.0 0.0 52.0 47.0 52.9 0.0 52.0	54.7 0.0	54.4 0.0	47.0 57.7 5.0 62.5 47.0 5.7 5.7 5.7	51.7 5.0	53.6 10.0	199% 49.3 10.0 59.3 10.0 1 59.5 1 10.0 1 59.5	24-Hour		45.1 52,2 52,8 51,1				49.0 30.3
	Meter: Piccolo I						6.22 0.22	15 16 17		<i>867 %</i>	42.0 41.0		43.0 42.0 45.0 44.0		48.0 48.0					45.0 45.0 45.0			47.0 47.0 49.0 48.0		+	49.0 48.0 48.0 48.0			190% 195%				47.0 47.0			_
easurement Summary	on Fair Hills Lane ıeighborhood.	djusted)					0.52 2.94	13 14		125% 150%	51.0 47.0		49.0 47.0 50.0 48.0		52.0 51.0 54.0 52.0				49.0 47.0				51.0 50.0 52.0 51.0		+	52.0 51.0 52.0 51.0			49.0 47.0 125% 150%				52.0 50.0 52.0 51.0			54.0 53.0
se Level Measuren	L5 - Located southwest of the Project site on Fair Hills Lane near an existing single-family residential neighborhood.	Hourly L _{eq} dBA Readings (unadjusted)					2.62 2.64	10 11 12	Hour Beginning	%8 7	54.0	49.0	52.0	53.0	54.0	54.0	51.0	51.0	52.0	53.0	52.0	53.0	54.0 54.0	56.0	57.0	0.66 65.0	54.0	54.0 72.0	18%	51.0	57.0	53.3	54.0 55.0	54.7	49.0	55.0
24-Hour Noise Level M		Hourly					8.84	7 8 9		L2% L5%	57.0 55.0		54.0 52.0 54.0 53.0		56.0 54.0 58.0 56.0	-			57.0 53.0 Fr.o	59.0 55.0 55.0			58.0 55.0 57.0 55.0			60.0 56.0 56.0 56.0			1.2% 1.5% 1.5%				57.0 55.0 60.0 56.0			58.0 56.0
	Location:						0.42	4 5 6		L _{min} L1%	39.9 58.0		40.6 55.0 40.8 55.0		45.5 56.0					41.7 62.0			44.8 61.0 45.5 59.0		┥	46.9 64.0 46.5 60.0			41./ 58.0 L 11%		48.5		44.9 58.0 A60 64.0	<u>.</u>	39.3	46.8 64.0
	30, 2018						8.84	2 3		L _{eq} L _{max}			48.8 08.2 49.4 63.1		51.8 67.5 54.0 72.2					53.2 76.3			52.0 66.0 52 9 74 9		+	5/.5 86.0 57 7 66.0			49.3 20.2 L		76.3		51.7 63.7 57.5 86.0		56.8	_
	:: Tuesday, October 30, 2018 :: Victorville Retail		0.1	0,0			46.3	5.0 + 0 1 0 1		Hour			3 40		5 51		8 49		10 49				15 52 16 57		┥	19 19 5/ 20 57			L2 Hour	Min	×		Min 51 May 52	+		ignt Max 54
	Date: Project:) 80. 80.	A8	, 00 20) ₽9-	יוא ו מינים	Houi 50.0 45.0	35		Timeframe			Night	0						l	Day					Fvening	0	Night	Timeframe	Dav	1.5.4	Energ	Evening	Fnerøv		INIGNT

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: 11724 : R. Saber			T.29		23	Adj. L _{eq}	70.7	70.2 70.2	73.8	74.5	76.1 77.5	68.3	66.5 200	66.U	66.8	66.1	67.2 27.0	67.8	69.0	68.3 67.4	71.8	71.5	74.4			Nighttime	67 2		(Han			
JN: Analyst:			6.9 3		21 22	Adj.	10.0	10.0	10.0	10.0	10.0 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0	5.0	5.0	10.0	10.0	L _{eq} (dBA)	Daytime	67.2		DUT CIVER (717		
			S.9 9		20	L eq	60.7	60.2 60.2	63.8	64.5	66.1 67.5	68.3	66.5 66.5	66.U	50.2 66.8	66.1	67.2 67.2	67.8 67.8	0.69	68.3 67.4	66.8	66.5 200	64.4	65.1		24-Hour	66.2	C.00	1-+-7			
			8.99		19	7667	43.0	40.0 41.0	41.0 43.0	45.0	52.0 52.0	54.0	49.0	47.0	48.0	45.0	48.0	48.U 50.0	54.0	56.0 53.0	52.0	51.0	49.0	42.0	%667	45.0 56.0	49.9	49.0 52.0	50 7	40.0	52.0 44.9	
l old			£.88		17 18	195%	45.0	41.0	42.0 45.0	48.0	54.0 55.0	57.0	52.0	51.0	52.0	51.0	54.0	57.0	59.0	59.0 57.0	54.0	53.0	49.0	45.0	195%	59.0 59.0	54.5	52.0	53.0 53.0	41.0	55.0 47.1	
<i>Meter:</i> Piccolo I			0.69		16	7 %067	47.0 4	42.0		_	56.0 57.0			53.0				0.05		62.0 59.0			52.0			53.0 62.0	_	54.0			57.0 49.2	
			8.73		4 15		-			_																				-	-	
Summar iew Drive			0.73 2.73		13 14	L50%	53.0	48.0	58.0	60.0	63.0 65.0	67.0	64.0	63.0 63.0	63.0	64.0	64.0	0.co 66.0	67.0	67.0 66.0	65.0	64.0	64.0 61.0	59.0	150%	63.0 67.0	64.9	64.0 65 0	6.4.3	48.0	65.0 57.4	
Measurement Summary ct site on Mesa View Drive	aaings (unaajustea)		T.99		11 12 11 12 Jour Beginning	125%	59.0	55.0 E7 0	63.0 63.0	65.0	66.0 68.0	69.0	67.0	66.U	66.0	66.0	67.0	67.0 68.0	69.0	68.0 68.0	67.0	67.0	65.0	63.0	L25%	66.0 69.0	67.3	67.0	67.0	55.0	68.0 62.3	
Project site	IBA Keaaing		T.99		10 11 Hour E	78%	64.0	63.0 64.0	64.0 67.0	68.0	69.0 71.0	71.0	70.0	0.07	69.1	69.0	70.0	71.0	71.0	71.0 70.0	0.69	69.0 70.0	68.0	67.0	%87	69.0 71.0	70.2	69.0 70.0	693	63.0	71.0 66.8	
24-Hour Noise Level Located west of the Proje th of Palmdale Road.	Hourry L _{eq} aBA Ke		0.99		6	L5%	65.0	65.0 66.0	0.00 69.0	70.0	71.0 72.0	72.0	71.0	71.0	71.0	71.0	71.0	/1.0 72.0	73.0	72.0 71.0	70.0	71.0	0.69	69.0	L5%	/1.0 73.0	71.4	70.0	2.02	65.0	72.0 68.4	
24-Hour Noise Level Measurement Summa L6 - Located west of the Project site on Mesa View Drive south of Palmdale Road.			S.99		- ∞	L2%	0.69	70.0	72.0	72.0	73.0 74.0	74.0	73.0	73.0	73.0	73.0	74.0	74.0 74.0	75.0	73.0 73.0	72.0	73.0	71.0	73.0	L2%	/3.0 75.0	73.4	72.0	73.0	0.69	74.0 71.4	
Location: L6 sc			2.7a		6 7	L1%	72.0	73.0	74.0	74.0	75.0 75.0	75.0	74.0	0.5/	74.0	74.0	76.0 71.0	75.0	76.0	75.0 74.0	73.0	75.0	73.0	75.0	L1%	76.0	74.7	73.0	74.7	72.0	73.7	
7			τ.99		- - -	L _{min}	41.8	39.7 40.7	40.7	42.1	49.6 48.6	49.5	47.2	44.3 13 D	43.9	40.7	45.3	43.0 47.6	49.1	52.3 47.8	49.1	49.0	45.7	40.8	L _{min}	40.7 52.3		46.5	1.64	39.7	49.6	
			S. 43		4	L max	-	80.6			84.9 78.3			0.6/				80.1		84.8 82.7			81.3			90.3 V9.0	Average:	83.7 00 F	Average:		90.0 Average:)
0, 2018			2.08	9	5			_		_																				-		
Tuesday, October 30, 2018 Victorville Retail			2.08	9		L eq	60.7	60.2 60.2	63.8	64.5	66.1 67.5	68.3	66.5	66.U	66.8	66.1	67.2	67.8 67.8	69.0	68.3 67.4	66.8	66.5	60.9 64.4	65.1	L _{eq}	0.09 69.0	67.3	66.5 66.0	6.00	60.2	67.5 64.3	
			65.0 555.0 50.0 50.0 7 0 7 0 7		0	e Hour	0	-1 c	m	4	<u>ہ</u> م	7	∞ α	ح و	11	12	13	15	16	17	19	50	22	23		Min Max	Energy Average	Min	TV AVERAPE		Energy Average	
Date: Project:	800	(A8b) ⊻,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ערוא L _{eq} (юН 14,4 %	ń	Timeframe			Night)						Dav	6					Evening		Night	Timeframe	Day	Energ	Evening	Fnerøv	Night	Energ	

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS



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	FH	WA-RD-77-108	HIGHW	AY NO	ISE PI	REDICTI	ON MO	DEL			
Road Nam	io: Existing W ne: SR-395 nt: n/o Palmda	ithout Project ale Rd. (SR-18)				Project Job Nu	Name: Imber:		Grove		
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE		s	
Highway Data				Sit	e Con	ditions ('Hard =	10, Sc	oft = 15)		
Peak Hour Peak H	Percentage: lour Volume:	30,200 vehicles 10% 3,020 vehicles				dium Tru avy Truc	cks (2 A		15 15 15		
	hicle Speed:	55 mph		Ve	hicle	Mix					
Near/Far La	ne Distance:	75 feet				icleType		Dav	Evening	Night	Daily
Site Data					-		utos:	77.5%	0		97.42%
Bai	rrier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		84.0 feet		No	ise So	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		84.0 feet				Autos	: 0.0	000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2.3	297			
Observer Height (5.0 feet			Heav	y Trucks	: 8.0	006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		1.			Distant		(4)		
	ad Elevation:	0.0 feet		La	ne Eq	uivalent			eet)		
1	Road Grade:	0.0%				Autos					
	Left View: Right View:	-90.0 degree 90.0 degree				m Trucks vy Trucks					
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresr	el	Barrier Att	en Be	rm Atten
Autos:	71.78	1.98		-2.77		-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-15.26		-2.76		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40			-2.76		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			1								
VehicleType	Leq Peak Ho			eq Evel		Leq I			Ldn		NEL
Autos:			67.9		66.1		60.1		68.7		69.3
Medium Trucks:			61.7		55.3		53.8		62.2	-	62.
Heavy Trucks:			61.8		52.8		54.0		62.4	-	62.
Vehicle Noise:	-		69.6		66.6		61.8		70.3	3	70.
Centerline Distant	ce to Noise C	ontour (in feet,		70 dB	A	65 0	IBA	6	0 dBA	54	5 dBA
			dn:	88		19			410		883
			IEL:	95		20	-		441		950
		0.				20	-				

	FHWA-	RD-77-108 HIG	HWAY	NOISE PF	REDICTIO	N MOI	DEL			
Scenario: Existing		ut Project			Project N			Grove		
Road Name: SR-395	5				Job Nur	nber: 1	1724			
Road Segment: n/o Dos	s Palma	is Rd.								
SITE SPECIFIC	C INPU	IT DATA						L INPUT	S	
Highway Data				Site Con	ditions (H	lard =	10, So	oft = 15)		
Average Daily Traffic (Ad	t): 33,8	300 vehicles		1			Autos:	15		
Peak Hour Percentag	e:	10%		Me	dium Truc	ks (2 A	xles):	15		
Peak Hour Volum	e: 3,3	880 vehicles		Hea	avy Truck	s (3+ A	xles):	15		
Vehicle Spee	d:	55 mph		Vehicle I	Mix					
Near/Far Lane Distanc	e:	75 feet			icleType		Dav	Evening	Night	Dailv
Site Data							77.5%	•		97.42
Barrier Heigh	nt.	0.0 feet		Me	edium Tru	cks: 1	84.8%	4.9%	10.3%	
Barrier Type (0-Wall, 1-Bern		0.0		H	leavy Tru	cks: 1	86.5%	2.7%	10.8%	0.74
Centerline Dist. to Barrie		34.0 feet								
Centerline Dist. to Observe		34.0 feet		Noise So	ource Ele			et)		
Barrier Distance to Observe		0.0 feet		1	Autos:		000			
Observer Height (Above Pag		5.0 feet			n Trucks:		297			
Pad Elevatio		0.0 feet		Heav	y Trucks:	8.0	006	Grade Adj	ustment.	0.0
Road Elevatio		0.0 feet		Lane Equ	uivalent L	Distanc	e (in f	feet)	-	
Road Grad	le:	0.0%			Autos:	75.3	331	, í		
Left Vie	w: -9	90.0 degrees		Mediur	n Trucks:	75.2	213			
Right Vie		90.0 degrees		Heav	y Trucks:	75.2	225			
FHWA Noise Model Calcula	tions			-	-	-		-	-	-
VehicleType REMEL	. Tr	affic Flow D	Distance	Finite	Road	Fresn		Barrier Att	en Ber	m Atter
Autos: 71	.78	2.47	-2.7	77	-1.20		-4.75	0.0	000	0.00
Medium Trucks: 82	.40	-14.77	-2.7	76	-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 86	6.40	-18.73	-2.7	76	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Levels (1	,					Т	
VehicleType Leq Peak		Leq Day		vening	Leq N		L	Ldn		NEL
Autos:	70.3	68.4		66.6		60.6		69.2		69
Medium Trucks:	63.7	62.2	-	55.8		54.3		62.7		62
Heavy Trucks:	63.7	62.3	-	53.2		54.5		62.9	-	63
Vehicle Noise:	71.9	70.1		67.1		62.3		70.8	}	71
Centerline Distance to Nois	e Conto	our (in feet)								
				dBA	65 dE		6	0 dBA		dBA
		Ldn		95	205			442 475		152 024
		CNFL		02	221					

Tuesday, January 08, 2019

		/A-RD-77-108	mon	WAT							
Scenario: Existi Road Name: SR-3 Road Segment: n/o Li	95	,					Name: I umber: ·				
SITE SPECIF	IC IN	PUT DATA				N	OISE N	10DE	L INPUTS		
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (A	dt): 2	9,000 vehicles	5					Autos:	15		
Peak Hour Percente	age:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hour Volu	me:	2,900 vehicles	5		He	avy Truc	cks (3+ A	xles):	15		
Vehicle Spe	ed:	55 mph		ŀ	Vehicle I	Mix					
Near/Far Lane Dista	nce:	75 feet		ŀ		icleType		Day	Evening	Night	Daily
Site Data					1011			77.5%	•	9.6%	· · ·
					Me	, adium Ti		84.8%		10.3%	
Barrier Hei Barrier Type (0-Wall, 1-Be		0.0 feet 0.0				leavy Tr		86.5%		10.8%	
Centerline Dist. to Bar		84.0 feet									
Centerline Dist. to Obser		84.0 feet			Noise Sc				eet)		
Barrier Distance to Obser		0.0 feet				Autos		000			
Observer Height (Above P		5.0 feet				n Truck		297			
Pad Eleva		0.0 feet			Heav	y Trucks	s: 8.0	006	Grade Adju	istment	t: 0.0
Road Eleva		0.0 feet		ľ	Lane Eq	uivalent	Distand	e (in	feet)		
Road Gr		0.0%		Ē		Autos	s: 75.3	331	,		
Left V	iew:	-90.0 degree	s		Mediur	n Truck	s: 75.2	213			
Right V	iew:	90.0 degree	s		Heav	y Trucks	s: 75.2	225			
FHWA Noise Model Calcu	ation	5									
VehicleType REMI	EL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	n Bei	rm Atten
Autos:	71.78	1.80		-2.7	7	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	32.40	-15.44		-2.7	6	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	36.40	-19.39		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Noise Levels			-		,						
VehicleType Leq Pea				Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	69.	-	57.7		65.9		59.9		68.5		69.
Medium Trucks:	63.	-	61.5		55.1		53.6		62.1		62.3
Heavy Trucks:	63.		61.6		52.6		53.8		62.2		62.3
Vehicle Noise:	71.	-	69.4		66.5		61.6		70.2		70.
Centerline Distance to No	ise Co	ontour (in feet)	1	70	dBA	65	dBA		60 dBA	55	i dBA
			1	,0	u DM	001	<i>uDn</i>	1 1	JU UDM	35	, uDM
			dn:	ş	36	11	35		399	\$	360

	FH\	WA-RD-77-108	HIGHW.	AY NO	DISE PR	EDICTI	ON MOD	EL			
Road Nan	io: Existing Wi ne: SR-395 nt: n/o La Mes						Name: D umber: 1		Grove		
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Si	te Con	ditions	(Hard = 1	10, S	oft = 15)		
Average Daily	Traffic (Adt):	27,300 vehicles	3				A	utos:	15		
	Percentage:	10%			Med	dium Tru	icks (2 A	xles):	15		
Peak F	lour Volume:	2,730 vehicles	3		Hea	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		14	ehicle N			-			
	ne Distance:	11 feet		Ve		nix cleTvpe		2011	Evening	Night	Dailu
010 0				_	veni			Day	Evening	Night	Daily
Site Data				_				7.5%		9.6%	
	rrier Height:	0.0 feet				dium Tr		34.8%		10.3%	
Barrier Type (0-V	. ,	0.0			-	leavy Tr	UCKS: E	86.5%	2.7%	10.8%	0.74%
Centerline Di		40.0 feet		No	oise So	urce El	evations	(in f	eet)		
Centerline Dist.		40.0 feet				Autos	: 0.0	00			
Barrier Distance		0.0 feet			Mediun	n Trucks	: 2.2	97			
Observer Height	· ,	5.0 feet			Heav	V Trucks	: 8.0	06	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet					Distant	- ()	(4)		
	ad Elevation:	0.0 feet		La	ane Equ		Distanc		teet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	s		Heav	y Trucks	39.7	34			
FHWA Noise Mod	el Calculation	s									
			Distar	1							
VehicleType	REMEL	Traffic Flow	Distai	ice	Finite	Road	Fresne	2/	Barrier Att	en Be	rm Atten
VehicleType Autos:	REMEL 71.78		Distai	1.36	Finite	Road -1.20		9 4.59		en Be 100	
11	71.78	1.54	Distai		Finite		-		0.0		0.000
Autos:	71.78 82.40	1.54 -15.70	Dista	1.36	Finite	-1.20	-	4.59	0.0 0.0	000	0.000
Autos: Medium Trucks:	71.78 82.40 86.40	1.54 -15.70 -19.66		1.36 1.40 1.39		-1.20 -1.20	-	4.59 4.87	0.0 0.0	000	0.000
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	1.54 -15.70 -19.66 out Topo and	barrier a	1.36 1.40 1.39	ation)	-1.20 -1.20 -1.20	-	4.59 4.87	0.0 0.0	000 000 000	0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	71.78 82.40 86.40 e Levels (with	1.54 -15.70 -19.66 out Topo and ur Leq Day	barrier a	1.36 1.40 1.39	ation)	-1.20 -1.20 -1.20	-	4.59 4.87	0.0 0.0 0.0	000 000 000 C	0.000 0.000 0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	71.78 82.40 86.40 e Levels (with Leg Peak Hou 73	1.54 -15.70 -19.66 out Topo and ur Leq Day 8.5	barrier a	1.36 1.40 1.39	ation) ening	-1.20 -1.20 -1.20	- - Night	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i>	000 000 000 C	0.000 0.000 0.000 NEL 73.0
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	71.78 82.40 86.40 e Levels (with Leq Peak Hou 73 66	1.54 -15.70 -19.66 out Topo and ur Leq Day 5.5 5.9	barrier a	1.36 1.40 1.39	ation) ening 69.8	-1.20 -1.20 -1.20	- - Vight 63.8	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 72.4	000 000 000 C	0.000 0.000 0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	71.78 82.40 86.40 e Levels (with Leq Peak Hou 73 66 66	1.54 -15.70 -19.66 out Topo and ur Leq Day 5.5 5.9 (6)	barrier a Le 71.6 55.4	1.36 1.40 1.39	ation) ening 69.8 59.0	-1.20 -1.20 -1.20	- 	4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 72.4 65.9	000 000 000 C	0.000 0.000 0.000 <i>NEL</i> 73.0 66.2
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40 e Levels (with Leq Peak Hot 73 66 66 75	1.54 -15.70 -19.66 out Topo and ur Leq Day 0.5 5.9 6.9 6.1	barrier a Le 71.6 55.4 55.5 73.3	1.36 1.40 1.39 attenua	ation) ening 69.8 59.0 56.5 70.3	-1.20 -1.20 -1.20 Leq		4.59 4.87 5.56	0.0 0.0 100 72.4 65.9 66.1 74.0	000 000 000 100 100	0.000 0.000 0.000 <i>INEL</i> 73.0 66.2 66.2 74.5
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	71.78 82.40 86.40 e Levels (with Leq Peak Hot 73 66 66 75	1.54 -15.70 -19.66 out Topo and a ur Leq Day 5.5 3.9 (6 5.9 (6 5.1) ontour (in feet)	barrier a [Le 71.6 55.4 55.5 73.3	1.36 1.40 1.39 attenua eq Eve	ation) ening 69.8 59.0 56.5 70.3	-1.20 -1.20 -1.20 <i>Leq</i>	Night 63.8 57.5 57.7 65.5	4.59 4.87 5.56	0.0 0.0 0.0 72.4 65.9 66.1 74.0	000 000 000 C L S S S S S S S	0.000 0.000 0.000 WEL 73.0 66.2 66.2 74.5
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	71.78 82.40 86.40 e Levels (with Leq Peak Hot 73 66 66 75	1.54 -15.70 -19.66 iout Topo and ur Leq Day 5.5 :9 :9 :0.1	barrier a Le 71.6 55.4 55.5 73.3	1.36 1.40 1.39 attenua	ation) ening 69.8 59.0 56.5 70.3	-1.20 -1.20 -1.20 Leq	Night 63.8 57.5 57.7 65.5 1BA 60	4.59 4.87 5.56	0.0 0.0 100 72.4 65.9 66.1 74.0	000 000 000 C 4 9 55	0.000 0.000 0.000 <i>INEL</i> 73.0 66.2 66.2 74.5

Tuesday, January 08, 2019

Scenario: Existing Without Project Road Name: Project Name: Desert Grove Job Number: Road Segment: No Beat Valley Rd. SITE SPECIFIC INPUT DATA Noise MODEL INPI Highway Data Site Conditions (Hard = 10, Soft = 15 Average Daily Traffic (Adt): 24,800 vehicles Peak Hour Volume: 2,480 vehicles Vehicle Speed: 55 mph Vehicle Speed: 55 mph Vehicle Speed: 11 feet Vehicle Type Day Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Desriver: 4.00 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade	
Highway Data Site Conditions (Hard = 10, Soft = 15 Average Daily Traffic (Adt): 24,800 vehicles Autos: 15 Peak Hour Volume: 2,480 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Vehicle Speed: 55 mph Near/Far Lane Distance: 11 feet Vehicle Type Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9 Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 86.5% 2.7 Centerline Dist. to Barrier: 40.0 feet Autos: 0.000 Barrier Totse to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet	
Average Daily Traffic (Adt): 24,800 vehicles Autos: 15 Peak Hour Percentage: 10% Peak Hour Volume: 2,480 vehicles Vehicle Speed: 55 mph Vehicle Speed: 55 mph Vehicle Type Day Earrier Type (Owalt, 1-Berm): 0.0 teet Barrier The (Owalt, 1-Berm): 0.0 teet Centerline Dist. to Barrier: 40.0 teet Barrier Type (Owalt, 1-Berm): 0.0 teet Centerline Dist. to Barrier: 40.0 teet Barrier Type (Owalt, 1-Berm): 0.0 teet Centerline Dist. to Daserver: 40.0 teet Distance to Observer: 0.0 teet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet)
Peak Hour Percentage: 10% Peak Hour Volume: 2,480 vehicles Vehicle Speed: 55 mph Vehicle Speed: 55 mph Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Site Data Autos: Barrier Height: 0.0 feet Barrier Type (V-Wall, 1-Berrn): 0.0 Centerline Dist. to Barrier: 40.0 feet Barrier Distance to Observer: 0.0 feet Molium Trucks: 2.80% Medium Trucks: 2.97 Medium Trucks: 2.97 Observer Height (Above Pad): 5.0 feet	
Near/Far Lane Distance: 11 Venicle Mix Day Evenit Site Data Autos: 77.5% 12.9 Barrier Height: 0.0 feet Medium Trucks:: 84.8% 4.9 4.9 Barrier Type (OvBall, 1-Berm): 0.0 Heavy Trucks:: 84.6% 4.7 Centerline Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) Autos: 0.000 Barrier Type (Inclust): 0.0 feet Medium Trucks:: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks:: 8.06 Grade	
Site Data Vehicle l ype Day Levenin Site Data Autos: 77.5% 12.9 Barrier Height: 0.0 feet Medium Trucks:: 84.8% 4.9 Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks:: 86.5% 2.7 Centerline Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) Autos:: 0.000 Barrier Jistance to Observer: 0.0 feet Autos:: 0.000 Medium Trucks:: 2.97 Observer Height (Above Pad): 5.0 feet Heavy Trucks:: 8.006 Grade	
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9 Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7 Centerline Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006	ng Night Daily
Barrier Type (J-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7 Centerline Dist. to Barrier: 40.0 feet Noise Source Elevations (in feet) Centerline Dist. to Observer: 40.0 feet Autos: 0.000 Barrier Type (J-Wall, 1-Berm): 0.0 feet Autos: 0.000 Barrier Type (J-Wall, 1-Berm): 0.0 feet Autos: 0.000 Barrier Type (J-Wall, 1-Berm): 0.0 feet Autos: 0.000 Doserver Height (Above Pad): 5.0 feet Heavy Trucks:: 8.006	
Darmer Type (Orvia, Tobrin), 0.0 Centerine Dist. to Barrier: 40.0 feet Rarrier Distance to Observer: 40.0 feet Deserver Height (Above Pad); 5.0 feet	10.3% 1.849
Centerline Dist. to Observer: 40,0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8,006 Grade	% 10.8% 0.749
Barrier Distance to Observer 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade	
	Adjustment: 0.0
	-
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 39.934	
Left View: -90.0 degrees Medium Trucks: 39.712 Right View: 90.0 degrees Heavy Trucks: 39.734	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier	Atten Berm Atter
Autos: 71.78 1.12 1.36 -1.20 -4.59	0.000 0.00
Medium Trucks: 82.40 -16.12 1.40 -1.20 -4.87	0.000 0.00
Heavy Trucks: 86.40 -20.07 1.39 -1.20 -5.56	0.000 0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn	CNEL
	72.0 72
	65.5 65
	65.7 65
Centerline Distance to Noise Contour (in feet)	73.6 74
70 dBA 65 dBA 60 dBA	
Ldn: 70 150 323	55 dBA
CNEL: 75 161 348	

	FHWA	-RD-77-108 HI	GHWA	AY NC	DISE PRE	DICTIC	N MOI	DEL			
Scenario: Existin Road Name: Palmd Road Segment: w/o SF	ale Rd.					roject N Job Nui			Grove		
SITE SPECIFI	C INPL	JT DATA				NC	DISE N	IODE	L INPUT	s	
Highway Data				Si	te Condi	tions (F	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	t): 24,4	400 vehicles					,	Autos:	15		
Peak Hour Percentag	ge:	10%			Mediu	ım Truc	:ks (2 A	xles):	15		
Peak Hour Volun	ne: 2,4	440 vehicles			Heav	y Truck	s (3+ A	xles):	15		
Vehicle Spee	ed:	55 mph		V	ehicle Mix	~					
Near/Far Lane Distand	ce:	51 feet			Vehicle			Day	Evening	Night	Daily
Site Data					Vernore			77.5%	•	9.6%	
	h4.	0.0 feet			Medi	ium Tru		84.8%		10.3%	
Barrier Heig Barrier Type (0-Wall, 1-Berr		0.0 feet				avy Tru		86.5%		10.8%	
Centerline Dist. to Barri		0.0 72.0 feet									
Centerline Dist. to Observ		72.0 feet		No	oise Sou	rce Ele	vation	s (in fe	et)		
Barrier Distance to Observ		0.0 feet				Autos:		000			
Observer Height (Above Pa		5.0 feet			Medium			297			
Pad Elevatio		0.0 feet			Heavy	Trucks:	8.0	006	Grade Ad	justment.	0.0
Road Elevatio		0.0 feet		Lá	ane Equiv	valent L	Distand	e (in t	feet)		
Road Grad		0.0%				Autos:			,		
Left Vie		90.0 degrees			Medium	Trucks:	67.3	387			
Right Vie		90.0 degrees			Heavy	Trucks:	67.4	400			
FHWA Noise Model Calcula											
VehicleType REME			Distan		Finite Ro		Fresn		Barrier Att		m Atten
	1.78	1.05		2.06		1.20		-4.72		000	0.00
	2.40	-16.19		2.05		1.20		-4.88		000	0.00
Heavy Trucks: 8	6.40	-20.14	-	2.05	-	1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (
VehicleType Leq Peak		Leq Day		q Eve		Leq N			Ldn		VEL
Autos:	69.6	67.			65.9		59.9		68.	-	69.
Medium Trucks:	63.0	61.	-		55.1		53.6		62.0		62.
Heavy Trucks:	63.0	61.	-		52.5		53.8		62.2	-	62.
Vehicle Noise:	71.2	69	4		66.4		61.6		70.1	1	70.
Centerline Distance to Nois	se Cont	our (in feet)									
				70 dE	BA	65 dl		6	0 dBA		dBA
		Ld CNE		73 79		158 170			340 366		33 88

Tuesday, January 08, 2019

Scenario: Existin	g Wit	hout Project				Project	Name: D	Deser	Grove		
Road Name: Luna F						Job N	umber: 1	1724			
Road Segment: e/o SR	-395										
SITE SPECIFI	CIN	PUT DATA							L INPUTS	;	
Highway Data					Site Con	ditions	(Hard = 1	10, Se	oft = 15)		
Average Daily Traffic (Ad	ft):	4,900 vehicles	5					lutos:			
Peak Hour Percentag		10%					ıcks (2 A				
Peak Hour Volun	ie:	490 vehicles	5		He	avy Tru	cks (3+ A	xles):	15		
Vehicle Spee		40 mph			Vehicle	Mix					
Near/Far Lane Distand	ce:	11 feet		ŀ		icleType		Day	Evening	Night	Daily
Site Data				-			Autos: 7	77.5%	12.9%	9.6%	97.42%
Barrier Heigi	ht.	0.0 feet			M	edium Ti	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berr		0.0			ŀ	Heavy Ti	ucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barri	·	40.0 feet		-	Noise So	-	ovotiona	link	0.041		
Centerline Dist. to Observ	er:	40.0 feet		-	NOISe 30	Auto			eel)		
Barrier Distance to Observ	er:	0.0 feet			Madiu	m Truck					
Observer Height (Above Pa	d):	5.0 feet				v Truck			Grade Adju	istmont	. 0.0
Pad Elevation	on:	0.0 feet				·			,	isunon.	. 0.0
Road Elevation	on:	0.0 feet			Lane Eq	uivalen	Distanc	e (in	feet)		
Road Grad	de:	0.0%				Auto		34			
Left Vie	W:	-90.0 degree	s			m Truck					
Right Vie	W:	90.0 degree	s		Heav	y Truck	s: 39.7	'34			
FHWA Noise Model Calcula	tions										
VehicleType REME	-	Traffic Flow	Di	stance	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos: 66	6.51	-4.54		1.3	36	-1.20	-	4.59	0.00	00	0.00
Medium Trucks: 7	7.72	-21.78		1.4	10	-1.20	-	4.87	0.00	00	0.00
Heavy Trucks: 82	2.99	-25.73		1.3	39	-1.20	-	5.56	0.00	00	0.00
Unmitigated Noise Levels (witho	out Topo and	barri	ier attei	nuation)						
VehicleType Leq Peak	Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	62.	1 6	60.2		58.5		52.4		61.0		61.0
Medium Trucks:	56.	1 ಕ	54.6		48.3		46.7		55.2		55.4
Heavy Trucks:	57.	5 5	56.0		47.0		48.2		56.6		56.
Vehicle Noise:	64.	26	62.4		59.1		54.6		63.1		63.
Centerline Distance to Nois	ie Co	ntour (in feet)	1								
			L		dBA		dBA		60 dBA		dBA
			dn:		14		0		65		39
		CA	IFI :		15	3	2		69	1	49

FHV	/A-RD-77-108 HIG	HWAY I	NOISE PF	REDICTI	ON MOD	EL			
Scenario: Existing Wi Road Name: Palmdale R Road Segment: e/o Cantina	d. (SR-18)				Name: D umber: 1		Grove		
SITE SPECIFIC IN	PUT DATA			N	OISE M	ODEI	L INPUTS	5	
Highway Data			Site Con	ditions ((Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt): 2	2,000 vehicles				A	utos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	icks (2 A)	des):	15		
Peak Hour Volume:	2,200 vehicles		He	avy Truc	ks (3+ A)	des):	15		
Vehicle Speed:	55 mph	ŀ	Vehicle I	Mise					
Near/Far Lane Distance:	51 feet	ŀ		viix icleType	1	Dav	Evening	Night	Daily
Site Data			ven			7.5%	12.9%	9.6%	
				A dium Tr		4.8%	4.9%	9.6%	
Barrier Height:	0.0 feet					6.5%		10.3%	
Barrier Type (0-Wall, 1-Berm):	0.0		r	leavy Tr	UCKS. C	0.3%	2.170	10.0%	0.74%
Centerline Dist. to Barrier:	72.0 feet		Noise Sc	ource Ele	evations	(in fe	et)		
Centerline Dist. to Observer:	72.0 feet			Autos	a: 0.0	00			
Barrier Distance to Observer:	0.0 feet		Mediur	n Trucks	: 2.2	97			
Observer Height (Above Pad):	5.0 feet		Heav	y Trucks	: 8.0	06	Grade Adj	ustment	0.0
Pad Elevation:	0.0 feet	-	Lane Eq	vivalant	Distance	o (in f	0.041		
Road Elevation:	0.0 feet	ŀ	Lane Eq	Autos			eel)		
Road Grade:	0.0%			n Trucks					
Left View:	-90.0 degrees								
Right View:	90.0 degrees		Heav	y Trucks	: 67.4	00			
FHWA Noise Model Calculation			-						
VehicleType REMEL		istance	Finite		Fresne		Barrier Atte		m Atten
Autos: 71.78	0.60	-2.0	-	-1.20		4.72	0.0		0.000
Medium Trucks: 82.40	-16.64	-2.0	-	-1.20		4.88	0.0		0.000
Heavy Trucks: 86.40	-20.59	-2.0	-	-1.20	-	5.26	0.0	00	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak Hou		Leq E	vening	Leq I	~		Ldn		VEL
Autos: 69			65.5		59.4		68.0		68.6
Medium Trucks: 62			54.7		53.1		61.6		61.8
Heavy Trucks: 62	· · · · ·		52.1		53.3		61.7		61.8
Vehicle Noise: 70			66.0		61.1		69.7		70.1
Centerline Distance to Noise Co	ntour (in feet)	70	dBA	65 (~	0 dBA	55	dBA
	I dn:		<i>ава</i> 38	00 0		0	317		ава 84
	CNFL:		58 74	14			317	-	84 36
	UNEL:		4	15	13		042		50

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGHWA	Y NOISE F	REDICTION	MODEL		
	Palmdale R	. ,				me: Deser ber: 11724		
SITE SI	PECIFIC IN	PUT DATA			NO	SE MODE	L INPUTS	5
Highway Data				Site Co.	nditions (Ha	ard = 10, S	oft = 15)	
Average Daily Tr Peak Hour P Peak Hou	, ,	23,000 vehicle 10% 2,300 vehicle			edium Truck eavy Trucks	. ,	15	
	cle Speed:	55 mph		Vehicle	Mix			
Near/Far Lane	e Distance:	51 feet			nicleType	Dav	Evening	Night Daily
Site Data					Aut	os: 77.5%	0	9.6% 97.42%
Barri	ier Height:	0.0 feet		N	ledium Truc	ks: 84.8%	4.9%	10.3% 1.84%
Barrier Type (0-Wa	ll, 1-Berm):	0.0			Heavy Truc	ks: 86.5%	2.7%	10.8% 0.74%
Centerline Dist.		72.0 feet		Noise S	ource Eleva	ations (in f	eet)	
Centerline Dist. to		72.0 feet			Autos:	0.000		
Barrier Distance to		0.0 feet		Mediu	ım Trucks:	2.297		
Observer Height (A	,	5.0 feet		Hea	vy Trucks:	8.006	Grade Adj	ustment: 0.0
	Elevation:	0.0 feet		Lano Er	uivalent Di	istanco (in	foot)	
	l Elevation: pad Grade:	0.0 feet 0.0%		Lane Lu	Autos:	67.519	ieel)	
R	l eft View:	-90.0 degree		Modiu	im Trucks:	67.387		
F	Right View:	90.0 degree			vy Trucks:	67.400		
FHWA Noise Model	Calculation	s						
VehicleType	REMEL	Traffic Flow	Distand	e Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	71.78	0.79	-	2.06	-1.20	-4.72	0.0	00 0.00
Medium Trucks:	82.40	-16.44		2.05	-1.20	-4.88	0.0	
Heavy Trucks:	86.40	-20.40		2.05	-1.20	-5.26	0.0	00 0.00
Unmitigated Noise				,				
VehicleType L Autos:	eq Peak Hou 69		67.4	q Evening 65.7	Leq Nig	1ht 59.6	Ldn 68.2	CNEL 68.8
Autos: Medium Trucks:	69		67.4 61.2	65. <i>1</i> 54.8		59.6 53.3	68.2 61.8	
Heavy Trucks:	62		61.2 61.3	54.0		53.5 53.5	61.8	
Vehicle Noise:	70		69.1	66.2		61.3	69.9	
Centerline Distance	to Noise Co	ontour (in feet)					
					1			
Centernine Distance				70 dBA	65 dB/	4 1	60 dBA	55 dBA
Centernine Distance			Ldn:	70 dBA 70	65 dB/ 152	4 (30 dBA 327	55 dBA 705

F	HWA-RD-7	7-108 H	IGHWAY	NOISE F	REDICTIO	ON MO	DEL			
Scenario: Existing Road Name: Palmdal Road Segment: e/o Ame	e Rd. (SR-1				Project I Job Nu	Vame: I Imber: 1		Grove		
SITE SPECIFIC	INPUT DA	АТА			N	OISE N	IODE		s	
Highway Data				Site Co	nditions (Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt)	: 22,700 v	ehicles					Autos:	15		
Peak Hour Percentage	: 10%			M	edium Tru	cks (2 A	xles):	15		
Peak Hour Volume	: 2,270 v	ehicles		H	eavy Truci	ks (3+ A	xles):	15		
Vehicle Speed	: 55 m	nph		Vehicle	Mix					
Near/Far Lane Distance	: 51 fe	eet			nicleType		Day	Evening	Night	Daily
Site Data				VCI			77.5%		9.6%	
	: 0.0 f			٨	ledium Tri		84.8%		10.3%	1.84%
Barrier Height		reet			Heavy Tru		86.5%		10.8%	
Barrier Type (0-Wall, 1-Berm) Centerline Dist, to Barrier		faat								
Centerline Dist. to Observer				Noise S	ource Ele	evation	s (in fe	et)		
Barrier Distance to Observer					Autos		000			
Observer Height (Above Pad)	. 0.0 .			Mediu	ım Trucks	: 2.2	297			
Pad Elevation				Hea	vy Trucks	: 8.0	006	Grade Ad	justment:	0.0
Road Elevation				Lane Ed	uivalent	Distand	e (in f	eet)		
Road Grade					Autos					
Left View		。 degrees		Medii	m Trucks					
Right View		degrees		Hea	vy Trucks					
FHWA Noise Model Calculati	ons									
VehicleType REMEL	Traffic F		Distance		Road	Fresn		Barrier Att		m Atten
Autos: 71.		0.74		.06	-1.20		-4.72		000	0.00
Medium Trucks: 82.		16.50		.05	-1.20		-4.88		000	0.00
Heavy Trucks: 86.	40 -2	20.46	-2	.05	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (w			1							
VehicleType Leq Peak H		eq Day		Evening	Leq N			Ldn		VEL
Autos:	69.3	67		65.6		59.5		68.2		68.
Medium Trucks:	62.7	61		54.8		53.2		61.7		61.
Heavy Trucks:	62.7	61		52.2		53.5		61.8		62.0
Vehicle Noise:	70.8	69	.1	66.1		61.2		69.8	3	70.3
Centerline Distance to Noise	Contour (in	n feet)								
) dBA	65 a		6	0 dBA		dBA
		La		70	15			324		98
		CNF		75	16			349		51

Tuesday, January 08, 2019

Soonari	p: Existing Wit	th Phore 1				Proiect I	Jamo: T	0000*	Grovo		
Road Name		urrilase i					mber: 1		GIUVE		
		le Rd. (SR-18)				000 140	mber.	1724			
SITES	SPECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUTS	5	
Highway Data					Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 3	30,800 vehicles	5				A	Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	xles):	15		
Peak He	our Volume:	3,080 vehicles	6		Hea	avy Truci	ks (3+ A	xles):	15		
Vel	nicle Speed:	55 mph			Vehicle I	Mix					
Near/Far Lar	ne Distance:	75 feet		-		cleTvpe		Dav	Evening	Night	Dailv
Site Data						A	utos:	77.5%	•	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			H	łeavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	84.0 feet		-	Noise So	ource Ele	vations	: (in fe	pet)		
Centerline Dist. t	o Observer:	84.0 feet		-	110/30 00	Autos					
Barrier Distance t	o Observer:	0.0 feet			Modiur	n Trucks					
Observer Height (/	Above Pad):	5.0 feet				y Trucks			Grade Adj	ıstmeni	0.0
Pa	d Elevation:	0.0 feet				·					
	d Elevation:	0.0 feet		L	Lane Equ				feet)		
F	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	s		Heav	y Trucks	75.2	225			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	71.78	2.06		-2.7		-1.20		4.75	0.0		0.000
Medium Trucks:	82.40	-15.18		-2.7	-	-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40	-19.13		-2.7	6	-1.20		-5.21	0.0	00	0.000
Unmitigated Noise			barrie	er atter	nuation)						
	Leq Peak Hou			Leq E	vening	Leq N	·		Ldn	С	NEL
Autos:	69.		68.0		66.2		60.2		68.8		69.4
Medium Trucks:	63.		51.8		55.4		53.9		62.3		62.5
Heavy Trucks:	63.	-	61.9		52.8		54.1		62.4		62.6
Vehicle Noise:	71.	.5 6	69.7		66.7		61.9		70.4		70.9
Centerline Distanc	e to Noise Co	ontour (in feet))								
				70	dBA	65 d	BA	6	0 dBA	55	dBA
			dn:		90 90	19			415		395

	FH\	VA-RD-77-108	HIGHW	AY N	OISE PF	REDICTI		DEL			
Road Nan	io: Existing Wine: SR-395 nt: n/o Dos Pa						Name: D umber: 1		Grove		
SITE	SPECIFIC IN	IPUT DATA				N	OISE M	ODE	L INPUTS	s	
Highway Data				5	Site Con	ditions	(Hard = '	10, S	oft = 15)		
Average Daily	Traffic (Adt):	37,200 vehicle	s				A	utos:	15		
• •	Percentage:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak F	lour Volume:	3,720 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph			Vehicle I	<i>a</i> ?					
Near/Far La	ne Distance:	75 feet				viix icleTvpe		Day	Evening	Night	Daily
Site Data					Ven			7.5%	v		97.42%
						ہ dium Tr		34.8%		9.6%	
	rrier Height:	0.0 feet				leavy Tr		36.5%		10.3%	
Barrier Type (0-V	. ,	0.0			r	leavy II	ucks. c	50.5%	2.170	10.0%	0.74%
Centerline Di		84.0 feet		1	Noise So	ource El	evations	(in f	eet)		
Centerline Dist.		84.0 feet				Autos	a: 0.0	00			
Barrier Distance		0.0 feet			Mediur	n Trucks	s: 2.2	97			
Observer Height	· ,	5.0 feet			Heav	y Trucks	: 8.0	06	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalont	Distanc	o (in	foot)		
	ad Elevation: Road Grade:	0.0 feet		-	Lane Ly	Autos			ieer)		
	Road Grade: Left View:	0.0%			Madiu	n Trucks					
	Right View:	-90.0 degree 90.0 degree				y Trucks					
	Right view.	90.0 degree	85		neav	y mucks	. 73.2	20			
FHWA Noise Mod	el Calculation	s									
FHWA Noise Mod VehicleType	el Calculation REMEL	s Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
		-	Dista	nce -2.77		Road -1.20		el 4.75	Barrier Atte 0.0		m Atten 0.000
VehicleType	REMEL 71.78	Traffic Flow	Dista		7		-			000	
VehicleType Autos:	REMEL 71.78 82.40	Traffic Flow 2.88	Dista	-2.77	7 6	-1.20	-	4.75	0.0	000	0.000
VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40	Traffic Flow 2.88 -14.36 -18.31		-2.77 -2.76 -2.76	7 6 6	-1.20 -1.20	-	4.75 4.88	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40	<i>Traffic Flow</i> 2.88 -14.36 -18.31 <i>out Topo and</i>	barrier	-2.77 -2.76 -2.76 atten	7 6 6	-1.20 -1.20 -1.20	-	4.75 4.88	0.0 0.0	000 000 000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (with	Traffic Flow 2.88 -14.36 -18.31 out Topo and Ir Leq Day	barrier	-2.77 -2.76 -2.76 atten	7 5 5 uation)	-1.20 -1.20 -1.20	-	4.75 4.88	0.0 0.0 0.0	000 000 000 Ci	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70	Traffic Flow 2.88 -14.36 -18.31 out Topo and ir Leq Day .7	barrier	-2.77 -2.76 -2.76 atten	7 5 5 uation) vening	-1.20 -1.20 -1.20	Night	4.75 4.88	0.0 0.0 0.0	000 000 000 Ci	0.000 0.000 0.000 VEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70	Traffic Flow 2.88 -14.36 -18.31 out Topo and rr Leq Day .7 .1	barrier / L 68.8	-2.77 -2.76 -2.76 atten	7 5 5 <i>uation)</i> 7 7.0	-1.20 -1.20 -1.20	Vight 61.0	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.6	000 000 000 Ci	0.000 0.000 0.000 NEL 70.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leg Peak Hou 70 64 64	Traffic Flow 2.88 -14.36 -18.31 out Topo and rr Leq Day .7 .1	barrier / L 68.8 62.6	-2.77 -2.76 -2.76 atten	7 5 5 <i>uation)</i> <i>vening</i> 67.0 56.2	-1.20 -1.20 -1.20	Night 61.0 54.7	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.6 63.1	000 000 000 Ci	0.000 0.000 0.000 <u>VEL</u> 70.2 63.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 70 64 64 72	Traffic Flow 2.88 -14.36 -18.31 out Topo and rr Leq Day .7 .1 .3	barrier / L 68.8 62.6 62.7 70.5	-2.77 -2.76 -2.76 atten .eq Ev	7 5 5 6 7 6 7.0 5 6.2 5 3.7 6 7.6	-1.20 -1.20 -1.20 <i>Leq</i>	Night 61.0 54.7 54.9 62.7	4.75 4.88 5.21	0.0 0.0 0.0 69.6 63.1 63.3 71.2	000 000 000 Ci 3	0.000 0.000 0.000 VEL 70.2 63.4 63.4 71.7
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitgated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 70 64 64 72	Traffic Flow 2.88 -14.36 -18.31 out Topo and Ir Leq Day .1 .3 ontour (in feet)	barrier / L 68.8 62.6 62.7 70.5	-2.77 -2.76 -2.76 atten .eq Ev	7 6 6 7 7 7 7 7 6 7.0 6 7.0 6 7.6 7.6	-1.20 -1.20 -1.20 Leg	Night 61.0 54.7 54.9 62.7	4.75 4.88 5.21	0.0 0.0 0.0 69.6 63.1 63.3 71.2 60 dBA	000 000 000 Ci 3 2 2 55	0.000 0.000 0.000 VEL 70.2 63.4 63.4 71.7 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 70 64 64 72	Traffic Flow 2.88 -14.36 -18.31 out Topo and Ir Leq Day .7 .1 .3 ontour (in feet)	barrier / L 68.8 62.6 62.7 70.5	-2.77 -2.76 -2.76 atten .eq Ev	7 6 6 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	-1.20 -1.20 -1.20 <i>Leq</i>	Night 61.0 54.7 54.9 62.7 1BA 9	4.75 4.88 5.21	0.0 0.0 0.0 69.6 63.1 63.3 71.2	000 000 000 2 2 55 1,	0.000 0.000 0.000 VEL 70.2 63.4 63.4 71.7

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	FH\	WA-RD-77-108	HIGHWA	Y NC	ISE PR	EDICTIC	N MO	DEL			
Road Nam	io: Existing W ne: SR-395 nt: n/o Luna R					Project N Job Nu			Grove		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	IODE		s	
Highway Data				Si	te Con	ditions (l	Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: lour Volume:	31,600 vehicle 10% 3,160 vehicle				dium Truc avy Truck	:ks (2 A		15 15 15		
Ve	hicle Speed:	55 mph		V	hicle I	Nix					
Near/Far La	ne Distance:	75 feet		-		cleType		Dav	Evening	Night	Daily
Site Data								77.5%	0	9.6%	
Ba	rrier Height:	0.0 feet			Ме	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		84.0 feet		N	oise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.		84.0 feet				Autos:	0.0	000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	006	Grade Ad	iustment	0.0
	ad Elevation:	0.0 feet					Di- 1	(!)	(4)		
	ad Elevation:	0.0 feet		Là	ine Equ	ivalent l			eet)		
	Road Grade:	0.0%				Autos:					
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks: y Trucks:					
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atten
Autos:	71.78	2.17		2.77		-1.20		-4.75	0.0	000	0.000
Medium Trucks:	82.40	-15.06		2.76		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40			2.76		-1.20		-5.21	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			q Eve		Leq N			Ldn		NEL
Autos:	70		68.1		66.3		60.3		68.9		69.5
Medium Trucks:	63		61.9		55.5		54.0		62.4		62.7
Heavy Trucks:	63		62.0		53.0		54.2		62.6	-	62.7
Vehicle Noise:	71		69.8		66.8		62.0		70.5	5	71.0
Centerline Distan	ce to Noise C	ontour (in feet		70 dE	24	65 d	RA	6	0 dBA	55	dBA
			I dn:	91	1	196		0	423		10 010
			VEL:	91		211	-		425		79
		Ci	*	30		21				-	

	FHWA	-RD-77-108 HI	GHWA	Y NOI	SE PREDI	CTION	MODEL			
Scenario: Existin Road Name: SR-39 Road Segment: n/o La	5						ne: Deser ber: 11724			
SITE SPECIFI	C INPL	JT DATA				NOIS	SE MODE	L INPUT	s	
Highway Data				Sit	e Conditio					
Average Daily Traffic (Ad	tt): 28.0	000 vehicles					Autos.	: 15		
Peak Hour Percentac	· ·	10%			Medium	Trucks	(2 Axles)	: 15		
Peak Hour Volum	ne: 2,1	800 vehicles			Heavy 7	rucks (3+ Axles)	: 15		
Vehicle Spee	ed:	55 mph		1/0	hicle Mix					
Near/Far Lane Distand	e:	11 feet		ve	VehicleT	ma	Day	Evening	Night	Daily
Site Data				_	venicier	Auto				97.429
				_	Mediun				10.3%	
Barrier Heigi		0.0 feet				/ Truck			10.3 %	
Barrier Type (0-Wall, 1-Berr		0.0			neavy	much	3. 00.07	0 2.170	10.070	0.74
Centerline Dist. to Barri		40.0 feet		No	ise Source	Eleva	tions (in f	eet)		
Centerline Dist. to Observ		40.0 feet			A	itos:	0.000			
Barrier Distance to Observ		0.0 feet		1	Aedium Tru	icks:	2.297			
Observer Height (Above Pa Pad Elevatio		5.0 feet			Heavy Tru	icks:	8.006	Grade Ad	ljustment	0.0
Pad Elevation Road Elevation		0.0 feet		1.2	ne Equival	ont Die	tanco (in	foot)		
Road Elevatio		0.0 feet 0.0%		Lai		itos:	39.934	leel)		
Left Vie		90.0 degrees			Aedium Tru		39.712			
Right Vie		90.0 degrees 90.0 degrees			Heavy Tru		39.734			
FHWA Noise Model Calcula	tions									
VehicleType REMEL	. T	raffic Flow	Distanc	е	Finite Road	1 F	resnel	Barrier At	ten Ber	m Atten
Autos: 7	1.78	1.65	1	1.36	-1.2	20	-4.59	0.0	000	0.00
	2.40	-15.59		1.40	-1.2		-4.87		000	0.00
	6.40	-19.55		1.39	-1.2	20	-5.56	0.0	000	0.00
Unmitigated Noise Levels (,					
VehicleType Leq Peak		Leq Day		l Ever		eq Nigł		Ldn		VEL
Autos:	73.6	71.			69.9		63.9	72.		73.
Medium Trucks:	67.0	65.	-		59.1		57.6	66.		66.
Heavy Trucks:	67.0	65.			56.6		57.8	66.	-	66.
Vehicle Noise:	75.2	73	4		70.5		65.6	74.	1	74
Centerline Distance to Nois	e Cont	our (in feet)	-							
				70 dB/	a 1	65 dBA		60 dBA		dBA
		Ldr	n:	76		163		351	7	55
		CNFI		81		175		377		13

Tuesday, January 08, 2019

Scenar	io: Existing Wi	th Phase 1				Proiect N	lame [.]	Desert	Grove		
	e: SR-395					Job Nu			2.000		
Road Segme	nt: n/o Bear Va	alley Rd.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				1	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	25,200 vehicles						Autos:			
Peak Hour	Percentage:	10%			Mee	dium True	cks (2 A	Axles):	15		
Peak H	lour Volume:	2,520 vehicles			Hea	avy Truck	(3+ A	Axles):	15		
Ve	hicle Speed:	55 mph		5	Vehicle I	/ix					
Near/Far La	ne Distance:	11 feet		H		cleType		Day	Evening	Night	Daily
Site Data				-		A	itos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	40.0 feet			Noise So	urce Ele	vation	s (in fé	et)		
Centerline Dist.	to Observer:	40.0 feet		F		Autos		200			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks.		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		206	Grade Ad	ustment	0.0
P	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		1	Lane Equ				feet)		
	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree	S		Mediur	n Trucks.					
	Right View:	90.0 degree	S		Heav	y Trucks:	39.	734			
FHWA Noise Mod	el Calculation	-									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	iel	Barrier Att	en Ber	m Atten
Autos:	71.78	1.19		1.36	6	-1.20		-4.59	0.0	00	0.000
Medium Trucks:	82.40	-16.05		1.40	D	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	86.40	-20.00		1.39	Э	-1.20		-5.56	0.0	00	0.000
Unmitigated Nois					· · ·						
VehicleType	Leq Peak Hou			eq Ev	/ening	Leq N	·		Ldn		NEL
Autos:	73		1.2		69.5		63.4		72.0		72.6
Medium Trucks:	66		5.0		58.7		57.1		65.6		65.8
Heavy Trucks:	66		5.2		56.1		57.4		65.7		65.9
Vehicle Noise:	74	.7 7	3.0		70.0		65.1		73.7	,	74.2
	ce to Noise Co	ontour (in feet)	-	70 0	(0.4	65 d					
Centerline Distan								1 6	60 dBA	55	dBA
Centerline Distan			. L								
Centerline Distan			.dn: EL:	70 0	0	15	2		327 352		'04 '57

	FRV	VA-RD-77-108	піспі	VAT	NOISE PI	REDICI	ION MOL	DEL			
Road Nan	io: Existing Wi ne: Palmdale R nt: w/o SR-395	d. (SR-18)					Name: [umber: 1				
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	25,400 vehicle	s				-	Autos:	15		
• •	Percentage:	10%			Me	dium Tri	ucks (2 A	xles).	15		
Peak F	lour Volume:	2,540 vehicle	s		He	avy Tru	cks (3+ A	xles).	15		
Ve	hicle Speed:	55 mph		F	Vehicle			-			
Near/Far La	ne Distance:	51 feet		ŀ		viix icleType		Davi	Evening	Night	Daily
Site Data					ven			Day	•	· ·	
								77.5%		9.6%	
	rrier Height:	0.0 feet				edium T		34.8%		10.3%	
Barrier Type (0-V	. ,	0.0			'	leavy T	UCKS:	36.5%	2.7%	10.8%	0.74%
Centerline Di		72.0 feet			Noise So	ource E	evations	; (in f	eet)		
Centerline Dist.		72.0 feet				Auto	s: 0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s: 2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck			Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet							,		
Ro	ad Elevation:	0.0 feet			Lane Eq				feet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 67.3	87			
	Right View:	90.0 degre	es		Heav	y Truck	s: 67.4	00			
FHWA Noise Mod	el Calculation	s									
FHWA Noise Mod VehicleType	el Calculation REMEL	s Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier Att	en Be	m Atten
			Dista	ance -2.0		Road -1.20		el -4.72		en Be	
VehicleType	REMEL 71.78	Traffic Flow	Dista		6					000	0.000
VehicleType Autos:	REMEL 71.78	Traffic Flow 1.23	Dista	-2.0	6 5	-1.20		4.72	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40	Traffic Flow 1.23 -16.01 -19.97		-2.0 -2.0 -2.0	6 5 5	-1.20 -1.20		4.72 4.88	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40	Traffic Flow 1.23 -16.01 -19.97 out Topo and	barrier	-2.0 -2.0 -2.0	6 5 5	-1.20 -1.20 -1.20		4.72 4.88	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (with	Traffic Flow 1.23 -16.01 -19.97 Out Topo and Ir Leq Day	barrier	-2.0 -2.0 -2.0	6 5 5 nuation)	-1.20 -1.20 -1.20		4.72 4.88	0.0 0.0 0.0	000 000 000 C	0.000 0.000 0.000 NEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou	Traffic Flow 1.23 -16.01 -19.97 out Topo and r Leq Day .7	barrier	-2.0 -2.0 -2.0	6 5 5 nuation) ivening	-1.20 -1.20 -1.20	Night	4.72 4.88	0.0 0.0 0.0 <i>Ldn</i>	000 000 000 C	0.000 0.000 0.000 NEL 69.3
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 69	Traffic Flow 1.23 -16.01 -19.97 out Topo and r Leq Day .7 .1	barrier	-2.0 -2.0 -2.0	6 5 5 <i>nuation)</i> <i>ivening</i> 66.1	-1.20 -1.20 -1.20	Night 60.0	4.72 4.88	0.0 0.0 0.0 <i>Ldn</i> 68.6	000 000 000 000 C	0.000 0.000 0.000 NEL 69.3 62.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leg Peak Hou 69 63 63	Traffic Flow 1.23 -16.01 -19.97 out Topo and r Leq Day .7 .1 .2	barrier / 67.8 61.6	-2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 5 5 5 5 5 5 3	-1.20 -1.20 -1.20	Night 60.0 53.7	-4.72 -4.88 -5.26	0.0 0.0 0.0 <i>Ldn</i> 68.6 62.2	000 000 000 C S 2 3	0.000 0.000 0.000 NEL 69.3 62.4 62.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 69 63 63 71	Traffic Flow 1.23 -16.01 -19.97 Out Topo and r Leq Day .7 .1 .2 .3	barrier 67.8 61.6 61.8 69.6	-2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 6 6 6 5 5 3 5 2.7	-1.20 -1.20 -1.20	Night 60.0 53.7 54.0	-4.72 -4.88 -5.26	0.0 0.0 0.0 <i>Ldn</i> 68.6 62.2 62.3	000 000 000 C S 2 3	0.000 0.000 0.000 NEL 69.3 62.4 62.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unnitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 69 63 63 71	Traffic Flow 1.23 -16.01 -19.97 Out Topo and r Leq Day .7 .1 .2 .3	barrier 67.8 61.6 61.8 69.6	-2.0 -2.0 -2.0 • atter Leq E	6 5 5 5 5 5 5 5 6 6 6 5 5 3 5 2.7	-1.20 -1.20 -1.20 <i>Leq</i>	Night 60.0 53.7 54.0	-4.72 -4.88 -5.26	0.0 0.0 0.0 <i>Ldn</i> 68.6 62.2 62.3	000 000 000 200 2 3 3	0.000 0.000 0.000 NEL 69.3 62.4 62.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 69 63 63 71	Traffic Flow 1.23 -16.01 -19.97 Out Topo and r Leq Day .1 .2 .3 ontour (in feet)	barrier 67.8 61.6 61.8 69.6	-2.0 -2.0 -2.0 -2.0 -2.0 -2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 5 5 5 5 5 5 3 5 2.7 6 6.6	-1.20 -1.20 -1.20 <i>Leq</i> 65	Night 60.0 53.7 54.0 61.7	-4.72 -4.88 -5.26	0.0 0.0 0.0 68.6 62.2 62.3 70.3	000 000 000 2 3 3 3 3	0.000 0.000 0.000 NEL 69.3 62.4 62.5 70.8

Tuesday, January 08, 2019

	FH\	VA-RD-77-108	HIGHW	AY NOI	SE PREDICT	ION MO	DDEL			
Scenario: Road Name: Road Segment:						t Name: lumber:		Grove		
	PECIFIC IN	IPUT DATA							s	
Highway Data				Site	e Conditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	6,800 vehicle	s				Autos:	15		
Peak Hour Pe		10%			Medium Tr			15		
	ır Volume:	680 vehicle	s		Heavy Tru	icks (3+	Axles):	15		
	cle Speed:	40 mph		Vel	icle Mix					
Near/Far Lane	Distance:	11 feet			VehicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Barri	er Height:	0.0 feet			Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wal	l, 1-Berm):	0.0			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist.		40.0 feet		No	se Source E	levatio	ns (in fe	et)		
Centerline Dist. to		40.0 feet			Auto	os: 0	.000			
Barrier Distance to		0.0 feet		/	ledium Truck	(s: 2	.297			
Observer Height (Al	,	5.0 feet			Heavy Truck	(s: 8	.006	Grade Ad	iustment	: 0.0
	Elevation: Elevation:	0.0 feet		1.21	e Equivalen	+ Dista	nco (in i	(aat)		
	Elevation: ad Grade:	0.0 feet 0.0%		Lai	Auto		.934	eel)		
Ru	l eft View:	-90.0 degre			/edium Truck		.712			
F	Right View:	90.0 degre			Heavy Truck		.734			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	ce	Finite Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-3.11		1.36	-1.20		-4.59	0.0	000	0.00
Medium Trucks:	77.72	-20.35		1.40	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-24.31		1.39	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise L										
	eq Peak Hou			eq Ever		Night		Ldn		NEL
Autos:	63		61.7		59.9	53.	-	62.5		63.
Medium Trucks:	57		56.1		49.7	48.		56.6		56.
Heavy Trucks:	58		57.5		48.4	49.	-	58.0		58.
Vehicle Noise:	65		63.8		60.6	56.	U	64.6	5	65.
Centerline Distance	to Noise Co	ontour (in fee	9	70 dB/	65	dBA	6	0 dBA	55	dBA
			🖵				-			
			Ldn:	17		37		80	1	73

۱ ۱	HWA-RI	D-77-108 HIG	HWAY	NOISE PF	REDICTIO	N MOI	DEL			
Scenario: Existing Road Name: Palmda Road Segment: e/o Can	e Rd. (SF				Project N Job Nur			Grove		
SITE SPECIFIC	INPUT	DATA			NO	ISE N	IODE		s	
Highway Data				Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt	: 23,600) vehicles				1	Autos:	15		
Peak Hour Percentage	e: 10)%		Me	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume	2,360) vehicles		Hea	avy Trucks	s (3+ A	xles):	15		
Vehicle Speed	l: 55	5 mph	ŀ	Vehicle I	liv					
Near/Far Lane Distance	e: 51	feet	ŀ		cleType		Day	Evening	Night	Daily
Site Data				VCIII			77.5%	•	•	97.429
		0 (Me	edium Truc		84.8%		10.3%	
Barrier Heigh		0 feet			leavy Truc		86.5%		10.8%	
Barrier Type (0-Wall, 1-Berm Centerline Dist, to Barrie		0 0 feet							10.070	0 47
Centerline Dist. to Barrie Centerline Dist. to Observe				Noise So	ource Elev	ations	s (in fe	eet)		
Barrier Distance to Observe		0 feet 0 feet			Autos:	0.0	000			
Observer Height (Above Pad		0 feet		Mediur	n Trucks:	2.2	297			
Pad Elevation		0 feet		Heav	y Trucks:	8.0	006	Grade Ad	justment.	0.0
Road Elevation		0 feet	ŀ	l ano Equ	uivalent D	listand	o (in i	(pot)		
Road Grade	0.	0 reet 0%	ŀ	Lane Ly	Autos:	67.5		000		
Left Viev		0 degrees		Modiur	n Trucks:	67.3				
Right Viev		0 degrees			y Trucks:	67.4				
FHWA Noise Model Calculat	ions									
VehicleType REMEL		ic Flow D	istance	Finite		Fresn		Barrier Att	en Ber	m Atten
Autos: 71.	78	0.91	-2.0	16	-1.20		-4.72	0.0	000	0.00
Medium Trucks: 82.		-16.33	-2.0		-1.20		-4.88		000	0.00
Heavy Trucks: 86	40	-20.29	-2.0	15	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (w	-		1	<u> </u>						
VehicleType Leq Peak Autos:	-10ur 69.4	Leq Day 67.5		vening 65.8	Leq Ni	gnt 59.7		Ldn 68.3		VEL 68.
Autos: Medium Trucks:	62.8	61.3		55.0		59.7 53.4		61.9		62.
Heavy Trucks:	62.8	61.3		55.0		53.4		62.0		62.
				-					-	
Vehicle Noise:	71.0	69.2		66.3		61.4		70.0)	70.
Centerline Distance to Noise	Contou	r (in teet)	70	dBA	65 dE	RA .	6	0 dBA	55	dBA
		Ldn		12	154			333		17

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		/A-RD-77-108	HIGHW		IOISE PH						
	Existing Wir Palmdale R e/o Cobalt F	d. (SR-18)				Project N Job Nui			Grove		
	PECIFIC IN	PUT DATA							L INPUTS	6	
Highway Data					Site Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt): 2	4,300 vehicles						Autos:	15		
Peak Hour P	ercentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak Ho	ur Volume:	2,430 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehi	cle Speed:	55 mph		F	Vehicle I	Nix					
Near/Far Lane	Distance:	51 feet		F		cleType		Day	Evening	Night	Daily
Site Data						AL	tos:	77.5%	12.9%	9.6%	97.42%
Barri	er Heiaht:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	I, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist.		72.0 feet			Noise Sc	urce Ele	vations	s (in fe	eet)		
Centerline Dist. to		72.0 feet				Autos:	0.0	00			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (A		5.0 feet			Heav	y Trucks:	8.0	06	Grade Adj	ustment	: 0.0
	Elevation:	0.0 feet		H	Lano Equ	ivalent L	Vietano	o (in t	foot)		
	Elevation:	0.0 feet		Ľ	Lane Ly	Autos:	67.5		eel)		
Ro	oad Grade: Left View:	0.0%			Madiu	Autos: n Trucks:	67.3				
F	Right View:	-90.0 degree 90.0 degree				y Trucks:	67.4				
FHWA Noise Model	Calculation	5									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	71.78	1.03		-2.0	6	-1.20		4.72	0.0	00	0.00
Medium Trucks:	82.40	-16.20		-2.0	5	-1.20		4.88	0.0	00	0.00
Heavy Trucks:	86.40	-20.16		-2.0	5	-1.20		5.26	0.0	00	0.00
Unmitigated Noise											
	eq Peak Hou			.eq E	vening	Leq N	<u> </u>		Ldn		NEL
Autos:	69.		7.7		65.9		59.8		68.5		69.
Medium Trucks:	63.		1.4		55.1		53.5		62.0		62.3
Heavy Trucks:	63.		1.6		52.5		53.8		62.1		62.3
Vehicle Noise:	71.	1 6	9.4		66.4		61.5		70.1		70.
Centerline Distance	to Noise Co	ntour (in feet)									
					dBA	65 dł		6	60 dBA		dBA
			.dn: EL:		3 9	157 169			339 365		731 786

FH	WA-RD-77-108 HIG	HWAY N	OISE PR	EDICTIO	N MODI	EL		
Scenario: Existing V Road Name: Palmdale Road Segment: e/o Ameth	Rd. (SR-18)			Project Na Job Nurr		esert Grove 724		
SITE SPECIFIC I	NPUT DATA			NO	ISE MO	DDEL INPU	гs	
Highway Data		5	Site Cona	litions (H	ard = 1	0, Soft = 15)		
Average Daily Traffic (Adt):	23,700 vehicles				AL	itos: 15		
Peak Hour Percentage:	10%		Med	lium Truck	s (2 Ax	les): 15		
Peak Hour Volume:	2,370 vehicles		Hea	vy Trucks	(3+ Ax	les): 15		
Vehicle Speed:	55 mph		/ehicle M					
Near/Far Lane Distance:	51 feet	-		leType	D	ay Evening	Night	Daily
Site Data		-	Verne	Aut		7.5% 12.9%	v v	
Barrier Height:	0.0 feet		Me	dium Truc	ks: 84	4.8% 4.9%		
Barrier Type (0-Wall, 1-Berm):	0.0		He	eavy Truc	ks: 80	6.5% 2.7%	10.8%	6 0.74%
Centerline Dist. to Barrier:	72.0 feet	_		,				
Centerline Dist. to Observer:	72.0 feet	/	loise Sol	urce Elev		, ,		
Barrier Distance to Observer:	0.0 feet			Autos:	0.00	-		
Observer Height (Above Pad):	5.0 feet			Trucks:	2.29		-li (
Pad Elevation:	0.0 feet		Heavy	Trucks:	8.00	6 Grade A	djustmen	1: 0.0
Road Elevation:	0.0 feet	L	.ane Equ	ivalent D	istance	(in feet)		
Road Grade:	0.0%			Autos:	67.51	9		
Left View:	-90.0 degrees		Medium	Trucks:	67.38	7		
Right View:	90.0 degrees		Heavy	Trucks:	67.40	0		
FHWA Noise Model Calculatio	ns	-						
VehicleType REMEL	Traffic Flow D	istance	Finite F	Road	Fresnei	Barrier A	tten Be	erm Atten
Autos: 71.78	3 0.92	-2.06	5	-1.20	-4	1.72 0	.000	0.000
Medium Trucks: 82.40		-2.05		-1.20			.000	0.000
Heavy Trucks: 86.40	-20.27	-2.05		-1.20	-5	5.26 0	.000	0.000
Unmitigated Noise Levels (wit								
VehicleType Leq Peak Ho	, .,	Leg Ev	•	Leq Nig		Ldn	-	ONEL
	9.4 67.5		65.8		59.7	68		69.0
	2.8 61.3		55.0		53.4	61		62.1
	2.9 61.5		52.4		53.7	62		62.2
	1.0 69.3		66.3		61.4	70	.0	70.5
Centerline Distance to Noise C	Contour (in feet)						-	
		70 d		65 dB	A	60 dBA		5 dBA
	Ldn:		-	155		334		719
	CNEL:	77	r	167		359		773

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGHWA	Y NO	ISE PR	EDICTIC	N MO	DEL			
Road Name	e: SR-395	ith Full Project Ile Rd. (SR-18)				Project N Job Nu			Grove		
SITES	SPECIFIC IN	IPUT DATA				NC	DISE N	10DE		s	
Highway Data				Si	te Con	ditions (I	Hard =	10, Sc	oft = 15)		
Peak He	Percentage: our Volume:	10% 3,100 vehicles				dium Truc avy Truck	:ks (2 A		15 15 15		
	nicle Speed:	55 mph		Ve	hicle N	lix					
Near/Far Lar	ne Distance:	75 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		84.0 feet		N	oise So	urce Ele	vation	s (in fe	et)		
Centerline Dist. t		84.0 feet				Autos:		000			
Barrier Distance t		0.0 feet			Mediun	n Trucks:	2.2	297			
Observer Height (/	,	5.0 feet			Heav	Trucks:	8.0	006	Grade Adj	iustmen	t: 0.0
	d Elevation:	0.0 feet		-	no For	ivalent l	Dioton	o (in i	[0.04]		
	d Elevation:	0.0 feet		Lê	ne Equ	Autos:			eet)		
F	Road Grade: Left View:	0.0%			Modium	n Trucks:					
	Right View:	-90.0 degree 90.0 degree				v Trucks:					
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	2.09	-2	2.77		-1.20		4.75	0.0	00	0.00
Medium Trucks:	82.40	-15.15	-2	2.76		-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-19.10	-2	2.76		-1.20		-5.21	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and I	barrier at	tenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leo	l Eve	ning	Leq N	light		Ldn	C	NEL
Autos:	69		68.0		66.2		60.2		68.8		69.4
Medium Trucks:	63		61.8		55.4		53.9		62.3		62.0
Heavy Trucks:	63		61.9		52.9		54.1		62.5		62.
Vehicle Noise:	71		69.7		66.8		61.9		70.4	1	70.9
Centerline Distanc	e to Noise Co	ontour (in feet)		0 45		05.	0.4		0 -10 4		
			dn:	0 dE 90	А	65 di 194		6	0 dBA 417		i dBA 399
		-	_an: IFI :	90 97		194			417 449		399 967
		CA	IEL.	97		208	>		449		101

F	HWA-F	RD-77-108 HIG	HWAY	NOISE PR	REDICTIO		DEL			
Scenario: Existing	With Fu	ull Project			Project I	lame:	Desert	Grove		
Road Name: SR-395					Job Nu	mber:	11724			
Road Segment: n/o Dos	Palmas	Rd.								
SITE SPECIFIC	INPU'	T DATA							S	
Highway Data				Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt,	: 38,50	00 vehicles					Autos:	15		
Peak Hour Percentage	e 1	10%		Me	dium Tru	cks (2 A	(xles)	15		
Peak Hour Volume	: 3,85	50 vehicles		He	avy Trucl	(3+ A	(xles)	15		
Vehicle Speed	l: 1	55 mph	F	Vehicle I	Mix					
Near/Far Lane Distance	c 1	75 feet	F		icleType		Dav	Evening	Night	Dailv
Site Data							77.5%	•	•	97.429
		0.0 feet		Me	edium Tru		84.8%		10.3%	
Barrier Height Barrier Type (0-Wall, 1-Berm		0.0 feet			leavy Tru		86.5%		10.8%	
Centerline Dist. to Barrie		0.0 4.0 feet								
Centerline Dist. to Observe	-			Noise So	ource Ele	vation	s (in fe	et)		
Barrier Distance to Observe	-	4.0 feet 0.0 feet			Autos.	0.0	000			
Observer Height (Above Pad				Mediur	n Trucks.	2.2	297			
Pad Elevation		5.0 feet 0.0 feet		Heav	y Trucks.	8.0	006	Grade Ad	justment.	0.0
Road Elevation			ŀ	Lane Eq	uivalent	Distan	no (in i	(pot)		
Road Elevation Road Grade		0.0 feet 0.0%	ŀ	Lane Ly	Autos			000		
Left View				Modiu	n Trucks.					
Right View		0.0 degrees			y Trucks.					
Right view	. 9	0.0 degrees		Tieav	y mucks.	75.	225			
FHWA Noise Model Calculat										
VehicleType REMEL			istance	Finite		Fresn		Barrier Att		m Atter
Autos: 71.		3.03	-2.7		-1.20		-4.75		000	0.00
Medium Trucks: 82.		-14.21	-2.7		-1.20		-4.88		000	0.00
Heavy Trucks: 86.	40	-18.16	-2.7	6	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Levels (w	-		1	(
VehicleType Leq Peak I		Leq Day		vening	Leq N			Ldn		VEL
Autos:	70.8	68.9		67.2		61.1		69.7		70.
Medium Trucks:	64.2	62.7		56.4		54.8		63.3		63
Heavy Trucks:	64.3	62.8		53.8		55.1		63.4		63.
Vehicle Noise:	72.4	70.7		67.7		62.8	1	71.4	1	71
Centerline Distance to Noise	Conto	ur (in feet)								
				dBA	65 d		6	0 dBA		dBA
		Ldn: CNFL		04	22			482 519		039 117
				12	24					

Tuesday, January 08, 2019

		VA-RD-77-108	mon	IWATI	NOISE PR				_		
Road Nan	io: Existing Wi ne: SR-395 nt: n/o Luna R	,				Project Job Ni	Name: Imber:		Grove		
SITE	SPECIFIC IN	IPUT DATA				N	OISE	/ODE		5	
Highway Data					Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	32,600 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	Axles):	15		
Peak H	lour Volume:	3,260 vehicle	s		He	avy Truc	ks (3+ A	Axles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		-		cleType		Day	Evening	Night	Dailv
Site Data								77.5%		9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	łeavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	84.0 feet		-	Noise Sc	urce Ek	vation	s (in fa	of)		
Centerline Dist.	to Observer:	84.0 feet		-		Autos		200	.00		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks		297			
Observer Height	Above Pad):	5.0 feet				v Trucks		206	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet				· · · ·			,		
	ad Elevation:	0.0 feet		L	Lane Eq				'eet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degre				n Trucks					
	Right View:	90.0 degre	es		Heav	y Trucks	: 75.	225			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	iel	Barrier Atte	en Be	rm Atten
Autos:	71.78	2.31		-2.7	7	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-14.93		-2.7	6	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-18.88		-2.7	6	-1.20		-5.21	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	1	Leq E	vening	Leq I	light		Ldn	С	NEL
Autos:	70	.1	68.2		66.5		60.4	Ļ	69.0		69.6
Medium Trucks:	63		62.0		55.6		54.1		62.6		62.8
Heavy Trucks:	63	-	62.1		53.1		54.3	· · · · · ·	62.7		62.8
Vehicle Noise:	71	.7	69.9		67.0		62.1		70.7		71.1
Centerline Distan	ce to Noise C	ontour (in feet)								
					dBA	65 0		6	i0 dBA		i dBA
			Ldn:	g	33	20	0		431	9	930
			VFI :		00	21			464		.000

	FHV	VA-RD-77-108	HIGHWA	Y NOISE F	PREDICTIO	ON MODEL			
Road Nam	io: Existing Wi ne: SR-395 nt: n/o La Mes	,				lame: Dese mber: 1172			
SITE	SPECIFIC IN	IPUT DATA					EL INPUT	s	
Highway Data				Site Co	nditions (l	Hard = 10, 3	Soft = 15)		
Average Daily	. ,		3			Auto			
	Percentage:	10%				cks (2 Axles			
	lour Volume:	2,830 vehicles	6	н	eavy Truck	(3+ Axles): 15		
	hicle Speed:	55 mph		Vehicle	Mix				
Near/Far La	ne Distance:	11 feet		Ve	hicleType	Day	Evening	Night	Daily
Site Data					A	utos: 77.5	% 12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet		٨	Aedium Tru	icks: 84.8	% 4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			Heavy Tru	icks: 86.5	% 2.7%	10.8%	0.74%
Centerline Dis		40.0 feet		Noise S	Source Ele	vations (in	feet)		
Centerline Dist.		40.0 feet			Autos:	0.000	,		
Barrier Distance		0.0 feet		Medi	um Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet		Hea	vy Trucks:	8.006	Grade Ad	iustment	: 0.0
Pa	ad Elevation:	0.0 feet							
	ad Elevation:	0.0 feet		Lane E		Distance (ii	n feet)		
1	Road Grade:	0.0%			Autos:				
	Left View:	-90.0 degree			um Trucks:				
	Right View:	90.0 degree	s	Hea	wy Trucks:	39.734			
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	o Pood	Ensand	Barrier Att		
					e Noau	Fresnel	Damer Au	en Bei	m Atten
Autos:	71.78	1.70		1.36	-1.20	-4.5		en Bei)00	
Autos: Medium Trucks:	71.78 82.40	1.70 -15.54		1.36 1.40			9 0.0		0.000
					-1.20	-4.59	9 0.0 7 0.0	000	0.000
Medium Trucks: Heavy Trucks: Unmitigated Noise	82.40 86.40 e Levels (with	-15.54 -19.50 out Topo and	barrier a	1.40 1.39 ttenuation)	-1.20 -1.20 -1.20	-4.59 -4.87 -5.50	9 0.0 7 0.0 6 0.0	000	0.000 0.000 0.000
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	82.40 86.40 e Levels (with Leg Peak Hou	-15.54 -19.50 out Topo and r Leq Day	barrier a	1.40 1.39 ttenuation) q Evening	-1.20 -1.20 -1.20 <i>Leq N</i>	-4.59 -4.87 -5.50 light	9 0.0 7 0.0 6 0.0	000 000 000	0.000 0.000 0.000 NEL
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	82.40 86.40 e Levels (with Leq Peak Hou 73	-15.54 -19.50 out Topo and r Leq Day .6	barrier a Le	1.40 1.39 ttenuation) q Evening 70.0	-1.20 -1.20 -1.20 -1.20	-4.59 -4.81 -5.50 light 63.9	9 0.0 7 0.0 6 0.0 <u>Ldn</u> 72.5	000 000 000 C	0.000 0.000 0.000 NEL 73.1
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	82.40 86.40 e Levels (with Leq Peak Hou 73 67	-15.54 -19.50 out Topo and ir Leq Day .6 .1	barrier a Le 71.7 65.6	1.40 1.39 (ttenuation) q Evening 70.0 59.2	-1.20 -1.20 -1.20 -1.20	-4.59 -4.87 -5.56 light 63.9 57.6	9 0.0 7 0.0 6 0.0 <u>Ldn</u> 72.5 66.1	000 000 000 C	0.000 0.000 0.000 NEL 73.1 66.3
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	82.40 86.40 e Levels (with Leq Peak Hou 73	-15.54 -19.50 out Topo and ir Leq Day .6 .1	barrier a Le	1.40 1.39 ttenuation) q Evening 70.0	-1.20 -1.20 -1.20 -1.20	-4.59 -4.81 -5.50 light 63.9	9 0.0 7 0.0 6 0.0 <u>Ldn</u> 72.5	000 000 000 C	0.000 0.000 0.000 NEL 73.1
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	82.40 86.40 e Levels (with Leq Peak Hou 73 67	-15.54 -19.50 out Topo and rr Leq Day .6 .1	barrier a Le 71.7 65.6	1.40 1.39 (ttenuation) q Evening 70.0 59.2	-1.20 -1.20 -1.20 Leq N	-4.59 -4.87 -5.56 light 63.9 57.6	9 0.0 7 0.0 6 0.0 <u>Ldn</u> 72.5 66.1	000 000 000 5 1 2	0.000 0.000 0.000 NEL 73.1 66.3
Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	82.40 86.40 e Levels (with Leg Peak Hou 73 67 67 75	-15.54 -19.50 out Topo and out Leq Day .6 .1 .1	barrier a Le 71.7 65.6 65.7 73.5	1.40 1.39 (tenuation) q Evening 70.0 59.2 56.0 70.9	-1.20 -1.20 -1.20 -1.20 -1.20	-4.5(-4.8) -5.5(iight 63.9 57.6 57.9 65.6	9 0.0 7 0.0 5 0.0 <u>Ldn</u> 72.5 66.1 66.2 74.2	000 000 000 5 1 2 2	0.000 0.000 0.000 NEL 73.1 66.3 66.4 74.7
Medium Trucks: Heavy Trucks: Unnitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.40 86.40 e Levels (with Leg Peak Hou 73 67 67 75	-15.54 -19.50 out Topo and rr Leq Day 6 .1 .1 .2 ontour (in feet	barrier a Le 71.7 55.6 55.7 73.5	1.40 1.39 (ttenuation) q Evening 70.0 59.2 56.0 70.3 70 dBA	-1.20 -1.20	-4.5(-4.8) -5.5(63.9 57.6 57.9 65.6 BA	9 0.0 7 0.0 6 0.0 72.5 66.2 74.2 60 dBA	000 000 000 5 1 2 2 5 5 5 5 5 5 5	0.000 0.000 0.000 NEL 73.1 66.3 66.4 74.7 dBA
Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.40 86.40 e Levels (with Leg Peak Hou 73 67 67 75	-15.54 -19.50 out Topo and rr Leq Day .6 .1 .1 .2 .2 .2 .0 ntour (in feet	barrier a Le 71.7 65.6 65.7 73.5	1.40 1.39 (tenuation) q Evening 70.0 59.2 56.0 70.9	-1.20 -1.20 -1.20 -1.20 -1.20	-4.56 -4.8 -5.56 63.9 57.6 57.9 65.6 BA 4	9 0.0 7 0.0 5 0.0 <u>Ldn</u> 72.5 66.1 66.2 74.2	000 000 5 1 2 2 5 5 7 7	0.000 0.000 0.000 NEL 73.1 66.3 66.4 74.7

Tuesday, January 08, 2019

	FH\	WA-RD-77-108	HIGHW	AY NC	ISE PF	REDICTIO	ON MC	DEL			
Scenari Road Nam Road Segmer	e: SR-395	ith Full Project alley Rd.				Project I Job Nu			Grove		
SITE S	SPECIFIC IN	NPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				Si	te Con	ditions (Hard =	= 10, Se	oft = 15)		
	Percentage:	10%				dium Tru			15		
	our Volume:	2,540 vehicle	S		не	avy Truci	KS (3+	Axies):	15		
Vei Near/Far Lai	hicle Speed:	55 mph 11 feet		Ve	ehicle l	Mix					
Neal/Fai Lai	ne Distance.	11 leel			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%			97.42%
Bar	rier Height:	0.0 feet				edium Tru		84.8%		10.3%	
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	40.0 feet		N	nisa Sr	ource Ele	vation	ne (in f	oot)		
Centerline Dist.	to Observer:	40.0 feet			//30 00	Autos		.000	500		
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucks		.297			
Observer Height (J	Above Pad):	5.0 feet				v Trucks		.006	Grade Ad	liustmen	t: 0.0
Pa	ad Elevation:	0.0 feet				,				,	. 0.0
Roa	ad Elevation:	0.0 feet		Lá	ne Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		.934			
	Left View:	-90.0 degree	es			n Trucks		.712			
	Right View:	90.0 degree	es		Heav	y Trucks	: 39	.734			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78			1.36		-1.20		-4.59		000	0.00
Medium Trucks:	82.40			1.40		-1.20		-4.87		000	0.00
Heavy Trucks:	86.40			1.39		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			eq Eve		Leq N			Ldn		NEL
Autos:			71.3		69.5		63.		72.		72.
Medium Trucks:			65.1		58.7		57.	-	65.		65.9
Heavy Trucks:			65.2		56.2		57.	·	65.	-	65.
Vehicle Noise:			73.0		70.0		65.	2	73.	7	74.
Centerline Distance	ce to Noise C	ontour (in feet)	70 dE	. 1	65 d	ID A	1	60 dBA	-	5 dBA
			I dn:	70 02	2/1	15		1 0	329		708
			VEL:	76		15	-		353		708 761
		Ci	*	70		10	-		000		

	FHWA	-RD-77-108 H	IGH	IWAY NO	DISE PF	REDICT	ION MO	DEL			
Scenario: Existing Road Name: Palmda Road Segment: w/o SR	le Rd.						Name: umber:		Grove		
SITE SPECIFIC	: INPL	JT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad): 25,	700 vehicles						Autos:	15		
Peak Hour Percentag	e:	10%			Me	dium Tru	ucks (2 /	Axles):	15		
Peak Hour Volum	e: 2,	570 vehicles			He	avy Truc	cks (3+ A	Axles):	15		
Vehicle Spee	d:	55 mph		V	ehicle l	Mix					
Near/Far Lane Distanc	e:	51 feet		V		icleType		Day	Evening	Night	Daily
Site Data					Ven			77.5%	•	9.6%	
					1.14	, dium Ti		84.8%		10.3%	
Barrier Heigh		0.0 feet				leavy Ti		86.5%		10.3 %	
Barrier Type (0-Wall, 1-Bern		0.0			,	icavy ii	uons.	00.070	2.170	10.070	0.147
Centerline Dist. to Barrie		72.0 feet		N	oise Sc	ource El	levation	s (in fe	eet)		
Centerline Dist. to Observe		72.0 feet				Autos	s: 0.0	000			
Barrier Distance to Observe		0.0 feet			Mediur	n Truck	s: 2.:	297			
Observer Height (Above Pac	·	5.0 feet			Heav	y Truck	s: 8.0	006	Grade Ad	justment	: 0.0
Pad Elevatio		0.0 feet				vivalan	Distan	aa (in	fa a 4)		
Road Elevatio		0.0 feet		L	ane Eq				reet)		
Road Grad		0.0%			M = - 15 - 11	Auto		519			
Left Vie		90.0 degrees				n Truck		387			
Right Viel	N:	90.0 degrees			Heav	y Truck:	5: 67.	400			
FHWA Noise Model Calculat											
VehicleType REMEL		raffic Flow	Dis	tance	Finite		Fresr		Barrier At		m Atten
	.78	1.28		-2.06		-1.20		-4.72		000	0.00
	.40	-15.96		-2.05		-1.20		-4.88		000	0.00
Heavy Trucks: 86	.40	-19.92		-2.05		-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (v		t Topo and b	arrie	er attenu	ation)						
VehicleType Leq Peak		Leq Day		Leg Eve	ening	Leq	Night		Ldn		NEL
Autos:	69.8		.9		66.1		60.1		68.		69.3
Medium Trucks:	63.2	-	.7		55.3		53.8		62.	-	62.
Heavy Trucks:	63.2		.8		52.8		54.0)	62		62.
Vehicle Noise:	71.4	69	9.6		66.7		61.8	3	70.3	3	70.8
Centerline Distance to Noise	e Cont	our (in feet)									
			L	70 dl			dBA	6	60 dBA		dBA
		Lo	in:	76		10	63		352	7	'59
		CNF		82							

Tuesday, January 08, 2019

Scenario	p: Existing Wit	h Full Project				Project	Vame: D	esert	Grove		
	e: Luna Rd.	, , , , , , , , , , , , , , , , , , , ,				Job Nu	mber: 1	1724			
Road Segmen	t: e/o SR-395										
	SPECIFIC IN	PUT DATA							L INPUTS	;	
Highway Data					Site Con	ditions (· ·	,		
Average Daily 1	. ,	7,500 vehicles						utos:	15		
Peak Hour I		10%					cks (2 Ax		15		
	our Volume:	750 vehicles			Hea	avy Truc	ks (3+ A)	des):	15		
	nicle Speed:	40 mph		F	Vehicle I	Nix					
Near/Far Lar	ne Distance:	11 feet		F	Vehi	cleType	E	ay	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.42%
Ran	rier Height:	0.0 feet			Me	dium Tr	ucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			H	leavy Tr	ucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	40.0 feet			Noise So	urce Ek	vations	(in fo	of)		
Centerline Dist. t	o Observer:	40.0 feet		-	110/30 00	Autos					
Barrier Distance t	o Observer:	0.0 feet			Modiur	n Trucks		-			
Observer Height (A	Above Pad):	5.0 feet				y Trucks			Grade Adju	istment	0.0
Pa	d Elevation:	0.0 feet				·					
Roa	d Elevation:	0.0 feet			Lane Equ				eet)		
F	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks		-			
	Right View:	90.0 degree	S		Heav	y Trucks	: 39.73	34			
FHWA Noise Mode	Calculations	6									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	/ /	Barrier Atte	n Ber	m Atten
Autos:	66.51	-2.69		1.3	6	-1.20	-4	1.59	0.0	00	0.00
Medium Trucks:	77.72	-19.93		1.4	0	-1.20	-4	1.87	0.0	00	0.00
Heavy Trucks:	82.99	-23.88		1.3	9	-1.20	-{	5.56	0.0	00	0.00
Unmitigated Noise			-								
	Leq Peak Hou			Leq E	vening	Leq I	•		Ldn	CI	VEL
Autos:	64.		52.1		60.3		54.3		62.9		63.
Medium Trucks:	58.		6.5		50.1		48.6		57.0		57.3
Heavy Trucks:	59.	-	57.9		48.8		50.1		58.5		58.0
Vehicle Noise:	66.	0 6	64.3		61.0		56.4		65.0		65.4
Centerline Distanc	e to Noise Co	ntour (in feet)									
					dBA	65 c		6	0 dBA		dBA
		1	dn:	1	19	40)		86	1	85
			IFI :		20	4:			92		98

	FHV	VA-RD-77-108	HIGH	WAYN	IOISE PI	REDICT		DEL			
Road Nan	io: Existing Wi ne: Palmdale R nt: e/o Cantina	d. (SR-18)					Name: [lumber: 1		Grove		
SITE	SPECIFIC IN	PUT DATA				ľ	IOISE N	IODE	L INPUTS	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
• •	Traffic (Adt): 2		S					lutos:	15		
	Percentage:	10%					ucks (2 A	/	15		
Peak H	lour Volume:	2,410 vehicles	S		He	avy Tru	cks (3+ A	xles):	15		
	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	51 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	, 77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium T	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy T	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	72.0 feet		7	Noise So	ource E	levations	; (in fe	eet)		
Centerline Dist.	to Observer:	72.0 feet				Auto			,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck					
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck			Grade Adj	iustment	: 0.0
P	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		1	Lane Eq		t Distanc		feet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				m Truck					
	Right View:	90.0 degree	es		Heav	y Truck	s: 67.4	00			
FHWA Noise Mod	lel Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:		1.00		-2.0	6	-1.20		4.72	0.0	000	0.000
Medium Trucks:	82.40	-16.24		-2.0	5	-1.20		4.88	0.0	000	0.000
Heavy Trucks:	86.40	-20.20		-2.0	5	-1.20		5.26	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou	1 ,		Leq E	vening	Leq	Night		Ldn		NEL
Autos:		-	67.6		65.9		59.8		68.4		69.0
Medium Trucks:			61.4		55.0		53.5		62.0		62.2
Heavy Trucks:		.0	61.5		52.5		53.7		62.1		62.2
Vehicle Noise:	71	.1	69.3		66.4		61.5		70.1		70.5
Centerline Distan	ce to Noise Co	ontour (in feet)								
					dBA		dBA	6	60 dBA		dBA
			Ldn:	7			57		337		27
		CI	VEL:	7	8	1	68		363	7	782

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTION	MODEL		
	e: Palmdale R	()				me: Deser ber: 11724		
SITE S	PECIFIC IN	PUT DATA			NO	SE MODE	L INPUTS	
Highway Data				Site Cor	nditions (Ha	ard = 10, S	oft = 15)	
	Percentage: our Volume:	24,700 vehicle 10% 2,470 vehicle			edium Truck eavy Trucks	. ,	15	
	icle Speed:	55 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	51 feet		Veł	nicleType	Day	Evening	Night Daily
Site Data					Auto	os: 77.5%	5 12.9%	9.6% 97.42%
Bar	rier Height:	0.0 feet		M	ledium Truc	ks: 84.8%	4.9%	10.3% 1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Truc	ks: 86.5%	2.7%	10.8% 0.74%
Centerline Dis		72.0 feet		Noise S	ource Eleva	ations (in f	eet)	
Centerline Dist. te		72.0 feet			Autos:	0.000		
Barrier Distance to		0.0 feet		Mediu	m Trucks:	2.297		
Observer Height (A	,	5.0 feet		Hea	vy Trucks:	8.006	Grade Adju	istment: 0.0
	d Elevation:	0.0 feet		Lano Ec	uivalent Di	istanco (in	foot)	
	d Elevation: Road Grade:	0.0 feet 0.0%		LaneLy	Autos:	67.519	ieel)	
	Left View:	-90.0 degre		Modiu	m Trucks:	67.387		
	Right View:	90.0 degre			vy Trucks:	67.400		
FHWA Noise Mode	l Calculation	s						
VehicleType	REMEL	Traffic Flow	Distand	e Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	71.78	1.10	-	2.06	-1.20	-4.72	0.00	0.00
Medium Trucks:	82.40	-16.13		2.05	-1.20	-4.88	0.00	
Heavy Trucks:	86.40	-20.09		2.05	-1.20	-5.26	0.00	0.00
Unmitigated Noise				,				
	Leq Peak Hou			g Evening	Leq Nig		Ldn 68.5	CNEL
Autos: Medium Trucks:	69 63		67.7 61.5	66.0 55.2		59.9 53.6	68.5	69. 62.
Heavy Trucks:	63		61.6	52.6		53.8	62.1	62.
Vehicle Noise:	71		69.4	66.5		61.6	70.2	70.0
Centerline Distanc	e to Noise Co	ontour (in feet)					
				70 -10 4			60 dBA	<i>CC -1</i> D A
				70 dBA	65 dB/	9 (DU dBA	55 dBA
			Ldn:	74 74	65 dB, 159	4 1	343	55 dBA 739

F	HWA-RD-77-108	HIGH	WAY NO		TION M	ODEL			
Scenario: Existing Road Name: Palmdale Road Segment: e/o Ame	e Rd. (SR-18)				ct Name Number				
SITE SPECIFIC	INPUT DATA				NOISE	MODE	L INPUT	s	
Highway Data			S	ite Condition	s (Hard	= 10, So	oft = 15)		
Average Daily Traffic (Adt)	24,100 vehicle	s				Autos:	15		
Peak Hour Percentage	10%			Medium	rucks (2	Axles):	15		
Peak Hour Volume	2,410 vehicle	s		Heavy Tr	ucks (3+	Axles):	15		
Vehicle Speed	55 mph		V	ehicle Mix					
Near/Far Lane Distance	51 feet			VehicleTy	ne l	Day	Evening	Night	Daily
Site Data				v or more v y	Autos:	77.5%	•	9.6%	
	0.0 feet			Medium		84.8%		10.3%	
Barrier Height Barrier Type (0-Wall, 1-Berm)					Trucks:			10.8%	
Centerline Dist. to Barrier				,					
Centerline Dist. to Observer			N	oise Source			eet)		
Barrier Distance to Observer	12.0 1000			Au		0.000			
Observer Height (Above Pad)	0.0 1001			Medium Truc		2.297			
Pad Elevation				Heavy Truc	sks: 8	3.006	Grade Ad	justment.	0.0
Road Elevation			L	ane Equivale	nt Dista	nce (in	feet)		
Road Grade				Au	os: 6	7.519			
Left View	-90.0 degre	es		Medium Truc	ks: 6	7.387			
Right View	90.0 degre	es		Heavy Truc	sks: 6	7.400			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Flow	Dist	tance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos: 71.3			-2.06	-1.20		-4.72		000	0.00
Medium Trucks: 82.4			-2.05	-1.20		-4.88		000	0.00
Heavy Trucks: 86.4	40 -20.20		-2.05	-1.20)	-5.26	0.0	000	0.00
Unmitigated Noise Levels (w		-							
VehicleType Leq Peak F			Leq Eve		q Night		Ldn		VEL
	69.5	67.6		65.9	59		68.4		69.
	62.9 63.0	61.4 61.5		55.0 52.5	53 53		62.0 62.1	-	62. 62.
	71.1	69.3		66.4	61	.5	70.1	1	70.
Centerline Distance to Noise	Contour (in fee	<i>1</i>)	70 dl	34 6	5 dBA		30 dBA	55	dBA
		I dn:	70 01		157		337		27
	0	NFI :	78		168		363		82
	0								

Tuesday, January 08, 2019

0						REDICTIC			0		
	e: Opening Ye	ear 2019 Witho	ut			Project N Job Nu			Grove		
		le Rd. (SR-18)				300 140					
SITE	SPECIFIC IN	PUT DATA				NO	DISE	IODE		5	
Highway Data					Site Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	32,100 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	:ks (2 A	(xles):	15		
Peak H	our Volume:	3,210 vehicles	3		Hea	avy Truck	is (3+ A	(xles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	<i>li</i> v					
Near/Far La	ne Distance:	75 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							itos:	77.5%	•	9.6%	97.42%
Pa	rier Heiaht:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	84.0 feet		-	Noise So	urco Elo	vation	s (in fa	of)		
Centerline Dist.	to Observer:	84.0 feet		-	140136 30	Autos:		3 (<i>III 1</i> 6	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks:		297			
Observer Height (Above Pad):	5.0 feet				v Trucks:		006	Grade Adj	ustment	- 00
Pa	ad Elevation:	0.0 feet								aoanon	. 0.0
	ad Elevation:	0.0 feet			Lane Equ				feet)		
1	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	s		Heav	y Trucks:	75.	225			
FHWA Noise Mode	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	el	Barrier Atte	en Bei	rm Atten
Autos:	71.78	2.24		-2.7	-	-1.20		-4.75	0.0		0.00
Medium Trucks:	82.40			-2.7	-	-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40	-18.95		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Noise			barri	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	<u> </u>		Ldn		NEL
Autos:	70		68.2		66.4		60.3		69.0		69.0
Medium Trucks:	63		61.9		55.6		54.0		62.5		62.
Heavy Trucks:	63	-	62.1		53.0		54.3		62.6		62.
Vehicle Noise:	71	.6	69.9		66.9		62.0		70.6		71.
Centerline Distand	ce to Noise Co	ontour (in feet)								
			L		dBA	65 d		6	0 dBA		dBA
			Ldn: VEL:	-	92 99	198 213	-		427		920
									459		990

	FHW	A-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	ON MOD	EL			
Road Nam	io: Opening Ye ne: SR-395 nt: n/o Dos Pal		ut				Vame: D mber: 1		Grove		
SITE	SPECIFIC IN	PUT DATA				N	DISE M	ODE	L INPUTS	s	
Highway Data				S	Site Con	ditions (Hard = 1	0, So	oft = 15)		
· ·	Traffic (Adt): 3 Percentage:	6,000 vehicles			Ме	dium Tru		utos: (les):	15 15		
		3.600 vehicles				avy Truci					
	hicle Speed:	55 mph					10 10 1 7 0		10		
	ne Distance:	75 feet		١	/ehicle l						
	ne Distance.	75 leet			Vehi	icleType)ay	Evening	Night	Daily
Site Data								7.5%			97.42%
Ba	rrier Height:	0.0 feet				edium Tru		4.8%		10.3%	
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	84.0 feet			Voise Sr	ource Ele	vations	(in fi	pet)		
Centerline Dist.	to Observer:	84.0 feet		-	10,00 00	Autos		·			
Barrier Distance	to Observer:	0.0 feet			Modium	n Trucks					
Observer Height (Above Pad):	5.0 feet				v Trucks			Grade Adj	iustmon	. 0.0
P	ad Elevation:	0.0 feet			neav	y muchs	0.00	0	Orade Auj	usunon	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distance	e (in	feet)		
	Road Grade:	0.0%				Autos	75.33	31			
	Left View:	-90.0 degree	s		Mediur	n Trucks	75.2	13			
	Right View:	90.0 degree	s		Heav	y Trucks	75.22	25			
FHWA Noise Mod	el Calculations	5									
FHWA Noise Mod VehicleType	el Calculations REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	1	Barrier Atte	en Be	rm Atten
			Dista	nce -2.77		Road -1.20		l 1.75	Barrier Atte 0.0		
VehicleType	REMEL	Traffic Flow	Dista		,		-4			000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40	Traffic Flow 2.74 -14.50 -18.45		-2.77 -2.76 -2.76	5	-1.20	-4	1.75	0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (witho	<i>Traffic Flow</i> 2.74 -14.50 -18.45 <i>put Topo and I</i>	barrier	-2.77 -2.76 -2.76 attent	s s uation)	-1.20 -1.20 -1.20	-4	4.75 4.88	0.0 0.0 0.0	000 000 000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I r Leq Day	barrier	-2.77 -2.76 -2.76 attent	s s uation) vening	-1.20 -1.20	-4 -4 -{	4.75 4.88	0.0 0.0 0.0	000 000 000 <i>C</i>	0.000 0.000 0.000 NEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 70.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I I r Leq Day 5 6	barrier L	-2.77 -2.76 -2.76 attent	wation) vening 66.9	-1.20 -1.20 -1.20	 	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.5	000 000 000 C	0.000 0.000 0.000 NEL 70.1
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 70. 63.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I I r Leq Day 5 6 9 6	barrier 1 58.6 52.4	-2.77 -2.76 -2.76 attent	uation) vening 66.9 56.1	-1.20 -1.20 -1.20	-4 -4 -5 -5 -5 -5 -4 -5 -4 -5 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.5 63.0	000 000 000 C	0.000 0.000 0.000 NEL 70.1 63.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (without Leq Peak Hout 70. 63. 64.	Traffic Flow 2.74 -14.50 -18.45 Out Topo and I I r Leq Day 5 6 9 6 0 6	58.6 52.4 52.6	-2.77 -2.76 -2.76 attent	wation) vening 66.9 56.1 53.5	-1.20 -1.20 -1.20	-4 -4 -5 -5 -4 -5 -4 -5 -4 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.5 63.0 63.1	000 000 000 000 C	0.000 0.000 0.000 <u>NEL</u> 70.1 63.2 63.3
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 86.40 e Levels (without Leg Peak Hout 70. 63. 64. 72.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I 7 Leg Day 6 9 6 0 6 1 7	barrier 1 88.6 62.4 62.6 70.4	-2.77 -2.76 -2.76 attent	uation) vening 66.9 56.1	-1.20 -1.20 -1.20	-4 -4 -5 -5 -5 -5 -4 -5 -4 -5 -4 -5 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	4.75 4.88	0.0 0.0 0.0 <i>Ldn</i> 69.5 63.0	000 000 000 000 C	0.000 0.000 0.000 NEL 70.1 63.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 86.40 e Levels (without Leg Peak Hout 70. 63. 64. 72.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I 7 Leg Day 6 9 6 0 6 1 7	barrier 1 88.6 62.4 62.6 70.4	-2.77 -2.76 -2.76 attenu .eq Ev	uation) vening 66.9 56.1 53.5 67.4	-1.20 -1.20 -1.20 <i>Leq N</i>	-4 -4 -5 -5 -5 -5 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	4.75 4.88 5.21	0.0 0.0 <i>Ldn</i> 69.5 63.0 63.1 71.1	000 000 000 000 000	0.000 0.000 0.000 NEL 70.1 63.2 63.3 71.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 86.40 e Levels (without Leg Peak Hout 70. 63. 64. 72.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I r Leq Day 5 9 6 0 6 1 7 Intour (in feet)	barrier (88.6 52.4 52.6 70.4	-2.77 -2.76 -2.76 attent .eq Ev	uation) vening 66.9 56.1 53.5 67.4	-1.20 -1.20 -1.20 <i>Leq N</i> 65 a		4.75 4.88 5.21	0.0 0.0 0.0 69.5 63.0 63.1 71.1 50 dBA	000 000 000 000 000 000 000 000	0.000 0.000 0.000 NEL 70.1 63.2 63.3 71.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 86.40 e Levels (without Leg Peak Hout 70. 63. 64. 72.	Traffic Flow 2.74 -14.50 -18.45 Dut Topo and I r Leq Day 5 0 6 0 1 7 Intour (in feet)	barrier 1 88.6 52.4 52.6 70.4	-2.77 -2.76 -2.76 attenu .eq Ev	uation) rening 66.9 56.1 53.5 67.4	-1.20 -1.20 -1.20 <i>Leq N</i>		4.75 4.88 5.21	0.0 0.0 <i>Ldn</i> 69.5 63.0 63.1 71.1	000 000 000 000 000 000 000 000	0.000 0.000 0.000 NEL 70.1 63.2 63.3 71.6

Tuesday, January 08, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PR	EDICTIO	N МО	DEL			
Scenario Road Name Road Segmen	e: SR-395	ear 2019 Withd	out			Project N Job Nun			Grove		
SITE S	PECIFIC IN	NPUT DATA				NO	ISE N	/ODE	L INPUT	s	
Highway Data				Si	te Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	30,700 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	10%			Mee	dium Truci	ks (2 A	Axles):	15		
Peak Ho	our Volume:	3,070 vehicle	S		Hea	avy Trucks	s (3+ A	Axles):	15		
Veh	icle Speed:	55 mph		Ve	hicle I	Nix					
Near/Far Lan	e Distance:	75 feet				cleType		Dav	Evening	Night	Daily
Site Data							tos:	77.5%	•	9.6%	
Barr	rier Height:	0.0 feet			Ме	dium Truc	cks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy Truc	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist		84.0 feet		No	oise So	urce Elev	ation	s (in fe	et)		
Centerline Dist. to		84.0 feet				Autos:	0.0	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.3	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.0	006	Grade Ad	justment	0.0
	d Elevation: d Elevation:	0.0 feet		1.	no Far	ivalent D	lioton	na (in i	[a.a.4]		
	a Elevation: Road Grade:	0.0 feet		Le	пе сч	Autos:	75.		eel)		
T.	Left View:	0.0% -90.0 degre			Modiur	n Trucks:	75.				
	Right View:	90.0 degre				y Trucks:	75.				
FHWA Noise Mode	l Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	iel	Barrier Att	en Bei	rm Atten
Autos:	71.78	2.05		-2.77		-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40			-2.76		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			-2.76		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			-					1			
	Leq Peak Hou			eq Eve		Leq Ni			Ldn		NEL
Autos:		9.9	68.0 61.7		66.2 55.4		60.1		68.8 62.3	-	69. 62.
Medium Trucks: Heavy Trucks:			61.7 61.9		55.4 52.8		53.8 54.1		62.4		62.
Vehicle Noise:		1.4	69.7		52.8 66.7		54.1 61.8		70.4		70.
Centerline Distance	e to Noise C	ontour (in fee	t)								
				70 dE	8A	65 dE	8A	6	0 dBA	55	dBA
			Ldn:	89		192			415	8	393

	FHWA	-RD-77-108 HI	GHWAY	(NOISE P	REDICTIO	N MO	DEL			
Scenario: Open	ing Year	2019 Without			Project N	ame: D	Desert	Grove		
Road Name: SR-39	95				Job Nur	nber: 1	1724			
Road Segment: n/o La	a Mesa F	₹d.								
SITE SPECIF	IC INP	UT DATA						L INPUT	S	
Highway Data				Site Cor	nditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (A	dt): 29,	000 vehicles				A	Autos:	15		
Peak Hour Percenta	ige:	10%		Me	edium Truc	ks (2 A	xles):	15		
Peak Hour Volu	me: 2,	900 vehicles		He	avy Truck	s (3+ A	xles):	15		
Vehicle Spe	ed:	55 mph		Vehicle	Mix					
Near/Far Lane Distar	nce:	11 feet		-	nicleType		Day	Evening	Night	Daily
Site Data			-				77.5%		9.6%	
Barrier Heig	wht.	0.0 feet		М	edium Tru	cks: 8	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-Be		0.0			Heavy Tru	cks: 8	86.5%	2.7%	10.8%	
Centerline Dist. to Bar		40.0 feet								
Centerline Dist. to Obser		40.0 feet		Noise S	ource Ele			eet)		
Barrier Distance to Obser		0.0 feet			Autos:	0.0				
Observer Height (Above P		5.0 feet			m Trucks:	2.2				
Pad Elevat		0.0 feet		Heav	vy Trucks:	8.0	006	Grade Ad	justment.	0.0
Road Flevat		0.0 feet		Lane Eo	uivalent L	Distanc	e (in t	feet)		
Road Gra		0.0%			Autos:	39.9				
Left V		-90.0 degrees		Mediu	m Trucks:	39.7	12			
Right Vi		90.0 degrees		Heav	vy Trucks:	39.7	/34			
FHWA Noise Model Calcul	ations									
VehicleType REME	EL T	raffic Flow	Distance	e Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	71.78	1.80	1	.36	-1.20		-4.59	0.0	000	0.00
Medium Trucks: 8	32.40	-15.44	1	.40	-1.20		4.87	0.0	000	0.00
Heavy Trucks: 8	36.40	-19.39	1	.39	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels				,	r					
VehicleType Leq Pea		Leq Day		Evening	Leq N			Ldn		VEL
Autos:	73.7	71.8	-	70.1		64.0		72.0	-	73.
Medium Trucks:	67.2	65.	-	59.3		57.8		66.2	-	66.
Heavy Trucks:	67.2	65.8	-	56.7		58.0		66.3	-	66.
Vehicle Noise:	75.3	73.0	ô	70.6		65.7		74.:	3	74.
Centerline Distance to No.	ise Cont	our (in feet)							1 .	
				0 dBA	65 dE		6	0 dBA		dBA
		Ldr		77 83	167			359 386		73 32
		CNFI			179					

Tuesday, January 08, 2019

Scena		VA-RD-77-108 ear 2019 Withou				Proiect I			Grove		
	10: Opening 10 1e: SR-395	ai 2013 Withou	11			Job NL			Giove		
	nt: n/o Bear Va	alley Rd.									
SITE	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	26,300 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 .	Axles):	15		
Peak I	our Volume:	2,630 vehicles			He	avy Truc	ks (3+ .	Axles):	15		
Ve	hicle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far La	ne Distance:	11 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%	•	9.6%	97.42%
Pa	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tri	icks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	40.0 feet		F	Noise Sc	ource Ele	vation	s (in f	eet)		
Centerline Dist.		40.0 feet		F		Autos		000			
Barrier Distance		0.0 feet			Mediur	n Trucks	: 2.	297			
Observer Height	· /	5.0 feet			Heav	y Trucks	: 8.	006	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		-	Lane Eq				feet)		
	Road Grade:	0.0%				Autos		934			
	Left View:	-90.0 degree				n Trucks		712			
	Right View:	90.0 degree	S		Heav	y Trucks	: 39.	734			
FHWA Noise Moo		-									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fresi		Barrier Att		m Atten
Autos:		1.38		1.3	-	-1.20		-4.59		000	0.000
Medium Trucks:		-15.86		1.4	-	-1.20		-4.87	0.0		0.000
Heavy Trucks:	86.40	-19.82		1.3	9	-1.20		-5.56	0.0	000	0.000
Unmitigated Nois			barrie								
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos:			1.4		69.7		63.	-	72.2	-	72.8
Medium Trucks:			5.2		58.9		57.3		65.8		66.0
Heavy Trucks:			5.4		56.3		57.		65.9		66.0
Vehicle Noise:	74	.9 7	3.1		70.2		65.3	3	73.9)	74.3
Centerline Distan	ce to Noise Co	ontour (in feet)		=0		0.5		1			10.4
			, L		dBA	65 0			60 dBA		dBA
		-	.dn: IFI :		'2 '8	15 16	-		336 362		25
											79

	FH	WA-RD-77-108	HIGHV	VAY N	IOISE PI	REDICT	ION MOI	DEL			
Road Nan	rio: Opening Y ne: Palmdale F nt: w/o SR-39		ut				Name: I lumber: 1		Grove		
SITE	SPECIFIC I	VPUT DATA				N	IOISE N	10DE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	25,900 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	2,590 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle	Mise					
Near/Far La	ne Distance:	51 feet		H		icleType		Dav	Evening	Night	Daily
Site Data					Ven			77.5%	~	9.6%	
						, edium T		84.8%		9.6%	
	rrier Height:	0.0 feet				Heavy T		86.5%		10.3%	
Barrier Type (0-V	. ,	0.0			,	ieavy II	iuchs.	50.576	2.170	10.076	0.7476
	ist. to Barrier:	72.0 feet		1	Noise So	ource E	levations	s (in fe	eet)		
Centerline Dist.		72.0 feet				Auto	s: 0.0	000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2.2	97			
Observer Height	, ,	5.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	iustment	: 0.0
	ad Elevation:	0.0 feet 0.0 feet		-	l ano Fa	uivalon	t Distand	o (in	foot)		
	ad Elevation: Road Grade:	0.0 reet		- F	Lane Ly	Auto					
	Road Grade: Left View:				Madiu	m Truck					
	Right View:	-90.0 degree				v Truck					
	Right view.	90.0 degre	55		near	y much	3. 07.4	100			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresn	-	Barrier Att		m Atten
Autos:				-2.06	-	-1.20		-4.72	0.0		0.000
Medium Trucks:				-2.05		-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-19.88		-2.05	5	-1.20		-5.26	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Ho	1 ,		Leq Ev	vening	Leq	Night		Ldn	-	NEL
Autos:			67.9		66.2		60.1		68.7		69.3
Medium Trucks:			61.7		55.4		53.8		62.3		62.5
Heavy Trucks:			61.8		52.8		54.1		62.4		62.5
Vehicle Noise:	71	1.4	69.7		66.7		61.8		70.4	Ļ	70.9
Centerline Distan	ce to Noise C	ontour (in feet)							T	
				70 c			dBA	6	60 dBA		dBA
			Ldn:	76			64		354		63
		CI	VEL:	82	2	1	77		381	8	20

Tuesday, January 08, 2019

	FH\	WA-RD-77-108	HIGHWA	AY NO	ISE PR	EDICTIO	N MODE	EL			
	e: Luna Rd.	ear 2019 Witho	ut			Project Na Job Num			Grove		
	PECIFIC IN	IPUT DATA								s	
Highway Data				Sit	te Cond	ditions (H	ard = 10), So	ft = 15)		
Average Daily T Peak Hour I Peak Ho	. ,	5,300 vehicle 10% 530 vehicle				lium Truck avy Trucks	is (2 Ax	· · · /	15 15 15		
Veh	icle Speed:	40 mph		Ve	hicle N	lix					
Near/Far Lar	e Distance:	11 feet				cleType	D	av	Evening	Night	Daily
Site Data						Aut		7.5%	12.9%	9.6%	
Bar	rier Height:	0.0 feet			Me	dium Truc	ks: 84	1.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Н	eavy Truc	ks: 86	6.5%	2.7%	10.8%	0.74%
Centerline Dis		40.0 feet		No	ise So	urce Elev	ations ('in fe	et)		
Centerline Dist. t		40.0 feet				Autos:	0.00		.,		
Barrier Distance t	o Observer:	0.0 feet			Mediun	Trucks:	2.29				
Observer Height (A	Above Pad):	5.0 feet				/ Trucks:	8.00		Grade Ad	iustment	t: 0.0
Pa	d Elevation:	0.0 feet						-			
Roa	d Elevation:	0.0 feet		La	ne Equ	ivalent D		· · ·	eet)		
F	Road Grade:	0.0%				Autos:	39.93	4			
	Left View: Right View:	-90.0 degree 90.0 degree				1 Trucks: / Trucks:	39.71 39.73	-			
FHWA Noise Mode	0	°	,5		,		00.10				
VehicleType	REMEL	S Traffic Flow	Distan	<u></u>	Finite I	Road	Fresnel		Barrier Att	on Ro	rm Atten
Autos:	66.51	-4.20	Distan	1.36	i inito i	-1.20		.59	0.0		0.00
Medium Trucks:	77.72			1.40		-1.20		.87		000	0.00
Heavy Trucks:	82.99			1.39		-1.20		.56		000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenua	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	Le	q Eve	ning	Leq Nig	pht		Ldn	С	NEL
Autos:	62	2.5	60.6		58.8		52.8		61.4	1	62.
Medium Trucks:	56	5.5	55.0		48.6		47.1		55.5	5	55.
Heavy Trucks:	57	.8	56.4		47.3		48.6		56.9)	57.
Vehicle Noise:	64	.5	62.8		59.5		54.9		63.5	5	63.
Centerline Distanc	e to Noise C	ontour (in feet)								
			1	70 10				~	0 dBA		i dBA
				70 dB	A	65 dB.	A	0	U aBA	50	UDA
			Ldn:	15 15	A	65 dB. 32	A	0	68		147

	FHW	/A-RD-77-108	HIGHV	VAY NO	DISE PRED	ICTIO	N MODE	L			
Scenario: Op Road Name: Pal Road Segment: e/o	mdale R	d. (SR-18)	ut				ime: De: ber: 117		rove		
SITE SPEC	IFIC IN	PUT DATA					SE MO			s	
Highway Data				S	ite Conditi	ons (H	ard = 10	, Soft	= 15)		
Average Daily Traffic	(Adt): 2	3,400 vehicles	6				Aut	os:	15		
Peak Hour Percei	ntage:	10%			Mediur	n Truck	s (2 Axle	es):	15		
Peak Hour Vo	olume:	2,340 vehicles	6		Heavy	Trucks	(3+ Axle	es):	15		
Vehicle S	peed:	55 mph		14	ehicle Mix						
Near/Far Lane Dis	tance:	51 feet		V	Vehicle	-	Da		vening	Night	Daily
Site Data					venicie	Aut		y 1 .5%	12.9%		97.42%
					Modiu	ми. т Truc		.5% .8%	4.9%	9.0%	
Barrier H		0.0 feet				ny Truc		.0% .5%	2.7%	10.3%	
Barrier Type (0-Wall, 1-E		0.0			пеа	ly muc	KS. 00	.5%	2.1%	10.0%	0.745
Centerline Dist. to B		72.0 feet		Ν	loise Sourd	e Elev	ations (i	n fee	t)		
Centerline Dist. to Obs		72.0 feet			,	Autos:	0.000)	-		
Barrier Distance to Obs		0.0 feet			Medium T	ucks:	2.297				
Observer Height (Above		5.0 feet			Heavy T	ucks:	8.006	G	rade Ad	ljustment	0.0
Pad Elev		0.0 feet		-						-	
Road Elev		0.0 feet		L	ane Equiva				et)		
Road C		0.0%				Autos:	67.519				
	View:	-90.0 degree			Medium T		67.387				
Right	View:	90.0 degree	es		Heavy T	ucks:	67.400)			
FHWA Noise Model Cald	culations	1									
	MEL	Traffic Flow	Dista		Finite Roa		Fresnel		arrier At		m Atten
Autos:	71.78	0.87		-2.06		.20	-4.			000	0.00
Medium Trucks:	82.40	-16.37		-2.05		.20	-4.			000	0.00
Heavy Trucks:	86.40	-20.32		-2.05	-1	.20	-5.	26	0.0	000	0.00
Unmitigated Noise Leve										1	
	eak Hou			Leq Ev		Leq Nig		L	dn		VEL
Autos:	69.	-	67.5		65.7		59.7		68.	-	68.
Medium Trucks:	62.		61.3		54.9		53.4		61.		62.
Heavy Trucks:	62.		61.4		52.4		53.6		62.		62.
Vehicle Noise:	71.	-	69.2		66.3		61.4		69.	9	70.
Centerline Distance to N	loise Co	ntour (in feet,)								
			L	70 d		65 dB	4		dBA		dBA
			Ldn:	71		154		3	31	7	13
			VFI :	77		165			56		67

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		VA-RD-77-108	-	WAYN	NOISE PR						
Road Nar	rio: Opening Ye ne: Palmdale F ent: e/o Cobalt		ut			Project N Job Nui					
	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions (H	lard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	24,400 vehicles	5					Autos:	15		
Peak Hou	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak I	Hour Volume:	2,440 vehicles	6		He	avy Truck	s (3+ A	xles):	15		
Ve	ehicle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far La	ane Distance:	51 feet		F		cleType		Day	Evening	Night	Daily
Site Data						AL	tos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			ŀ	łeavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	72.0 feet		F	Noise Sc	ource Ele	ation	s (in f	eet)		
Centerline Dist.	to Observer:	72.0 feet		F		Autos:	0.0				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height	· /	5.0 feet			Heav	v Trucks:	8.0	006	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		L							
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent L			feet)		
	Road Grade:	0.0%				Autos:	67.5				
	Left View:	-90.0 degree				n Trucks:	67.3				
	Right View:	90.0 degree	'S		Heav	y Trucks:	67.4	100			
FHWA Noise Mod	lel Calculation	s		1							
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fresn	-	Barrier Atte		rm Atten
Autos:		1.05		-2.0		-1.20		-4.72	0.0		0.00
Medium Trucks:		-16.19		-2.0	-	-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40	-20.14		-2.0	5	-1.20		-5.26	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	<u> </u>		Ldn	С	NEL
Autos:			67.7		65.9		59.9		68.5		69.
Medium Trucks			61.5		55.1		53.6		62.0		62.3
Heavy Trucks:			61.6		52.5		53.8		62.2		62.3
Vehicle Noise.	71	.2	59.4		66.4		61.6		70.1		70.
Centerline Distan	ce to Noise Co	ontour (in feet)	1								
			L		dBA	65 di		6	60 dBA		dBA
			dn:	7	'3	158			340	7	733
			IEL:		'9	170			366		788

	FHV	VA-RD-77-108	HIGHWA	YN	OISE PF	REDICTIO	ON MOI	DEL			
Road Nam	o: Opening Ye e: Palmdale R nt: e/o Amethy:		ut			Project N Job Nu	lame: [mber: 1		Grove		
SITE	SPECIFIC IN	PUT DATA							L INPUTS		
Highway Data				5	Site Con	ditions (l	Hard =	10, So	oft = 15)		
Average Daily	. ,							lutos:	15		
	Percentage:	10%				dium Truo			15		
Peak H	our Volume:	2,400 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Vei	hicle Speed:	55 mph		1	/ehicle I	Nix					
Near/Far Lai	ne Distance:	51 feet		F		cleType	1	Day	Evening	Night	Daily
Site Data						A	itos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	icks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tru	icks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	72.0 feet		1	Voise So	urce Ele	vations	; (in fe	et)		
Centerline Dist.	to Observer:	72.0 feet				Autos					
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks					
Observer Height (.	,	5.0 feet			Heav	v Trucks:	8.0	06	Grade Adju	istment.	0.0
	d Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		1	.ane Equ	uivalent			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	S		Heav	y Trucks:	67.4	100			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Distanc		Finite		Fresn		Barrier Atte		m Atten
Autos:	71.78	0.98		2.06		-1.20		4.72	0.00		0.000
Medium Trucks:	82.40	-16.26		2.05		-1.20		4.88	0.00		0.000
Heavy Trucks:	86.40	-20.21	-	2.05	5	-1.20		-5.26	0.00	00	0.000
Unmitigated Noise			-								
21	Leq Peak Hou	1 1		q Ev	rening	Leq N	•		Ldn	CI	VEL
Autos:	69.		67.6		65.8		59.8		68.4		69.0
Medium Trucks:	62.		61.4		55.0		53.5		61.9		62.2
Heavy Trucks:	62.		61.5		52.5		53.7		62.1		62.2
Vehicle Noise:	71.		69.3		66.4		61.5		70.0		70.5
Centerline Distance	e to Noise Co	ontour (in feet)									
				70 a		65 d			0 dBA		dBA
		-	dn:	72	-	15	-		336		25
		CN	IEL:	78	5	16	5		362	7	80

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	FH	WA-RD-77-108	HIGHW	AY NC	ISE PF	REDICTIC	N MO	DEL			
Road Nam	e: SR-395	ear 2019 w/ Ph ale Rd. (SR-18)				Project N Job Nu			Grove		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE	/ODE	L INPUT	s	
Highway Data				Si	te Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	32,600 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%				dium Truc			15		
Peak H	our Volume:	3,260 vehicle	s		He	avy Truck	:s (3+ /	Axles):	15		
Ve	hicle Speed:	55 mph		Ve	hicle l	Mix					
Near/Far La	ne Distance:	75 feet				icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		84.0 feet		N	oise So	ource Ele	vation	s (in fe	eet)		
Centerline Dist.		84.0 feet				Autos:	0.	000	,		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (,	5.0 feet			Heav	v Trucks:	8.	006	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet					N	//	(
	ad Elevation:	0.0 feet		La	ine Eq	uivalent l			reet)		
,	Road Grade: Left View:	0.0%			Modiuu	Autos: n Trucks:		213			
	Right View:	-90.0 degre 90.0 degre				y Trucks:		213			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	iel	Barrier Att	en Be	rm Atten
Autos:	71.78	2.31		-2.77		-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-14.93		-2.76		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-18.88		-2.76		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			barrier a	attenu	ation)						
	Leq Peak Ho			eq Eve		Leq N			Ldn		NEL
Autos:			68.2		66.5		60.4		69.0	-	69.0
Medium Trucks:			62.0		55.6		54.1		62.6		62.
Heavy Trucks:			62.1		53.1		54.3		62.7		62.
Vehicle Noise:			69.9		67.0		62.1		70.7	7	71.
Centerline Distant	ce to Noise C	ontour (in feet)	70 dE		65 di	DA	6	0 dBA	56	5 dBA
			I dn:	93	2/1	200			431		930
		0	VFL:	100		200	-		451		.000
		C.	*	100		21;	,		-04		,000

	FHWA	-RD-77-108 HI	GHWA	Y NOI	SE PREDIC	TION M	IODEL			
Scenario: Oper		2019 w/ Phase	e 1				: Deser			
Road Name: SR-3					Job	Numbe	r: 11724			
Road Segment: n/o E	os Palma	as Rd.								
SITE SPECIE	IC INPL	JT DATA		0.1	0				S	
Highway Data				Site	Condition	s (Hard	= 10, Se			
Average Daily Traffic (4 <i>dt):</i> 39,3						Autos:			
Peak Hour Percent	age:	10%			Medium 1	,				
Peak Hour Volu	ime: 3,9	930 vehicles			Heavy Tr	ucks (3-	+ Axles):	15		
Vehicle Sp		55 mph		Vel	icle Mix					
Near/Far Lane Dista	nce:	75 feet			VehicleTy	ре	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Barrier Hei	aht:	0.0 feet			Medium	Trucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-Be	•	0.0			Heavy	Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Ba		84.0 feet		Noi	se Source	Elovatio	no (in f	0.041		
Centerline Dist. to Obse	rver:	84.0 feet		NOI				eel)		
Barrier Distance to Obse	rver:	0.0 feet			Au Iedium Truc		0.000 2.297			
Observer Height (Above F	Pad):	5.0 feet		v			2.297 8.006	Grade Ad	iustmont	
Pad Eleva	tion:	0.0 feet			Heavy Truc	KS:	8.006	Grade Au	Jusuneni	0.0
Road Eleva	tion:	0.0 feet		Lar	e Equivale	nt Dista	nce (in	feet)		
Road Gr	ade:	0.0%			Au	os: 7	5.331			
Left V	/iew: -	90.0 degrees		٨	ledium Truc	:ks: 7	5.213			
Right V	liew:	90.0 degrees			Heavy Truc	:ks: 7	5.225			
FHWA Noise Model Calcu	lations									
VehicleType REM	EL T	raffic Flow	Distanc	e I	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	71.78	3.12	-1	2.77	-1.20	-	-4.75	0.0	000	0.00
Medium Trucks:	82.40	-14.12		2.76	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-18.07	-1	2.76	-1.20)	-5.21	0.0	000	0.00
Unmitigated Noise Levels			1		,					
	ak Hour	Leq Day		g Even		q Night		Ldn		VEL
Autos:	70.9	69	-		67.3	-	1.2	69.8	-	70.
Medium Trucks:	64.3	62	-		56.5		4.9	63.4		63.
Heavy Trucks:	64.4	62			53.9		5.2	63.	-	63.
Vehicle Noise:	72.5	70	.7		67.8	62	2.9	71.	5	71.
Centerline Distance to No	ise Cont	our (in feet)								
				70 dBA	6	5 dBA	6	60 dBA		dBA
		Ld		105 113		227 244		489 526		053 133
		CNF								

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Road Nam		ar 2019 w/ Pha	ise 1		Project Name: Desert Grove Job Number: 11724								
	SPECIFIC IN	PUT DATA			Site Con					S			
Highway Data					Site Con	aitions (,				
Average Daily	, ,							Autos:					
	Percentage:	10%				dium Tru							
	our Volume:	3,340 vehicles			He	avy Truc	KS (3+7	axies):	15				
	hicle Speed:	55 mph			Vehicle I	Mix							
Near/Far La	ne Distance:	75 feet			Vehi	cleType		Day	Evening	Night	Daily		
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%		
Bar	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tri	icks:	86.5%	2.7%	10.8%	0.74%		
Centerline Dis		84.0 feet			Noise Sc	ource Ele	vation	s (in fe	eet)				
Centerline Dist.		84.0 feet				Autos	: 0.	000	,				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	2.	297					
Observer Height (,	5.0 feet			Heav	y Trucks	8.	006	Grade Ad	ustmen	t: 0.0		
	ad Elevation:	0.0 feet		L		·							
	ad Elevation:	0.0 feet		L	Lane Eq				feet)				
ŀ	Road Grade:	0.0%				Autos							
	Left View:	-90.0 degree				n Trucks		213					
	Right View:	90.0 degree	S		Heav	y Trucks	75.	225					
FHWA Noise Mode		-											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresr		Barrier Atte		rm Atten		
Autos:	71.78	2.41		-2.7	-	-1.20		-4.75	0.0		0.000		
Medium Trucks:	82.40	-14.82		-2.7	-	-1.20		-4.88	0.0		0.000		
Heavy Trucks:	86.40	-18.78		-2.7	-	-1.20		-5.21	0.0	00	0.000		
Unmitigated Noise VehicleType	e Levels (with Leg Peak Hou				vening	Leg I	liaht		l dn		NEL		
Autos:	Zey Peak Hou 70.		38.3	Ley E	66.6	Leq	11911 60.5		69.1		69.7		
Medium Trucks:	63.		52.1		55.7		54.2		62.7		62.9		
Heavy Trucks:	63.	-	32.2		53.2		54.4		62.8		62.9		
Vehicle Noise:	71.		70.0		67.1		62.2		70.8	· · · · · · · · · · · · · · · · · · ·	71.2		
					67.1		62.2		70.8	5	71.2		
Centerline Distand	e to Noise Co	ontour (in feet)		70	dBA	65 0	BA	6	60 dBA	55	i dBA		
			dn:		4	20		· `	439		945		

	FH\	VA-RD-77-108	HIGH\	NAY N	IOISE PI	REDICTI	ON MO	DEL					
Road Nam	<i>io:</i> Opening Ye ne: SR-395 nt: n/o La Mes		ase 1		Project Name: Desert Grove Job Number: 11724								
SITE	SPECIFIC IN	IPUT DATA				N	OISE I	MODE	L INPUT	s			
Highway Data				:	Site Con	ditions	(Hard =	: 10, So	oft = 15)				
Average Daily	Traffic (Adt):	29,700 vehicle	s					Autos:	15				
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 i	Axles):	15				
Peak H	lour Volume:	2,970 vehicle	S		He	avy Truc	:ks (3+)	Axles):	15				
Ve	hicle Speed:	55 mph		-	Vehicle I	Mix							
Near/Far La	ne Distance:	11 feet		H		icleType		Day	Evening	Night	Daily		
Site Data							lutos:	77.5%	•	9.6%			
Pa	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-W	•	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%		
Centerline Di	. ,	40.0 feet		H		-							
Centerline Dist.		40.0 feet		4	Noise So				eet)				
Barrier Distance		0.0 feet				Autos		000					
Observer Height	(Above Pad):	5.0 feet				n Trucks		297	Our de Ad				
Pi	ad Elevation:	0.0 feet			Heav	y Trucks	5. 8.	006	Grade Ad	usimeni.	0.0		
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)				
	Road Grade:	0.0%				Autos	s: 39.	.934					
	Left View:	-90.0 degree	es		Mediu	n Trucks	s: 39.	.712					
	Right View:	90.0 degree	€S		Heav	y Trucks	s: 39.	.734					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten		
Autos:	71.78	1.91		1.36	6	-1.20		-4.59	0.0	000	0.00		
Medium Trucks:	82.40	-15.33		1.40	0	-1.20		-4.87	0.0	000	0.00		
Heavy Trucks:	86.40	-19.29		1.39	9	-1.20		-5.56	0.0	000	0.00		
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)								
VehicleType	Leq Peak Hou			Leg Ev	•	Leq	Night		Ldn		VEL		
Autos:	73		71.9		70.2		64.		72.7		73.		
Medium Trucks:	67		65.8		59.4		57.9		66.3		66.		
Heavy Trucks:	67	-	65.9		56.8		58.		66.4		66.		
Vehicle Noise:	-		73.7		70.7		65.8	8	74.4	ļ	74.		
Centerline Distan	ce to Noise Co	ontour (in feet)	70	10.4	05	10.4				-10.4		
				70 0		65		6	60 dBA		dBA		
			Ldn:	7	э	16	59		365	/	86		
		0	VEL:	8	~		32		392	0	45		

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	FH\	VA-RD-77-108	HIGHW	AY NO	ISE PF	REDICTIO	ON MO	DEL			
Scenario Road Name Road Segmen	e: SR-395	ear 2019 w/ Ph alley Rd.	ase 1			Project I Job Nu			Grove		
SITE S	PECIFIC IN	IPUT DATA				N	DISE N	NODE	L INPUT	s	
Highway Data				Sit	e Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily T Peak Hour I Peak Ho	, ,	26,700 vehicle 10% 2,670 vehicle				dium True avy Truck	cks (2 /		15 15 15		
Veh	icle Speed:	55 mph		Va	hicle I	Mix					
Near/Far Lar	e Distance:	11 feet		ve		icleType		Dav	Evening	Night	Daily
Site Data					1011		utos:	77.5%	•		97.429
Barrier Type (0-Wa	r ier Height: all, 1-Berm):	0.0 feet 0.0				edium Tru Ieavy Tru		84.8% 86.5%		10.3% 10.8%	
Centerline Dis	t. to Barrier:	40.0 feet		No	ise Sr	ource Ele	vation	s (in fe	et)		
	o Observer: Above Pad): d Elevation:	40.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediui Heav	Autos: n Trucks. y Trucks:	0. 2. 8.	000 297 006	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet		La	ne Eq	uivalent		ce (in 1 934	eet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos: n Trucks. y Trucks:	39.	934 712 734			
FHWA Noise Mode	Calculation	s		_							
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresr	nel	Barrier Att	en Bei	rm Atten
Autos:	71.78	1.44		1.36		-1.20		-4.59	0.0	000	0.00
Medium Trucks:	82.40	-15.80		1.40		-1.20		-4.87		000	0.00
Heavy Trucks:	86.40	-19.75		1.39		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenua	tion)						
VehicleType	Leq Peak Hou	ir Leq Day	/ Le	q Eve	ning	Leq N	light		Ldn	С	NEL
Autos:	73	.4	71.5		69.7		63.7	7	72.3	3	72.9
Medium Trucks:	66	.8	65.3		58.9		57.4	1	65.9	Э	66.
Heavy Trucks:	66	.8	65.4		56.4		57.6	6	66.0)	66.
Vehicle Noise:	75	.0	73.2		70.2		65.4	1	73.9	9	74.
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dB	A	65 d	BA	6	i0 dBA	55	dBA
			I dn:	73	_	15	o		340		732
			2011.			15	0		0.10		

	FHWA-	RD-77-108 H	GHV	NAY NC	DISE PR	EDICT	ION MO	DEL			
Scenario: Openin Road Name: Palmda Road Segment: w/o SR	le Rd. (e 1				Name: umber:		Grove		
SITE SPECIFIC	INPL	IT DATA				N	IOISE I	IODE	L INPUT	s	
Highway Data				Si	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad): 26,8	300 vehicles						Autos:	15		
Peak Hour Percentag	e:	10%			Med	dium Tri	ucks (2 /	Axles):	15		
Peak Hour Volum	e: 2,6	80 vehicles			Hea	avy True	cks (3+)	Axles):	15		
Vehicle Spee	d:	55 mph		14	ehicle N	Niv					
Near/Far Lane Distanc	e:	51 feet				cleType		Day	Evening	Night	Daily
Site Data					Vern			77.5%	0	9.6%	
					Me	, dium T		84.8%		10.3%	
Barrier Heigh		0.0 feet						86.5%		10.3%	
Barrier Type (0-Wall, 1-Bern		0.0		L		ouvy I	aono.	50.576	2.170	10.076	0.747
Centerline Dist. to Barrie		72.0 feet		N	oise So	urce E	levation	s (in fe	eet)		
Centerline Dist. to Observe		72.0 feet				Auto	s: 0.	000			
Barrier Distance to Observe		0.0 feet			Mediun	n Truck	s: 2.	297			
Observer Height (Above Pac	·	5.0 feet			Heav	y Truck	s: 8.	006	Grade Ac	ljustment	0.0
Pad Elevatio		0.0 feet			ano Eau	uive le n	Distan	aa (in	fa a 4)		
Road Elevatio		0.0 feet		La	ane Equ				reet)		
Road Grad		0.0%				Auto		519			
Left Vie		90.0 degrees			Mediun			387			
Right Viel	<i>N</i> : 9	90.0 degrees			Heav	y Truck	s: 67.	400			
FHWA Noise Model Calculat											
VehicleType REMEL			Dista	ance	Finite		Fresr		Barrier At		m Atten
	.78	1.46		-2.06		-1.20		-4.72		000	0.00
	.40	-15.78		-2.05		-1.20		-4.88		000	0.00
Heavy Trucks: 86	.40	-19.74		-2.05		-1.20		-5.26	0.	000	0.00
Unmitigated Noise Levels (v	vithout	Topo and ba	rrier	r attenu	ation)						
VehicleType Leq Peak		Leq Day		Leq Eve	ening	Leq	Night		Ldn		NEL
Autos:	70.0	68			66.3		60.3		68.		69.
Medium Trucks:	63.4	61	-		55.5		54.0		62.		62.
Heavy Trucks:	63.4	62			53.0		54.2	2	62.	-	62.
Vehicle Noise:	71.6	69	.8		66.8		62.0)	70.	5	71.0
Centerline Distance to Noise	e Conte	our (in feet)									
				70 dE	BA		dBA	6	60 dBA		dBA
		La	n:	78		1	68		362	7	'80
		CNF					31		390		

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Road Nan	io: Opening Ye ne: Luna Rd. nt: e/o SR-395	ar 2019 w/ Pha	se 1	Project Name: Desert Grove Job Number: 11724								
	SPECIFIC IN	PUT DATA			0/4- 0					S		
Highway Data					Site Con	ditions (l			,			
Average Daily	, ,	7,100 vehicles						Autos:				
	Percentage:	10%				dium Truc						
	lour Volume:	710 vehicles			He	avy Truck	:s (3+ A	ixles):	15			
	hicle Speed:	40 mph		1	Vehicle I	Mix						
Near/Far La	ne Distance:	11 feet			Vehi	cleType		Day	Evening	Night	Daily	
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.42%	
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%	
Centerline Di		40.0 feet		1	Noise Sc	ource Ele	vations	s (in f	eet)			
Centerline Dist.		40.0 feet				Autos:	0.0	000	,			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.2	297				
Observer Height	· · · ·	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	ustmen	t: 0.0	
	ad Elevation:	0.0 feet										
	ad Elevation:	0.0 feet		1	Lane Equ	uivalent			feet)			
	Road Grade:	0.0%				Autos:						
	Left View:	-90.0 degrees				n Trucks:						
	Right View:	90.0 degrees			Heav	y Trucks:	39.7	734				
HWA Noise Mod		-										
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresn	-	Barrier Atte		rm Atten	
Autos:	66.51	-2.93		1.36		-1.20		-4.59	0.0		0.000	
Medium Trucks:	77.72	-20.17		1.40	-	-1.20		-4.87	0.0		0.000	
Heavy Trucks:	82.99	-24.12		1.39	Э	-1.20		-5.56	0.0	00	0.000	
Inmitigated Nois								r				
VehicleType	Leq Peak Hou			eq Ev	/ening	Leq N	<u> </u>		Ldn		NEL	
Autos:	63		1.8		60.1		54.0		62.6		63.3	
Medium Trucks:	57		6.2		49.9		48.3		56.8		57.0	
Heavy Trucks:	59		7.6		48.6		49.9		58.2		58.3	
Vehicle Noise:	65		4.0		60.8		56.2		64.7	, 	65.2	
Contorline Distan	ce to Noise Co	ontour (in feet)	-	70 0	10.4	65 d	DA		30 dBA	55	i dBA	
Jenternine Distan												
zentenine Distan			dn:	10 0		38			83		178	

	FHWA	A-RD-77-108 HIG	HWAY	NOISE PI	REDICTIC	N MOI	DEL			
Road Nam	io: Opening Year e: Palmdale Rd. nt: e/o Cantina S		1		Project N Job Nui			Grove		
SITE	SPECIFIC INP	UT DATA			NC	DISE N	IODEI	INPUTS	5	
Highway Data				Site Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 24	,900 vehicles				1	Autos:	15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume: 2	,490 vehicles		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		Vehicle I	Mise					
Near/Far La	ne Distance:	51 feet			icleType		Day	Evening	Night	Daily
Site Data				ven			Day 77.5%	12.9%	9.6%	
					AL dium Tru		77.5% 84.8%	12.9%	9.6%	97.42%
	rrier Height:	0.0 feet					64.6% 86.5%		10.3%	0.74%
Barrier Type (0-W		0.0			leavy Tru	CKS.	00.3%	2.170	10.0%	0.74%
Centerline Di		72.0 feet		Noise So	ource Ele	vations	s (in fe	et)		
Centerline Dist.		72.0 feet			Autos:	0.0	000			
Barrier Distance		0.0 feet		Mediu	m Trucks:	2.2	97			
Observer Height (,	5.0 feet		Heav	y Trucks:	8.0	006	Grade Adj	ustment.	0.0
	ad Elevation:	0.0 feet		1 Fr				41		
	ad Elevation:	0.0 feet		Lane Eq	uivalent I			eel)		
	Road Grade:	0.0%			Autos:	67.5				
		-90.0 degrees			m Trucks:					
	Right View:	90.0 degrees		Heav	y Trucks:	67.4	100			
FHWA Noise Mod										
VehicleType			listance		Road	Fresn		Barrier Atte		m Atten
Autos:	71.78	1.14	-2.0		-1.20		-4.72	0.0		0.000
Medium Trucks:	82.40	-16.10	-2.0		-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-20.05	-2.0)5	-1.20		-5.26	0.0	00	0.000
Unmitigated Noise										
VehicleType	Leq Peak Hour	Leq Day	,	vening	Leq N			Ldn		VEL
Autos:	69.7	67.8		66.0		59.9		68.6		69.2
Medium Trucks:	63.1	61.5		55.2		53.6		62.1		62.3
Heavy Trucks:	63.1	61.7		52.6		53.9		62.2		62.4
Vehicle Noise:	71.2	69.5		66.5		61.7		70.2		70.7
Centerline Distant	ce to Noise Con	tour (in feet)								
				dBA	65 dl		6	0 dBA		dBA
		Ldn:		74	160			345		43
		CNEL	: 8	30	172	2		371	7	99

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		HWAT	NOISE PR	EDICTION	N MODEL		
Scenario: Opening Year 2 Road Name: Palmdale Rd. (S Road Segment: e/o Cobalt Rd.		1			ame: Dese aber: 11724		
SITE SPECIFIC INPUT	Γ DATA			NO	ISE MOD	EL INPUTS	;
Highway Data			Site Con	ditions (H	ard = 10, S	oft = 15)	
	00 vehicles 0% 70 vehicles				Autos s (2 Axles) (3+ Axles)	: 15	
Vehicle Speed: 5	i5 mph	-	Vehicle I	liv			
Near/Far Lane Distance: 5	51 feet	ŀ		cleType	Dav	Evening	Night Daily
Site Data			1011	Aut		0	9.6% 97.42
	0.0 feet		Me	edium Truc			10.3% 1.84
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	leavy Truc	ks: 86.59	6 2.7%	10.8% 0.74
	2.0 feet	ŀ	Noise Sc	ource Elev	ations (in	feet)	
	2.0 feet	ľ		Autos:	0.000		
	0.0 feet		Mediur	n Trucks:	2.297		
5 ()	5.0 feet		Heav	y Trucks:	8.006	Grade Adji	istment: 0.0
	0.0 feet	ŀ	Lane Eq	uivalent D	istance (in	feet)	
	0.0%	ŀ		Autos:	67.519	,	
	0.0 degrees		Mediur	n Trucks:	67.387		
00	0.0 degrees		Heav	y Trucks:	67.400		
FHWA Noise Model Calculations							
VehicleType REMEL Trai	ffic Flow D	istance	Finite	Road	Fresnel	Barrier Atte	n Berm Atter
Autos: 71.78	1.28	-2.0	6	-1.20	-4.72	0.0	0.0
Medium Trucks: 82.40	-15.96	-2.0	5	-1.20	-4.88	0.0	0.0
Heavy Trucks: 86.40	-19.92	-2.0	5	-1.20	-5.26	0.0	0.0
Unmitigated Noise Levels (without 1	Topo and barr	ier atter	nuation)				
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig		Ldn	CNEL
Autos: 69.8	67.9		66.1		60.1	68.7	69
Medium Trucks: 63.2	61.7		55.3		53.8	62.2	62
Heavy Trucks: 63.2	61.8		52.8		54.0	62.4	62
Vehicle Noise: 71.4	69.6		66.7		61.8	70.3	70
Centerline Distance to Noise Contor	ur (in feet)	-					
			dBA	65 dB.	A	60 dBA	55 dBA
	Ldn:		76	163		352	759
	CNFL:	, s	32	176		379	816

	FHW	A-RD-77-108	HIGH	IWAY N	OISE PF	REDICT		DEL			
Scenario: O Road Name: Pa Road Segment: e/	almdale Ro		se 1				Name: umber:				
SITE SPEC	CIFIC INF	PUT DATA							L INPUT	s	
Highway Data				3	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffi	c (Adt): 2	5,100 vehicles						Autos:	15		
Peak Hour Perce	entage:	10%			Me	dium Tru	ucks (2 J	Axles):	15		
Peak Hour V	olume:	2,510 vehicles			He	avy Truc	cks (3+)	Axles):	15		
Vehicle	Speed:	55 mph			/ehicle	Mix					
Near/Far Lane Di	stance:	51 feet		- H		icleType		Day	Evening	Night	Daily
Site Data					VCIII		Autos:	77.5%	0	9.6%	
	In laulate	0.0 ()			Me	, dium Ti		84.8%		10.3%	
Barrier I		0.0 feet 0.0				leavy Ti		86.5%		10.8%	
Barrier Type (0-Wall, 1- Centerline Dist, to		0.0 72.0 feet				,					
Centerline Dist. to Ob		72.0 feet		1	Voise So	ource El	evation	s (in f	eet)		
Barrier Distance to Ob		0.0 feet				Autos		000			
Observer Height (Abov		5.0 feet			Mediur	n Truck	s: 2.	297			
Pad Ele	,	0.0 feet			Heav	y Truck	s: 8.	006	Grade Ad	justment.	0.0
Road Ele		0.0 feet		1	ane Eq	uivalen	Distan	ce (in	feet)		
	Grade:	0.0%				Auto		519			
	ft View:	-90.0 degree	e		Mediur	n Truck		387			
Righ	nt View:	90.0 degree			Heav	y Truck	s: 67.	400			
FHWA Noise Model Ca	lculations										
VehicleType RE	EMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	1.17		-2.06	6	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	82.40	-16.06		-2.05	5	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-20.02		-2.05	5	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Lev			barrie								
	Peak Hour			Leq Ev		Leq	Night	<u> </u>	Ldn		VEL
Autos:	69.7		7.8		66.0		60.0		68.6		69.
Medium Trucks:	63.1		1.6		55.2		53.		62.1		62.
Heavy Trucks:	63.1		1.7		52.7		53.9		62.3		62.
Vehicle Noise:	71.3		9.5		66.6		61.	7	70.2	2	70.
Centerline Distance to	Noise Col	ntour (in feet)		70 c	IRΔ	65	dBA		60 dBA	55	dBA
		1	.dn:	75			61		347		47
			EL:	80			73		373		03
				-			-			-	

Tuesday, January 08, 2019

		NA-RD-77-108		ALL							
Scenar Road Nam		ear 2019 w/ Pha	ise 1 &			Project N			Grove		
		ile Rd. (SR-18)				000 144	moor.	11724			
SITE	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	32,800 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium True	cks (2 A	(xles):	15		
Peak H	our Volume:	3,280 vehicles			Hea	avy Truck	ks (3+ A	(xles):	15		
Ve	hicle Speed:	55 mph		H	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		F		cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.429
Bai	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	84.0 feet		H	Noise So	urco Ela	vation	e (in fi	not)		
Centerline Dist.	to Observer:	84.0 feet		H	140/36 30	Autos		3 (<i>III 1</i> 6	el)		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks		297			
Observer Height (Above Pad):	5.0 feet				v Trucks.		006	Grade Adj	ustment	. 0.0
Pa	ad Elevation:	0.0 feet								aounom	. 0.0
Roa	ad Elevation:	0.0 feet		1	Lane Equ				feet)		
1	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks.					
	Right View:	90.0 degree	S		Heav	y Trucks.	75.2	225			
HWA Noise Mod	el Calculation	s		_							
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.34		-2.7	7	-1.20		-4.75	0.0	00	0.00
Medium Trucks:	82.40	-14.90		-2.7	6	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-18.86		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Noise	e Levels (with	out Topo and I	barrier a	atten	uation)						
VehicleType	Leq Peak Hou			eq E	vening	Leq N	·		Ldn		NEL
Autos:	70		68.2		66.5		60.4		69.0		69.
Medium Trucks:	63		62.0		55.7		54.1		62.6		62.
Heavy Trucks:	63		52.2		53.1		54.4		62.7		62.
Vehicle Noise:	71	.7 7	0.0		67.0		62.1		70.7		71.
Centerline Distand	ce to Noise Co	ontour (in feet)									
					dBA	65 d		6	60 dBA		dBA
			_dn: IFI :		3 00	20 21			433		33
									466		004

	FH\	VA-RD-77-108	HIGHV	VAY N	OISE PI	REDICT	ION MODI	EL			
Road Nan	rio: Opening Ye ne: SR-395 nt: n/o Dos Pa		ase 1 &	L			Name: De umber: 11		Grove		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE MO	DDE	L INPUTS	5	
Highway Data				5	Site Con	ditions	(Hard = 1	0, Sc	ft = 15)		
• •	Traffic (Adt):	40,500 vehicle: 10%	S		Mo	dium Tr	AL JCks (2 Ax	Itos:	15 15		
	lour Volume:	4.050 vehicle:					cks (3+ Ax	~ ~	15		
		1	5		110	avy nu	M3 [0+ MX	103).	10		
	hicle Speed:	55 mph		١	Vehicle I	Vix					
Near/Far La	ne Distance:	75 feet			Veh	icleType	D	ay	Evening	Night	Daily
Site Data							Autos: 7	7.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium T	rucks: 84	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			ŀ	leavy T	rucks: 80	6.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	84.0 feet			Voise So	ource E	evations	(in fe	et)		
Centerline Dist.	to Observer:	84.0 feet		Ē		Auto					
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck					
Observer Height	(Above Pad):	5.0 feet				v Truck			Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet			near	y mach	3. 0.00	0	Grado / laj	aounom	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	Distance	(in i	eet)		
	Road Grade:	0.0%				Auto	s: 75.33	1			
	Left View:	-90.0 degree	es		Mediu	n Truck	s: 75.21	3			
	Right View:	90.0 degree	es		Heav	y Truck	s: 75.22	5			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.25		-2.77	7	-1.20	-4	.75	0.0	00	0.000
Medium Trucks:	82.40	-13.99		-2.76	6	-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	86.40	-17.94		-2.76	6	-1.20	-5	5.21	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	· 1	Leq Ev	/ening	Leq	Night		Ldn	CI	VEL
Autos:	71	.1	69.2		67.4		61.3		70.0		70.6
Medium Trucks:	64	.5	62.9		56.6		55.0		63.5		63.7
Heavy Trucks:	64	.5	63.1		54.0		55.3		63.6		63.8
Vehicle Noise:	72	.6	70.9		67.9		63.0		71.6		72.1
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 a			dBA	6	0 dBA		dBA
			Ldn:	10	7	2	31		499	1,	074
		CI	VEL:	11	6	2	49		536	1,	156

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	FH\	VA-RD-77-108	HIGHW	AY NOIS		ON MOD	DEL			
Scenario Road Name Road Segmen	: SR-395	ear 2019 w/ Ph d.	ase 1 &		Project I Job Nu	Vame: E Imber: 1		Grove		
SITE S	PECIFIC IN	IPUT DATA			N	DISE N	IODEI		S	
Highway Data				Site	Conditions (Hard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	34,400 vehicle	s			A	lutos:	15		
Peak Hour F	Percentage:	10%			Medium Tru	cks (2 A	xles):	15		
Peak Ho	our Volume:	3,440 vehicle	s		Heavy Truci	ks (3+ A	xles):	15		
Veh	icle Speed:	55 mph		Veh	icle Mix					
Near/Far Lan	e Distance:	75 feet			VehicleType	1	Day	Evening	Night	Daily
Site Data					A	utos: 1	77.5%	12.9%	9.6%	97.42%
Barr	ier Height:	0.0 feet			Medium Tru	icks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tru	icks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist		84.0 feet		Nois	e Source Ele	vations	; (in fe	et)		
Centerline Dist. to		84.0 feet			Autos.	: 0.0	00			
Barrier Distance to		0.0 feet		M	edium Trucks	: 2.2	97			
Observer Height (A	,	5.0 feet			Heavy Trucks	8.0	06	Grade Adj	iustment	0.0
	d Elevation: d Elevation:	0.0 feet		Lan	e Equivalent	Distanc	o (in f	oot)		
	oad Grade:	0.0 feet 0.0%		Lan	Autos					
N N	Left View:	-90.0 degre	20	M	edium Trucks					
	Right View:	90.0 degre			Heavy Trucks					
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	ce F	inite Road	Fresne	el I	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.54		-2.77	-1.20		4.75	0.0		0.00
Medium Trucks:	82.40	-14.70		-2.76	-1.20		4.88	0.0		0.00
Heavy Trucks:	86.40	-18.65		-2.76	-1.20	-	5.21	0.0	00	0.00
Unmitigated Noise			-						-	
VehicleType I Autos:	eq Peak Hou 70		68.5	eq Eveni	ng Leq N 66.7	light 60.6		Ldn 69.3		NEL 69.9
Medium Trucks:	63		62.2		55.9	54.3		62.8		63.0
Heavy Trucks:	63		62.2 62.4		53.3	54.5		62.0		63.
Vehicle Noise:	71		70.2		67.2	62.3		70.9		71.4
Centerline Distance	e to Noise Co	ontour (in feet)							
				70 dBA	65 d	BA	6	0 dBA	55	dBA
			Ldn:	96	20	8		447	g	63
		0	NFL:	104	22	2		481	1	037

F	HWA-RD-77-10	8 HIGH	WAY NC	DISE PREDIC	TION MO	ODEL			
Scenario: Opening Road Name: SR-395 Road Segment: n/o La M		hase 1	&		ct Name: Number:		Grove		
SITE SPECIFIC	INPUT DATA				NOISE	MODE		s	
Highway Data			Si	te Condition					
Average Daily Traffic (Adt)	30.000 vehicle	25				Autos:	15		
Peak Hour Percentage				Medium 1	rucks (2	Axles):	15		
Peak Hour Volume		es		Heavy Tr	ucks (3+	Axles):	15		
Vehicle Speed	55 mph					,			
Near/Far Lane Distance			Ve	ehicle Mix		0	Curning	Allerter	Delle
011				VehicleTy	Autos:	Day	Evening	Night	Daily
Site Data						77.5%		9.6%	
Barrier Height				Medium		84.8% 86.5%		10.3% 10.8%	
Barrier Type (0-Wall, 1-Berm)				Heavy	Trucks:	86.5%	2.1%	10.8%	0.74%
Centerline Dist. to Barrier			N	oise Source	Elevatio	ns (in fe	eet)		
Centerline Dist. to Observer	10.0 1001			Aut	os: 0	.000	,		
Barrier Distance to Observer	0.0 1001			Medium Truc		297			
Observer Height (Above Pad)	5.0 feet			Heavy Truc	ks: 8	.006	Grade Ad	iustment.	0.0
Pad Elevation	0.0 1001								
Road Elevation	0.0 feet		La	ane Equivale			feet)		
Road Grade	0.0%			Aut		9.934			
Left View	-90.0 degre	es		Medium Truc		9.712			
Right View	90.0 degre	es		Heavy Truc	ks: 39	9.734			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Flow	Dist	ance	Finite Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos: 71.3	8 1.95	5	1.36	-1.20		-4.59	0.0	000	0.00
Medium Trucks: 82.4	0 -15.29	9	1.40	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 86.4	-19.25	5	1.39	-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels (w				,		-			
VehicleType Leq Peak F			Leq Eve		q Night		Ldn		VEL
	73.9	72.0		70.2	64		72.8	-	73.
	67.3	65.8		59.4	57.		66.4		66.
	67.3	65.9		56.9	58.		66.5	-	66.0
	75.5	73.7		70.8	65.	.9	74.4	1	74.9
Centerline Distance to Noise	Contour (in fee	<i>t</i>)	70 -15			· ·	C dBA	57	dD A
		I dn:	70 dE 79		5 dBA 170	1	367		dBA 91
		Lan:	79		170		307		91
		NFI :	85		183		395	~	51

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Scenar	io: Opening Ye	ear 2019 w/ Ph	ase 1 &	8		Project N	ame:	Desert	Grove		
	ne: SR-395					Job Nun	nber:	11724			
Road Segme	nt: n/o Bear Va	alley Rd.									
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				1	Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	26,900 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truci	ks (2 /	Axles):	15		
Peak H	lour Volume:	2,690 vehicle	s		He	avy Trucks	s (3+ /	Axles):	15		
Ve	hicle Speed:	55 mph		- H	Vehicle I	liv					
Near/Far La	ne Distance:	11 feet		H		cleType		Dav	Evening	Night	Dailv
Site Data							tos:	77.5%	•	9.6%	
	rrier Heiaht:	0.0 feet			Me	dium Truc		84.8%		10.3%	1.84%
ва Barrier Type (0-И		0.0 feet 0.0			ŀ	leavy Truc	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	40.0 feet			Voise Sc	urce Elev	ation	s (in fa	pet)		
Centerline Dist.	to Observer:	40.0 feet			10/30 00	Autos:		000			
Barrier Distance	to Observer:	0.0 feet			Modiuu	n Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		006	Grade Ad	iustmont	. 0.0
P	ad Elevation:	0.0 feet			Tieav	y muchs.	0.	000	Orade Auj	usunom	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	ivalent D	listan	ce (in i	feet)		
	Road Grade:	0.0%				Autos:	39.	934			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	39.	712			
	Right View:	90.0 degree	es		Heav	y Trucks:	39.	734			
FHWA Noise Mod	el Calculation	s		1							
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fresr	-	Barrier Att		m Atten
Autos:		1.48		1.36	-	-1.20		-4.59		000	0.000
Medium Trucks:		-15.76		1.40		-1.20		-4.87		000	0.000
Heavy Trucks:	86.40	-19.72		1.39	9	-1.20		-5.56	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leg E		Leq Ni	· · · ·		Ldn		NEL
Autos:			71.5		69.8		63.7		72.3		72.9
Medium Trucks:			65.3		59.0		57.4		65.9		66.1
Heavy Trucks:		-	65.4		56.4		57.7	7	66.0		66.1
Vehicle Noise:	75	.0	73.2		70.3		65.4	4	74.0)	74.4
Centerline Distan	ce to Noise Co	ontour (in feet)					T			
				70 c		65 dE	BA	6	60 dBA		dBA
			Ldn:	74	4	158			341 367		'35 '91
			VFI :	79		170					

	FHW	A-RD-77-108 HIC	GHWAY	NOISE PI	REDICTI	ON MODEL			
Road Nan	io: Opening Yea ne: Palmdale Rd nt: w/o SR-395	r 2019 w/ Phase . (SR-18)	1&			Name: Dese umber: 1172			
SITE	SPECIFIC INP	UT DATA				OISE MOD		s	
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt): 27	,200 vehicles				Auto	s: 15		
Peak Hour	Percentage:	10%		Me	dium Tru	icks (2 Axles): 15		
Peak H	lour Volume: 2	720 vehicles		He	avy Truc	ks (3+ Axles): 15		
Ve	hicle Speed:	55 mph		Vehicle	Mise				
Near/Far La	ne Distance:	51 feet			icleType	Day	Evening	Night	Daily
Site Data				ven		utos: 77.5	•	9.6%	
				м	, edium Tr			10.3%	
	rrier Height:	0.0 feet			Heavy Tr			10.8%	
Barrier Type (0-W		0.0			loary n	00.0		10.070	0.1 170
Centerline Di Centerline Dist.		72.0 feet 72.0 feet		Noise S	ource El	evations (in	feet)		
Barrier Distance		0.0 feet			Autos	s: 0.000			
		5.0 feet		Mediu	m Trucks	s: 2.297			
Observer Height	ADOVE Pad): ad Elevation:	0.0 feet		Heav	/y Trucks	8: 8.006	Grade Ad	justment	: 0.0
	ad Elevation: ad Elevation:	0.0 feet		Lane Fo	uivalent	Distance (i	n feet)		
	Road Grade:	0.0%			Autos				
	Left View:	-90.0 degrees		Modiu	m Trucks				
	Right View:	90.0 degrees			/y Trucks				
FHWA Noise Mod	el Calculations								
VehicleType		Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Bei	m Atten
Autos:	71.78	1.52	-2.0	06	-1.20	-4.7	2 0.0	000	0.000
Medium Trucks:	82.40	-15.72	-2.0)5	-1.20	-4.8	3 0.0	000	0.000
Heavy Trucks:	86.40	-19.67	-2.0)5	-1.20	-5.2	6 0.0	000	0.000
Unmitigated Nois			rier atte	nuation)					
VehicleType	Leq Peak Hour			vening	Leq	Night	Ldn		NEL
Autos:	70.0		1	66.4		60.3	68.9		69.6
Medium Trucks:			-	55.6		54.0	62.5		62.7
Heavy Trucks:	63.5	-		53.0		54.3	62.6		62.8
Vehicle Noise:	71.6	69.9	9	66.9		62.0	70.6	6	71.1
Centerline Distan	ce to Noise Con	ntour (in feet)							
				dBA		dBA	60 dBA		dBA
		Ldn		79		70	366		'88
		CNEL	.: 8	85	18	33	393	8	348

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	FH	WA-RD-77-108	HIGHW	AY NC	DISE PF	REDICTIO	on Mo	DEL			
	e: Luna Rd.	ear 2019 w/ Ph 5	ase 1 &			Project I Job Nu			Grove		
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (,		
Average Daily 1	, ,	7,800 vehicle	S					Autos:	15		
Peak Hour I		10%				dium True			15		
	our Volume:	780 vehicle	5		He	avy Truck	(S (3+)	Axies):	15		
	nicle Speed:	40 mph		V	ehicle l	Nix					
Near/Far Lar	ie Distance:	11 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%	12.9%	9.6%	97.42%
Ban	rier Height:	0.0 feet				edium Tru		84.8%		10.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	40.0 feet		N	oise Sr	ource Ele	vation	s (in fe	pet)		
Centerline Dist. t	o Observer:	40.0 feet		-	0.00 00	Autos		000			
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Trucks.		297			
Observer Height (A	,	5.0 feet				y Trucks		006	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet				·					
	d Elevation:	0.0 feet		La	ane Eq	uivalent			'eet)		
F	Road Grade:	0.0%				Autos:		934			
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks. v Trucks:		712 734			
	•	°				,					
FHWA Noise Mode VehicleType	REMEL	is Traffic Flow	Distar		Finite	Dood	Fresi		Barrier Att	on Bo	rm Atten
Autos:	66.51		Distai	1.36	FILIL	-1.20	riesi	-4.59		000	0.00
Medium Trucks:	77.72			1.40		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			1.39		-1.20		-5.56		000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	' Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	64	1.2	62.3		60.5		54.4	1	63.1	1	63.
Medium Trucks:	58	3.2	56.6		50.3		48.7	7	57.2	2	57.
Heavy Trucks:	59		58.1		49.0		50.3	3	58.6	-	58.
Vehicle Noise:	66	3.2	64.4	_	61.2		56.6	6	65.2	2	65.
Centerline Distanc	e to Noise C	ontour (in feet)		1			1		1	
			L	70 dE	BA	65 d		6	0 dBA		dBA
			Ldn:	19		41			88		190
		CI	VEL:	20		44	ł		94	2	203

	FHW	A-RD-77-108	HIGH	WAY N	OISE PF	REDICT	ION MO	DEL			
Scenario: C Road Name: P Road Segment: e,	almdale Ro		ase 1 a	&			Name: lumber:				
SITE SPE	CIFIC IN	PUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traff	ic (Adt): 2	5,500 vehicle	6					Autos:	15		
Peak Hour Perc	entage:	10%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Hour	Volume: :	2,550 vehicle	6		Hea	avy Tru	cks (3+)	Axles):	15		
Vehicle	Speed:	55 mph			/ehicle I	Aire					
Near/Far Lane D	istance:	51 feet				cleType		Day	Evening	Night	Daily
Site Data					veni		# Autos:	77.5%	•		97.42
					Me	, dium T		84.8%		10.3%	
Barrier		0.0 feet						86.5%		10.3 %	
Barrier Type (0-Wall, 1		0.0			,	ieavy i	iuchs.	00.370	2.170	10.076	0.74
Centerline Dist. to		72.0 feet		I	loise So	urce E	levation	s (in f	eet)		
Centerline Dist. to O		72.0 feet				Auto	s: 0.	000			
Barrier Distance to O		0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height (Abov	,	5.0 feet			Heav	y Truck	s: 8.	006	Grade Ad	ljustment	0.0
	levation:	0.0 feet					Distan	(!	641		
Road El		0.0 feet		-	ane Equ				reet)		
	Grade:	0.0%				Auto		519			
	eft View:	-90.0 degree				n Truck		387			
Rig	ht View:	90.0 degree	es		Heav	y Truck	s: 67.	400			
FHWA Noise Model Ca	alculations										
VehicleType R	EMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi		Barrier Att	ten Ber	m Atter
Autos:	71.78	1.24		-2.06		-1.20		-4.72	0.0	000	0.00
Medium Trucks:	82.40	-16.00		-2.05		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-19.95		-2.05		-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Lev											
	Peak Hour			Leq Ev		Leq	Night		Ldn		NEL
Autos:	69.	-	67.9		66.1		60.0	-	68.		69
Medium Trucks:	63.	-	61.7		55.3		53.		62.2	-	62
Heavy Trucks:	63.2		61.8		52.7		54.0	-	62.3		62
Vehicle Noise:	71.3		69.6		66.6		61.8	8	70.3	3	70
Centerline Distance to	Noise Co	ntour (in feet)							1	
			L	70 a			dBA	6	60 dBA		dBA
									350		'55
			Ldn: VFL:	75			63 75		377		12

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		VA-RD-77-108			NOISE PR	REDICTIC	N MO	DEL			
Road Nan	rio: Opening Ye ne: Palmdale F ent: e/o Cobalt		ise 1 &	L		Project N Job Nui			Grove		
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	26,100 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	:ks (2 A	(xles):	15		
Peak H	lour Volume:	2,610 vehicles			He	avy Truck	s (3+ A	(xles)	15		
Ve	ehicle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far La	ane Distance:	51 feet		-		cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	, 77.5%	12.9%	9.6%	97.429
Ra	rrier Height:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	łeavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	72.0 feet			Noise Sc	ource Ele	vation	s (in fe	eet)		
Centerline Dist.		72.0 feet				Autos:	0.0	000	,		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.3	297			
Observer Height	· /	5.0 feet			Heav	y Trucks:	8.0	006	Grade Adj	ustmen	: 0.0
-	ad Elevation:	0.0 feet		-	1 E		N-4		(
	ad Elevation:	0.0 feet		4	Lane Eq	uivalent L			reet)		
	Road Grade:	0.0%				Autos:					
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks: y Trucks:					
FHWA Noise Moo	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	1.34		-2.0	6	-1.20		-4.72	0.0	00	0.00
Medium Trucks:	82.40	-15.89		-2.0	5	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-19.85		-2.0	5	-1.20		-5.26	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	<u> </u>		Ldn	-	NEL
Autos:			68.0		66.2		60.1		68.8		69.
Medium Trucks:			61.8		55.4		53.8		62.3		62.
Heavy Trucks:			61.9		52.8		54.1		62.4		62.
Vehicle Noise:			69.7		66.7		61.9		70.4	ļ.	70.
Centerline Distan	ce to Noise C	ontour (in feet)		70	-/DA	05."			0 -10 4		
			dn:		dBA 7	65 dE 165		6	356 356		dBA
											767
			IEL:		2	178			383		325

	FHW	A-RD-77-108 HIC	GHWAY I	NOISE PR	REDICTIO	N MODE	-		
	Palmdale R		1&			ame: Des nber: 117	ert Grove 24		
SITE S	PECIFIC IN	PUT DATA					DEL INPUT	S	
Highway Data				Site Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily Tr	· · ·					Aut			
Peak Hour P		10%			dium Truc				
		2,550 vehicles		He	avy Trucks	s (3+ Axle	s): 15		
	cle Speed:	55 mph		Vehicle I	Mix				
Near/Far Lane	e Distance:	51 feet		Vehi	icleType	Da	/ Evening	Night	Daily
Site Data					Au	tos: 77.	5% 12.9%	9.6%	97.42%
Barri	ier Height:	0.0 feet		Me	edium Truc	cks: 84.	8% 4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0		F	leavy Truc	cks: 86.	5% 2.7%	10.8%	0.74%
Centerline Dist.	to Barrier:	72.0 feet	-	Noise So	ource Elev	ations (i	n feet)		
Centerline Dist. to	Observer:	72.0 feet	ľ		Autos:	0.000			
Barrier Distance to	Observer:	0.0 feet		Mediur	n Trucks:	2.297			
Observer Height (A	bove Pad):	5.0 feet		Heav	v Trucks:	8.006	Grade Ad	liustment	: 0.0
Pad	Elevation:	0.0 feet			,				
Road	Elevation:	0.0 feet		Lane Eq	uivalent D		,		
Ro	oad Grade:	0.0%			Autos:	67.519			
	Left View:	-90.0 degrees			n Trucks:	67.387			
F	Right View:	90.0 degrees		Heav	y Trucks:	67.400			
FHWA Noise Model									
VehicleType	REMEL		Distance	Finite		Fresnel	Barrier At		m Atten
Autos:	71.78	1.24	-2.0	-	-1.20	-4.1		000	0.000
Medium Trucks:	82.40	-16.00	-2.0	-	-1.20	-4.8		000	0.000
Heavy Trucks:	86.40	-19.95	-2.0	15	-1.20	-5.2	26 0.	000	0.000
Unmitigated Noise			1					1	
,1	eq Peak Hou			vening	Leq Ni	·	Ldn		NEL
Autos:	69.		-	66.1		60.0	68.		69.3
Medium Trucks:	63.			55.3		53.7	62.		62.4
Heavy Trucks:	63.		-	52.7		54.0	62.	-	62.5
Vehicle Noise:	71.		Ċ,	66.6		61.8	70.	3	70.8
Centerline Distance	to Noise Co	ntour (in feet)	70	-10.4	05 -15		00 -ID 4		-10.4
		I de		dBA	65 dE		60 dBA		dBA
		Ldn		75	163		350		755
		CNEL	: 8	31	175		377	8	312

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	FH	WA-RD-77-108	HIGHWA	AY NC	ISE PR	EDICTIO	N MOI	DEL			
Road Nam	io: Existing W ne: SR-395 nt: n/o Palmda	ithout Project ale Rd. (SR-18)				Project N Job Nur			Grove		
SITE	SPECIFIC IN	NPUT DATA				NO	ISE N	IODE		s	
Highway Data				Si	te Con	ditions (H	lard =	10, So	ft = 15)		
Peak Hour	Traffic (Adt): Percentage: lour Volume:	42,900 vehicles 10% 4,290 vehicles				dium Truc avy Truck:	ks (2 A		15 15 15		
Ve	hicle Speed:	55 mph		V	hicle I	Nix					
Near/Far La	ne Distance:	75 feet		F		cleType		Dav	Evening	Night	Daily
Site Data								77.5%	12.9%		97.42%
Pa	rrier Height:	0.0 feet			Ме	dium True	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		84.0 feet		N	oise So	urce Elev	ations	s (in fe	et)		
Centerline Dist.		84.0 feet				Autos:	0.0	00	,		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (5.0 feet			Heav	y Trucks:	8.0	06	Grade Adj	iustmen	: 0.0
	ad Elevation:	0.0 feet				durate at F					
	ad Elevation:	0.0 feet		La	ine Equ	ivalent D			eet)		
	Road Grade:	0.0%				Autos:	75.3				
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks: y Trucks:	75.2 75.2				
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el i	Barrier Atte	en Be	rm Atten
Autos:	71.78	3.50		2.77		-1.20		4.75	0.0	00	0.00
Medium Trucks:	82.40	-13.74		2.76		-1.20		4.88	0.0	00	0.00
Heavy Trucks:	86.40			-2.76		-1.20		-5.21	0.0	00	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Ho			eq Eve		Leq Ni			Ldn		NEL
Autos:			69.4		67.6		61.6		70.2		70.
Medium Trucks:	-		63.2		56.8		55.3		63.8		64.0
Heavy Trucks:			63.3		54.3		55.5		63.9		64.0
Vehicle Noise:			71.1		68.2		63.3		71.9)	72.3
Centerline Distan	ce to Noise C	ontour (in feet))	70 dE	A	65 dE	BA	6	0 dBA	55	dBA
			Ldn:	112		240			518		116
			VEL:	120		259			557		201

	FHWA-	RD-77-108 HIG	SHWAY I	NOISE PF	REDICTIC	ON MOI	DEL			
Scenario: Ex Road Name: SR Road Segment: n/c	-395	,			Project N Job Nu			Grove		
SITE SPEC	IFIC INPU	T DATA			NO	DISE N	IODE		s	
Highway Data				Site Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily Traffic	(Adt): 45,2	00 vehicles				1	Autos:	15		
Peak Hour Perce	ntage:	10%		Me	dium Truc	:ks (2 A	xles):	15		
Peak Hour V	olume: 4,5	20 vehicles		Hea	avy Truck	:s (3+ A	xles):	15		
Vehicle S	Speed:	55 mph	ŀ	Vehicle I	Also .					
Near/Far Lane Dis	tance:	75 feet	-		cleType		Day	Evening	Night	Daily
Site Data				VCIII			77.5%			97.429
				Me	dium Tru		84.8%		10.3%	
Barrier H	•	0.0 feet			leavy Tru		86.5%		10.8%	
Barrier Type (0-Wall, 1-		0.0		,	icavy ina	043.	00.070	2.170	10.070	0.147
Centerline Dist. to E		4.0 feet	[Noise So	urce Ele	vations	s (in fe	et)		
Centerline Dist. to Ob		4.0 feet			Autos:	0.0	000			
Barrier Distance to Ob		0.0 feet		Mediur	n Trucks:	2.2	97			
Observer Height (Above		5.0 feet		Heav	y Trucks:	8.0	006	Grade Ad	justment.	0.0
Pad Ele		0.0 feet	-	Lane Equ	uivalont l	Distanc	o (in i	foot)		
Road Ele		0.0 feet	-	Lane Equ	Autos:			eel)		
		0.0%		Modium	Autos: n Trucks:					
		0.0 degrees 0.0 degrees			v Trucks:					
		io.o uegrees		nour	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10.2	20			
FHWA Noise Model Cal										
			Distance	Finite		Fresn		Barrier Att		m Atten
Autos:	71.78	3.73	-2.7		-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-13.51	-2.7		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-17.47	-2.7	6	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Leve	els (without	Topo and ban	rier atter	nuation)						
VehicleType Leq F	Peak Hour	Leq Day	Leq E	vening	Leq N	light		Ldn		VEL
Autos:	71.5	69.6		67.9		61.8		70.4		71.
Medium Trucks:	64.9	63.4	Ļ	57.1		55.5		64.0)	64.
Heavy Trucks:	65.0	63.5	5	54.5		55.8		64.1		64.
Vehicle Noise:	73.1	71.4	ļ	68.4		63.5		72.1		72.
Centerline Distance to I	Noise Conto	our (in feet)								
			70	dBA	65 di	BA	6	i0 dBA	55	dBA
		Ldn	: 1	16	249)		536	1,	156

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	FH\	VA-RD-77-108	HIGH	WAY	NOISE PR	REDICTI	ON MC	DEL			
Road Nan	<i>io:</i> Existing W ne: SR-395 nt: n/o Luna R					Project Job Ni	Name: Imber:				
SITE	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions ('Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	42,900 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 .	Axles):	15		
Peak H	lour Volume:	4,290 vehicles			Hea	avy Truc	ks (3+ .	Axles):	15		
Ve	hicle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		-		cleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	•	9.6%	
Pa	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	84.0 feet		-							
Centerline Dist.	to Observer:	84.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		000			
Observer Height	(Above Pad):	5.0 feet				n Trucks		297	Grade Adj		
P	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.	006	Grade Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Equ	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 75	.331			
	Left View:	-90.0 degree	s		Mediur	n Trucks		213			
	Right View:	90.0 degree	s		Heav	y Trucks	: 75	.225			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	3.50		-2.7	7	-1.20		-4.75	0.0	00	0.00
Medium Trucks:	82.40	-13.74		-2.7	6	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-17.69		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening	Leq I	· ·		Ldn	-	NEL
Autos:	71		69.4		67.6		61.	-	70.2		70.
Medium Trucks:	64		3.2		56.8		55.3	-	63.8		64.
Heavy Trucks:	64		3.3		54.3		55.	-	63.9		64.
Vehicle Noise:	72	.9	71.1		68.2		63.	3	71.9)	72.
Centerline Distan	ce to Noise C	ontour (in feet)									
					dBA	65 0		1 1	60 dBA		6 dBA
			dn:		12	24	-		518		,116
		(C)	IFI :		20	25	ч		557	1	,201

	FHV	/A-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	ON MOD	EL			
Road Nam	io: Existing Wit ie: SR-395 nt: n/o La Mesa	,					Vame: D Imber: 1		Grove		
SITE	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				S	Site Con	ditions (Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt): 4 Percentage:	2,100 vehicle: 10%	6		Mo	dium Tru		utos:	15 15		
		4.210 vehicle:				avy Truci	,				
	hicle Speed:	4,210 venicie. 55 mph	5		110	avy much	13 (04 70		10		
	nicie Speeu. ne Distance:	11 feet		V	/ehicle l						
Neal/Fal La	ne Distance.	11 leel			Vehi	icleType	L	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	5 97.42%
Ba	rier Height:	0.0 feet			Me	edium Tru	ucks: 8	4.8%	4.9%	10.3%	5 1.84%
Barrier Type (0-W		0.0			ŀ	leavy Tru	ucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis		40.0 feet		٨	Voise Sc	ource Ele	vations	(in fe	eet)		
Centerline Dist.		40.0 feet				Autos	: 0.00		,		
Barrier Distance		0.0 feet			Mediur	n Trucks	2.29	97			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks			Grade Ad	ustmen	t: 0.0
Pa	ad Elevation:	0.0 feet				·					
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalent			feet)		
1	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree	es		Mediur	n Trucks					
	Right View:	90.0 degree	es		Heav	y Trucks	39.73	34			
FHWA Noise Mod	el Calculations	5									
FHWA Noise Mod VehicleType	el Calculations REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	1	Barrier Att	en Be	rm Atten
			Distai	nce 1.36		Road -1.20		l 4.59	Barrier Atte 0.0		
VehicleType	REMEL	Traffic Flow	Distar		6		-4			00	0.000
VehicleType Autos:	REMEL 71.78	Traffic Flow 3.42	Distai	1.36	6)	-1.20		4.59	0.0	00	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (witho	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and		1.36 1.40 1.39	5))	-1.20 -1.20		4.59 4.87	0.0 0.0 0.0	00	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois e VehicleType	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day	barrier a	1.36 1.40 1.39 attent)) uation) vening	-1.20 -1.20	 light	4.59 4.87	0.0 0.0 0.0	00	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 75.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4	barrier a	1.36 1.40 1.39 attent	o auation) vening 71.7	-1.20 -1.20 -1.20		4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 74.3	00 00 00 C	0.000 0.000 0.000 <i>0.000</i> <i>CNEL</i> 74.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 75. 68.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8	<i>barrier</i> L 73.5 67.3	1.36 1.40 1.39 attent	<i>uation)</i> <i>vening</i> 71.7 60.9	-1.20 -1.20 -1.20		4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 74.3 67.8	00 00 00 C	0.000 0.000 0.000 <i>CNEL</i> 74.9 68.1
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 75.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8	barrier a	1.36 1.40 1.39 attent	o auation) vening 71.7	-1.20 -1.20 -1.20		4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 74.3	00 00 00 C	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hout 75. 68.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8 8	<i>barrier</i> L 73.5 67.3	1.36 1.40 1.39 attent	<i>uation)</i> <i>vening</i> 71.7 60.9	-1.20 -1.20 -1.20		4.59 4.87	0.0 0.0 0.0 <i>Ldn</i> 74.3 67.8		0.000 0.000 0.000 <i>CNEL</i> 74.9 68.1 68.1
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 75. 68. 68. 77.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8 0	barrier 2 73.5 67.3 67.4 75.2	1.36 1.40 1.39 attenti .eq Ev	a vation) vening 71.7 60.9 58.4 72.2	-1.20 -1.20 -1.20 <i>Leq N</i>		4.59 4.87 5.56	0.0 0.0 1.0 74.3 67.8 68.0 75.9	00 00 00 00	0.000 0.000 0.000 <i>CNEL</i> 74.9 68.1 68.1 76.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 75. 68. 68. 77.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8 0 Intour (in feet)	barrier 6 73.5 67.3 67.4 75.2	1.36 1.40 1.39 attent eq Ev	a vening 71.7 60.9 58.4 72.2	-1.20 -1.20 -1.20 <i>Leq N</i> 65 a		4.59 4.87 5.56	0.0 0.0 0.0 74.3 67.8 68.0 75.9	00 00 00 00	0.000 0.000 0.000 CNEL 74.9 68.1 68.1 76.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 75. 68. 68. 77.	Traffic Flow 3.42 -13.82 -17.77 Dut Topo and r Leq Day 4 8 0 Intour (in feet)	barrier 2 73.5 67.3 67.4 75.2	1.36 1.40 1.39 attenti .eq Ev	auation) vening 71.7 60.9 58.4 72.2	-1.20 -1.20 -1.20 <i>Leq N</i>		4.59 4.87 5.56	0.0 0.0 1.0 74.3 67.8 68.0 75.9	00 00 00 00	0.000 0.000 0.000 <i>CNEL</i> 74.9 68.1 68.1 76.4

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	FHV	VA-RD-77-108	HIGHWA	Y NOI	SE PREDICTIO		EL			
Scenario Road Name Road Segmen		,			Project I Job Nu	Vame: D mber: 1		Grove		
	PECIFIC IN	PUT DATA							5	
Highway Data				Site	e Conditions (Hard = 1	10, So	ft = 15)		
Average Daily T	raffic (Adt): 3	88,200 vehicles	6			A	utos:	15		
Peak Hour F	Percentage:	10%			Medium Tru			15		
	our Volume:	3,820 vehicles	5		Heavy Truci	ks (3+ A)	xles):	15		
	icle Speed:	55 mph		Vel	hicle Mix					
Near/Far Lan	e Distance:	11 feet			VehicleType	Ĺ	Day	Evening	Night	Daily
Site Data					A	utos: 7	7.5%	12.9%	9.6%	97.42%
Barr	rier Height:	0.0 feet			Medium Tru	icks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tru	icks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dist	t. to Barrier:	40.0 feet		No	ise Source Ele	vations	(in fe	et)		
Centerline Dist. to	o Observer:	40.0 feet			Autos			00		
Barrier Distance to	o Observer:	0.0 feet		/	Aedium Trucks					
Observer Height (A	,	5.0 feet			Heavy Trucks	8.0	06	Grade Adj	ustment	: 0.0
	d Elevation:	0.0 feet		1	,		- () 6	41		
	d Elevation: load Grade:	0.0 feet		Lai	ne Equivalent Autos			eet)		
ĸ	l eft View:	0.0%			Autos. Aedium Trucks					
	Right View:	-90.0 degree 90.0 degree			Heavy Trucks					
FHWA Noise Mode	I Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce .	Finite Road	Fresne	2 I	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.00		1.36	-1.20	-	4.59	0.0	00	0.00
Medium Trucks:	82.40	-14.24		1.40	-1.20		4.87	0.0		0.00
Heavy Trucks:	86.40	-18.20		1.39	-1.20	-	5.56	0.0	00	0.00
Unmitigated Noise					,					
VehicleType I Autos:	Leq Peak Hou 74		73.0	q Ever	ning Leq N 71.3	light 65.2		Ldn 73.8		NEL 74.4
Autos: Medium Trucks:	74 68		73.0 66.9		60.5	58.9		73.8 67.4		67.0
Heavy Trucks:	68		50.9 57.0		57.9	59.2		67.5		67.
Vehicle Noise:	76		74.8		71.8	66.9		75.5		76.
Centerline Distance	e to Noise Co	ontour (in feet)							
		1 1		70 dB/	A 65 d	DA .	6	0 dBA	55	dBA
				70 UDA	4 00 0	DA	0	0 UDA	00	ubh
			Ldn:	93	20		0	431		129

F	HWA	-RD-77-108	HIGH	HWAY N	IOISE PF	REDICTI	ON MC	DEL			
Scenario: Existing Road Name: Palmdal Road Segment: w/o SR-	e Rd.					Project Job N	Name: umber:				
SITE SPECIFIC	INP	UT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				3	Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily Traffic (Adt,	: 25,	800 vehicles	5					Autos:	15		
Peak Hour Percentage	e	10%			Me	dium Tru	icks (2	Axles):	15		
Peak Hour Volume	: 2,	580 vehicles	5		Hea	avy Truc	ks (3+	Axles):	15		
Vehicle Speed	l:	55 mph			Vehicle I	Ai~					
Near/Far Lane Distance	e .	51 feet		H		cleType	1	Dav	Evening	Night	Daily
Site Data					VCIII		lutos:	77.5%	0	9.6%	
					Me	ر dium Tr		84.8%		10.3%	
Barrier Heigh		0.0 feet				leavy Tr		86.5%		10.8%	
Barrier Type (0-Wall, 1-Berm,		0.0			,	icavy II	uono.	00.07	2.170	10.070	0.147
Centerline Dist. to Barrie		72.0 feet		1	Voise So	urce El	evatior	ns (in f	eet)		
Centerline Dist. to Observe		72.0 feet				Autos	s: 0	.000			
Barrier Distance to Observe		0.0 feet			Mediur	n Trucks	s: 2	.297			
Observer Height (Above Pad		5.0 feet			Heav	y Trucks	s: 8	.006	Grade Ad	justment.	0.0
Pad Elevation		0.0 feet		-	Lane Equ	uive le né	Diotor	neo (in	fa a fi		
Road Elevation		0.0 feet		-	Lane Equ	Autos		.519	leel)		
Road Grade		0.0%			Modium	n Trucks		.387			
		-90.0 degree				y Trucks		.387			
Right View	<i>.</i>	90.0 degree	s		i ieav	y mucka	5. 07	.400			
FHWA Noise Model Calculat				1							
VehicleType REMEL		raffic Flow	Dis	stance	Finite		Fres		Barrier Att	en Ber	m Atten
Autos: 71.	78	1.29		-2.06	6	-1.20		-4.72	0.0	000	0.00
Medium Trucks: 82.		-15.94		-2.05	-	-1.20		-4.88		000	0.00
Heavy Trucks: 86.	40	-19.90		-2.05	5	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (w	ithou	t Topo and	barri	er atten	uation)						
VehicleType Leq Peak I	lour	Leq Day		Leq Ev	/ening	Leq	Night		Ldn	CI	VEL
Autos:	69.8		67.9		66.1		60.		68.		69.
Medium Trucks:	63.2		61.7		55.3		53.		62.3	-	62.
Heavy Trucks:	63.2	(61.8		52.8		54.	0	62.4	4	62.
Vehicle Noise:	71.4	(69.6		66.7		61.	8	70.4	4	70.
Centerline Distance to Noise	Con	tour (in feet))								
			L	70 c			dBA	1	60 dBA		dBA
			Ldn:	76	0	4.6	64		353	7	61
			IFL:	70	-		76		380		18

Tuesday, January 08, 2019

Road Nam	o: Existing Wit e: Luna Rd. at: e/o SR-395	,					Vame: D Imber: 1		Grove		
SITE S Highway Data	SPECIFIC IN	PUT DATA			Site Con						
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	5,200 vehicles 10% 520 vehicles 40 mph			Mee Hea	dium Tru avy Truc	A cks (2 A)	utos: des):	15 15 15 15		
Near/Far Lar		11 feet		_	Vehicle I	Nix icleType	1	Day	Evening	Night	Daily
Site Data Bar Barrier Type (0-W	rier Height: all. 1-Berm):	0.0 feet			Ме		utos: 7 icks: 8	7.5% 4.8% 6.5%	12.9% 4.9%	9.6% 10.3% 10.8%	97.42 1.84 0.74
Centerline Dis	t. to Barrier:	40.0 feet		1	Noise So	ource Ele	vations	(in fe	et)		
Barrier Distance i Observer Height (J Pa Roa	to Observer: Above Pad): ad Elevation: ad Elevation:	0.0 feet 5.0 feet 0.0 feet 0.0 feet		7		Autos n Trucks y Trucks uivalent Autos	2.29 8.00 Distance	97 06 e (in f	Grade Adju eet)	istment.	0.0
FHWA Noise Mode	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos n Trucks y Trucks	39.7	12			
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne		Barrier Atte	n Ber	m Atter
Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99	-4.28 -21.52 -25.47		1.30 1.40 1.39	0	-1.20 -1.20 -1.20		4.59 4.87 5.56	0.00	00	0.0
Unmitigated Noise	Lovols (with	out Tono and	harrior	atton	uation)						
	Leq Peak Hou		-		vening	Leq I	light		Ldn	Cl	VEL
Autos: Medium Trucks:	62. 56.		i0.5 i4.9		58.7 48.5		52.7 47.0		61.3 55.4		61 55
Heavy Trucks:	57.		6.3		47.3		48.5		56.9		57
Vehicle Noise:	64	.4 6	62.7		59.4		54.9		63.4		63
Centerline Distand	e to Noise Co	ontour (in feet)									
				70 0		65 0		6	0 dBA		dBA
			dn:			31			67		45

Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 25,600 vehicles Autos: 15 Peak Hour Percentage: 10% Peak Hour Volume: 2,560 vehicles Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night	
Average Daily Traffic (Adt): 25,600 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,560 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 55 mph Vehicle Type Day Evening Night	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,560 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 55 mph Vehicle Mix Near/Far Lane Distance: 51 feet Vehicle Type Day	
Peak Hour Volume: 2,560 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 55 mph Vehicle Mix Vehicle Type Day Evening Night	
Vehicle Speed: 55 mph Near/Far Lane Distance: 51 feet Vehicle Mix Vehicle Type Day Evening Night	
Near/Far Lane Distance: 51 feet VehicleType Day Evening Night	
Near/Far Lane Distance: 51 feet VehicleType Day Evening Night	
	Daily
Site Data Autos: 77.5% 12.9% 9.6% 9	7.42%
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3%	1.84%
	0.74%
Centerline Dist. to Barrier: 72.0 feet Noise Source Elevations (in feet)	
Centerline Dist. to Observer: 72.0 feet Autos: 0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0	0
Pad Elevation: 0.0 feet	.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 67.519	
Left View: -90.0 degrees Medium Trucks: 67.387	
Right View: 90.0 degrees Heavy Trucks: 67.400	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm	Atten
Autos: 71.78 1.26 -2.06 -1.20 -4.72 0.000	0.000
Medium Trucks: 82.40 -15.98 -2.05 -1.20 -4.88 0.000	0.000
Heavy Trucks: 86.40 -19.93 -2.05 -1.20 -5.26 0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNE	L
Autos: 69.8 67.9 66.1 60.1 68.7	69.3
Medium Trucks: 63.2 61.7 55.3 53.8 62.2	62.5
Heavy Trucks: 63.2 61.8 52.8 54.0 62.4	62.5
Vehicle Noise: 71.4 69.6 66.6 61.8 70.3	70.8
Centerline Distance to Noise Contour (in feet)	
70 dBA 65 dBA 60 dBA 55 dB	
Ldn: 76 163 351 757	
CNEL: 81 175 378 814	

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	FHV	VA-RD-77-108	HIGHWA	Y NOISI	E PREDICTI	ON MOD	EL		
	 Existing Wi Palmdale R e/o Cobalt 	Rd. (SR-18)				Name: De umber: 11	esert Grove 724		
SITE S	PECIFIC IN	IPUT DATA			N	OISE MO	DDEL INPU	TS	
Highway Data				Site	Conditions	(Hard = 1	0, Soft = 15)		
Average Daily 1 Peak Hour F Peak Ho	, ,	26,800 vehicle 10% 2,680 vehicle			Medium Tru Heavy Truc	icks (2 Ax	,		
	nicle Speed:	55 mph		Vehi	cle Mix				
Near/Far Lan	e Distance:	51 feet		_	VehicleType	D	ay Evening	Night	Daily
Site Data						utos: 7	7.5% 12.9%	/ V	
Bar	rier Height:	0.0 feet			Medium Tr	ucks: 8	4.8% 4.9%	6 10.39	6 1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tr	ucks: 8	6.5% 2.7%	6 10.89	6 0.74%
Centerline Dis		72.0 feet		Nois	e Source El	evations	(in feet)		
Centerline Dist. to		72.0 feet			Autos	: 0.00	0		
Barrier Distance to		0.0 feet		Me	dium Trucks	: 2.29	7		
Observer Height (A	,	5.0 feet		F	leavy Trucks	: 8.00	6 Grade A	Adjustmer	nt: 0.0
	d Elevation:	0.0 feet		Land	Equivalent	Distance	(in foot)		
	d Elevation: Road Grade:	0.0 feet 0.0%		Lane	Autos		, ,		
	Left View:	-90.0 degree		M	dium Trucks				
	Right View:	90.0 degree			leavy Trucks				
FHWA Noise Mode	l Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Fi	nite Road	Fresne	Barrier A	Atten Be	erm Atten
Autos:	71.78	1.46	-	2.06	-1.20	-4	1.72 (0.000	0.00
Medium Trucks:	82.40	-15.78		2.05	-1.20			0.000	0.00
Heavy Trucks:	86.40	-19.74		2.05	-1.20	-5	5.26 (0.000	0.00
Unmitigated Noise			i i						
	Leq Peak Hou			q Evenin			Ldn		CNEL
Autos: Medium Trucks:	70 63		68.1 61.9	-	6.3 5.5	60.3 54.0		3.9 2.4	69.5 62.7
Heavy Trucks:	63		62.0		5.5 3.0	54.0 54.2		2.4	62.
Vehicle Noise:	71		69.8		6.8	62.0).5	71.0
Centerline Distanc	e to Noise Co	ontour (in feet)						
				70 dBA	65 0	1BA	60 dBA	5	5 dBA
			L						
			Ldn:	78	16	68	362		780

F	HWA-RD-77-10	8 HIGH	IWAY NO		TION MO	DEL			
Scenario: Existing Road Name: Palmdale Road Segment: e/o Ame	e Rd. (SR-18)				ct Name: Number:		Grove		
SITE SPECIFIC	INPUT DATA				NOISE	MODE		S	
Highway Data			S	ite Condition	s (Hard :	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt)	26,200 vehicle	es				Autos:	15		
Peak Hour Percentage	10%			Medium	rucks (2	Axles):	15		
Peak Hour Volume	2,620 vehicle	es		Heavy Tr	ucks (3+	Axles):	15		
Vehicle Speed	55 mph		V	ehicle Mix					
Near/Far Lane Distance	51 feet			VehicleTy	ne l	Day	Evening	Night	Daily
Site Data				1011010191	Autos:	77.5%	•	9.6%	
	0.0 ()			Medium	Trucks:	84.8%		10.3%	1.84%
Barrier Height Barrier Type (0-Wall, 1-Berm)					Trucks:	86.5%		10.8%	
Centerline Dist. to Barrier				,					
Centerline Dist. to Observer			N	oise Source			eet)		
Barrier Distance to Observer	12.0 1000			Au		.000			
Observer Height (Above Pad)	0.0 1001			Medium Truc		.297			
Pad Elevation				Heavy Truc	:ks: 8	.006	Grade Ad	ustment:	0.0
Road Elevation	0.0 feet		L	ane Equivale	nt Distar	nce (in i	feet)		
Road Grade	0.0%			Au	os: 67	.519			
Left View	-90.0 degre	ees		Medium Truc	ks: 67	.387			
Right View	90.0 degre	ees		Heavy Truc	:ks: 67	.400			
FHWA Noise Model Calculati	ons		I						
VehicleType REMEL	Traffic Flow	Dis	stance	Finite Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 71.3		-	-2.06	-1.20		-4.72		000	0.00
Medium Trucks: 82.4			-2.05	-1.20		-4.88		000	0.00
Heavy Trucks: 86.4	40 -19.83	3	-2.05	-1.20)	-5.26	0.0	000	0.00
Unmitigated Noise Levels (w						_		T	
VehicleType Leq Peak F			Leq Eve		q Night		Ldn		VEL
	69.9	68.0		66.2	60	-	68.8		69.
	63.3 63.3	61.8 61.9		55.4 52.9	53. 54	-	62.3 62.5		62. 62.
								-	
	71.5	69.7		66.7	61.	a	70.4	ŀ	70.9
Centerline Distance to Noise	contour (in fee	er)	70 dl	34 6	5 dBA	F	0 dBA	55	dBA
		I dn:	70 00		166		357		69
	(NFI :	83		178		384	8	27

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	FH	NA-RD-77-108	HIGHV	TATI	NOISE PH			DEC			
Road Nan	io: Existing Wi e: SR-395 nt: n/o Palmda	ith Phase 1 ale Rd. (SR-18)				Project I Job Nu					
SITE	SPECIFIC IN	IPUT DATA				N	DISE	/ODE		5	
Highway Data					Site Con	ditions (Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	43,500 vehicles	5					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 /	(xles)	15		
Peak H	lour Volume:	4,350 vehicles	6		He	avy Truci	ks (3+ /	(xles)	15		
Ve	hicle Speed:	55 mph		H	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		ŀ		cleType		Dav	Evening	Night	Daily
Site Data							itos:	77.5%	•	9.6%	
	rrier Height:	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3%	
Barrier Type (0-W		0.0 1001			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	84.0 feet		-		,					
Centerline Dist.		84.0 feet		-	Noise So				eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height	Above Pad):	5.0 feet				n Trucks		297	~		
	ad Elevation:	0.0 feet			Heav	y Trucks	8.	006	Grade Adj	ustment	: 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	75.	331			
	Left View:	-90.0 degree	s		Mediur	n Trucks	75.	213			
	Right View:	90.0 degree	s		Heav	y Trucks	75.	225			
- HWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	iel	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.56		-2.7	7	-1.20		-4.75	0.0	00	0.00
Medium Trucks:	82.40	-13.68		-2.7	6	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-17.63		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrier	atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	·		Ldn		NEL
Autos:	71		39.5		67.7		61.7		70.3		70
Medium Trucks:	64		53.3		56.9		55.4		63.8		64
Heavy Trucks:	64		53.4		54.3		55.6		63.9		64
Vehicle Noise:	73	3.0	71.2		68.2		63.4		71.9		72
Centerline Distan	ce to Noise Ce	ontour (in feet)									
			∟		dBA	65 d			60 dBA		dBA
			Ldn: IFL:		13 21	24 26	-		523		127
									563		212

	FHV	VA-RD-77-108	HIGHW	AY NOIS	E PREDICI	ION MO	DEL			
Road Nam	io: Existing Wit ie: SR-395 nt: n/o Dos Pal					t Name: lumber:				
SITE	SPECIFIC IN	PUT DATA						L INPUT	s	
Highway Data				Site	Conditions	(Hard =	10, S	oft = 15)		
		8,600 vehicles			Ma di una T		Autos:			
	Percentage:	10%			Medium Ti					
		4,860 vehicles			Heavy Tru	CKS (3+7	4xies):	15		
	hicle Speed:	55 mph		Vehi	cle Mix					
Near/Far La	ne Distance:	75 feet			VehicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	5 12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	84.0 feet		Nois	e Source E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	84.0 feet			Auto		000			
Barrier Distance	to Observer:	0.0 feet		14	dium Truck		297			
Observer Height (Above Pad):	5.0 feet			leavy Truck		006	Grade Ad	iustmen	· 0.0
Pa	ad Elevation:	0.0 feet						,	uoumom	0.0
Roa	ad Elevation:	0.0 feet		Lane	Equivaler	t Distan	ce (in	feet)		
1	Road Grade:	0.0%			Auto	s: 75.	331			
	Left View:	-90.0 degree	s	M	edium Truck	(s: 75.	213			
			e	4		s: 75.	225			
	Right View:	90.0 degree	3		leavy Truck					
FHWA Noise Mod	3 * *	0	5		leavy Truck					
FHWA Noise Mod VehicleType	3 * *	0	Distar		nite Road	Fresr	nel	Barrier Att	en Be	rm Atten
	el Calculations	s	Distar				nel -4.75		en Be	
VehicleType	el Calculations REMEL	s Traffic Flow	Distar	nce F	nite Road			0.0		0.000
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VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	el Calculations REMEL 71.78 82.40 86.40 e Levels (withous Leg Peak Hou	s Traffic Flow 4.04 -13.19 -17.15 put Topo and B r Leq Day	Distar Distar	nce F -2.77 -2.76 -2.76 attenuati eq Evenir	nite Road -1.20 -1.20 -1.20 on) Ig Leq	Fresr Night	-4.75 -4.88 -5.21	0.0 0.0 0.0	000 000 000	0.000 0.000 0.000 NEL
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VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks:	el Calculations <u>REMEL</u> 71.78 82.40 86.40 e Levels (without Leq Peak Hout 71. 65.	s Traffic Flow 4.04 -13.19 -17.15 Dut Topo and B r Leq Day 9 7 2 6	Distar Distar	nce F -2.77 -2.76 -2.76 attenuati eq Evenir (nite Road -1.20 -1.20 -1.20 00) 120 00 00 120 00 120 00 00 120 00 00 00 00 00 00 00 00 00 00 00 00 0	Fresr Night 62.1 55.8	-4.75 -4.88 -5.21	0.0 0.0 0.0 <i>Ldn</i> 70.8 64.3	000 000 000 000 C 3 3	0.000 0.000 0.000 NEL 71.4 64.5
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Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	el Calculations <u>REMEL</u> 71.78 82.40 86.40 a Levels (with Leq Peak Hou 71. 65. 65. 73.	s Traffic Flow 4.04 -13.19 -17.15 out Topo and I r Leq Day 9 7 2 6 6 6	Distar Distar	nce F. -2.77 -2.76 -2.76 attenuati eq Evenin ({	nite Road -1.20 -1.20 -1.20 on) g Leq 8.2 7.4 44.8 88.7	Frest Night 62.1 55.8 56.1 63.8	-4.75 -4.88 -5.21	0.0 0.0 0.0 70.8 64.3 64.4 72.4	000 000 000 3 3 4 4	0.000 0.000 0.000 NEL 71.4 64.5 64.6 72.9
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Tuesday, January 08, 2019

Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dserver: 84.0 feet Barrier Distance to Observer: 84.0 feet Barrier Distance to Observer: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 86.40 Autos: 71.78 3.77 -2.77 1.20 -4.75 Medium Trucks: 86.40 Autos: 71.78 3.77 -2.77 1.20 -4.75 Medium Trucks: 86.40 171.43 -2.76 1.20 -4.75 0.000 0.00 Medium Trucks: 86.40 171.43 -2.76 1.20 -4.75		FH\	WA-RD-77-108	HIGHWA	AY NC	ISE PF	REDICTIO	ON MO	DEL			
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 45,600 vehicles Peak Hour Porcentage: 10% Autos: 15 Peak Hour Porcentage: 10% Medium Trucks (2 Akes): 15 Peak Hour Volume: 4,560 vehicles Vehicle Speed: 55 mph Medium Trucks (2 Akes): 15 Site Data Vehicle Type Day Evening Night Daily Site Data Vehicle Type Day Evening Night Daily Site Data 0.0 feet Heavy Trucks: 84.8% 4.9% 10.3% 1.84 Barrier Height: 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.74 Centerline Dist. to Dserver: 84.0 feet Autos: Noise Source Elevations (in feet) Noise Source Elevations (in feet) Road Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 75.213 Heavy Trucks: 8.00 feet Autos: Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Medium Trucks: 75.213 Heavy Trucks: 82.40 -13.47 -2.77 -1.20	Road Nam	ie: SR-395								Grove		
Average Daily Traffic (Adt): 45,600 vehicles Peak Hour Percentage: 10% Autos: 15 Peak Hour Volume: Peak Hour Vencentage: Near/Far Lane Distance: 10% Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Near/Far Lane Distance: 75 feet Medium Trucks (3 A xkes): 15 Site Data Autos: 75 feet Vehicle Type Day Evening Night Daily Barrier Height: 0.0 feet Medium Trucks: 4.8% 4.9% 10.3% 1.84 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dserver: 0.0 feet Medium Trucks: 8.4.9% 4.9% 10.3% 1.84 Barrier Distance to Observer: 0.0 feet Autos: 75.331 Nieke Source Elevations (in feet) Road Grade: 0.0% Autos: 75.331 Heavy Trucks: 75.251 FHWA Noise Model Calculations Vehicle Type REMEL Taffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atter Autos: 71.78 3.77 -2.76 -1.20 -4.75 0.000	SITE	SPECIFIC IN	NPUT DATA				NO	DISE N	IODE	L INPUT	s	
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Road Grade: 0.0% Autos: 75.331 Left View: -90.0 degrees Medium Trucks: 75.213 Heavy Trucks: 75.225 FHWA Noise Model Calculations Finite Road Fresnel Barrier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Weiwer Trucks: 82.40 -13.47 -2.76 -1.20 -4.75 0.000 0.00 Medium Trucks: 86.40 -17.43 -2.76 -1.20 -5.21 0.000 0.00 Umitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNEL Autos: 71.6 69.7 67.9 61.9 70.5 71 Medium Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: <td< td=""><td></td><td></td><td></td><td></td><td></td><td>no Fa</td><td>uivalant</td><td>Distan</td><td>no (in i</td><td>[0.04]</td><td></td><td></td></td<>						no Fa	uivalant	Distan	no (in i	[0.04]		
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Right View: 90.0 degrees Heavy Trucks: 75.225 FHWA Noise Model Calculations Environmentation Barrier Atten Berm Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 3.77 -2.76 -1.20 -4.75 0.000 0.00 Medium Trucks: 82.40 -13.47 -2.76 -1.20 -4.88 0.000 0.00 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle/pve Leg Peak Hour Leg Devining Leg Night Ldn CNEL VehicleType Eds.0 65.0 63.5 57.1 55.6 64.0 64 Heavy Trucks: 65.0 63.6 55.5 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) Interve Interve Interve Interve Interve 270 dBA 65 dBA 60 dBA			0.070			Madiu						
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Heavy Trucks: 86.40 -17.43 -2.76 -1.20 -5.21 0.000 0.00 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Evening Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Matus: 71.6 69.7 67.9 61.9 70.5 71 Medium Trucks: 65.0 63.6 54.5 55.8 64.2 64 Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet)	Autos:	71.78	3.77		-2.77		-1.20		-4.75	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 71.6 69.7 67.9 61.9 70.5 71. Medium Trucks: 65.0 63.6 54.5 55.8 64.2 64 Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) Lab 116 250 540 1,163	Medium Trucks:	82.40	-13.47		2.76		-1.20		-4.88	0.0	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 71.6 69.7 67.9 61.9 70.5 71 Medium Trucks: 65.0 63.5 57.1 55.6 64.0 64 Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet)					-		-1.20		-5.21	0.0	000	0.00
Autos: 71.6 69.7 67.9 61.9 70.5 71 Medium Trucks: 65.0 63.5 57.1 55.6 64.0 64 Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 116 250 540 1,163				-								
Medium Trucks: 65.0 63.5 57.1 55.6 64.0 64 Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) Image: Contour Contour (in feet) Contour Contour Contour Contour Ldn: 116 250 540 1,163	,1				eq Eve		Leq N					
Heavy Trucks: 65.0 63.6 54.5 55.8 64.2 64 Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 116 250 540 1,163											-	
Vehicle Noise: 73.2 71.4 68.4 63.6 72.1 72 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 116 250 540 1,163											-	
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 116 250 540 1,163	· · ·					0.110				• ···	-	64.3 72.0
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 116 250 540 1,163	Centerline Distan	ce to Noise C	ontour (in feet)								
Ldn: 116 250 540 1,163	Contentine Distant	0 10 110136 0	Sinour (in leet	, 	70 dF	A	65 d	BA	6	0 dBA	55	i dBA
				Ldn:								
								-		581		

	FHWA	-RD-77-108 HI	GHWA	Y NO	ISE PRE	DICTIO	N MOI	DEL			
Scenario: Existi Road Name: SR-39 Road Segment: n/o La	95					roject N Job Nur			Grove		
SITE SPECIF		JT DATA				NO	ISE N	IODE	L INPUT	s	
Highway Data				Si	te Condi						
Average Daily Traffic (A	dt): 42.	800 vehicles						Autos:	15		
Peak Hour Percenta	· · ·	10%			Mediu	Im Truc	ks (2 A	xles):	15		
Peak Hour Volu	me: 4,	280 vehicles			Heav	y Trucks	s (3+ A	xles):	15		
Vehicle Spe	ed:	55 mph		1/4	ehicle Mix						
Near/Far Lane Distar	nce:	11 feet		Ve	Vehicle		1	Day	Evening	Night	Daily
Site Data				_	Venicie			77.5%			97.429
				-	Modi	ium Truc		84.8%		10.3%	
Barrier Heig		0.0 feet				avy Truc		86.5%		10.3%	
Barrier Type (0-Wall, 1-Be		0.0			1100	avy mac	JAG.	00.070	2.170	10.070	0.74
Centerline Dist. to Bar		40.0 feet		No	oise Soui	rce Elev	ation:	s (in fe	et)		
Centerline Dist. to Obser		40.0 feet				Autos:	0.0	000			
Barrier Distance to Obser		0.0 feet			Medium	Trucks:	2.2	297			
Observer Height (Above P Pad Elevat		5.0 feet			Heavy	Trucks:	8.0	006	Grade Ad	justment.	0.0
Pad Elevat Road Elevat		0.0 feet		12	ne Equiv	alont F	Vietan	o (in i	foot)		
Road Elevat Road Gra		0.0 feet 0.0%		La	ine Lyun	Autos:	39.9		eel)		
Left V		0.0% 90.0 degrees			Medium						
Right Vi		90.0 degrees			Heavy		39.1				
FHWA Noise Model Calcul	ations										
VehicleType REME	EL T	raffic Flow	Distand	e	Finite Ro	oad	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	71.78	3.49		1.36	-	1.20		-4.59	0.0	000	0.00
Medium Trucks: 8	32.40	-13.75		1.40	-	1.20		-4.87	0.0	000	0.00
	36.40	-17.70		1.39		1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels											
VehicleType Leq Pea		Leq Day		q Eve		Leq Ni			Ldn		VEL
Autos:	75.4	73.			71.8		65.7		74.3		74.
Medium Trucks:	68.9	67.	-		61.0		59.4		67.9		68.
Heavy Trucks:	68.9	67.	•		58.4		59.7		68.0	-	68.
Vehicle Noise:	77.0	75.	3		72.3		67.4		76.0)	76
Centerline Distance to No.	se Cont	our (in feet)	· ·			05.15					10.4
		1.4		70 dB		65 dE		6	0 dBA		dBA
		Ldi		100 108		216			465 500		002 078
		CNF				232					

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGH	WAYI	NOISE PH	EDICTI		DEL			
Scenario Road Name Road Segmen						Project Job N	Name: umber:				
SITE S	PECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily 1	raffic (Adt): 3	38,600 vehicles						Autos.	15		
Peak Hour I	Percentage:	10%			Me	dium Tru	icks (2	Axles).	15		
Peak Ho	our Volume:	3,860 vehicles			He	avy Truc	:ks (3+ .	Axles)	15		
Veh	nicle Speed:	55 mph		-	Vehicle I	Mix					
Near/Far Lar	e Distance:	11 feet				cleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	0	9.6%	
Par	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0			ŀ	łeavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	40.0 feet		-	Noise Sc				41		
Centerline Dist. t	o Observer:	40.0 feet		ŀ	Noise Sc	Autos		15 (In 1 .000	eet)		
Barrier Distance t	o Observer:	0.0 feet				n Trucks		.000			
Observer Height (A	Above Pad):	5.0 feet				y Trucks		.297	Grade Adj	ustmon	+ 0.0
Pa	d Elevation:	0.0 feet				, 				usunen	. 0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		.934			
	Left View:	-90.0 degree				n Trucks		.712			
	Right View:	90.0 degree	S		Heav	y Trucks	39.	.734			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	3.04		1.3	6	-1.20		-4.59	0.0	00	0.00
Medium Trucks:	82.40	-14.19		1.4	0	-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	86.40	-18.15		1.3	9	-1.20		-5.56	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	75		3.1		71.3		65.3	-	73.9		74.
Medium Trucks:	68		6.9		60.5		59.	-	67.5		67.
Heavy Trucks:	68	.4 6	67.0		58.0		59.3	2	67.6		67.
Vehicle Noise:	76	.6	74.8		71.9		67.	0	75.5		76.
Centerline Distanc	e to Noise Co	ontour (in feet)									
					dBA		dBA		60 dBA		5 dBA
			dn:		94	20			434		936
		CA	IFI :	1	01	21	17		467	1	.007

	FH\	VA-RD-77-108	HIGHW	AY NOIS	E PREDICT	ION MC	DEL			
Road Nan	rio: Existing Wine: Palmdale F Ind: Wo SR-39	td. (SR-18)				t Name: lumber:				
SITE	SPECIFIC IN	IPUT DATA			I	IOISE I	MODE	L INPUT	S	
Highway Data				Site	Conditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	26,700 vehicle	S				Autos:	15		
	Percentage:	10%			Medium Tr	ucks (2	Axles).	15		
Peak H	our Volume:	2,670 vehicle	s		Heavy Tru	cks (3+ .	Axles).	15		
Ve	hicle Speed:	55 mph		Vahi	cle Mix					
Near/Far La	ne Distance:	51 feet			VehicleTvp		Day	Evening	Night	Daily
Site Data				_		# Autos:	77.5%	~		97.42%
				_	Medium T		84.8%		9.6%	
	rrier Height:	0.0 feet			Heavy T		86.5%		10.3%	
Barrier Type (0-V	. ,	0.0			neavy i	TUCKS.	00.37	o 2.170	10.0%	0.74%
	ist. to Barrier:	72.0 feet		Nois	e Source E	levation	ns (in f	eet)		
Centerline Dist.		72.0 feet			Auto	s: 0.	000			
Barrier Distance		0.0 feet		Me	edium Truck	s: 2.	297			
Observer Height	· ,	5.0 feet		ŀ	leavy Truck	s: 8.	006	Grade Ad	iustment	: 0.0
-	ad Elevation:	0.0 feet		Long	Equivalen	4 Diaton	ee (in	fa a 4)		
	ad Elevation:	0.0 feet		Lane	· ·			leel)		
	Road Grade:	0.0%			Auto		.519			
	Left View:	-90.0 degree			edium Truck		.387			
	Right View:	90.0 degree	es	,	leavy Truck	S: 07	.400			
FUNALA Maina Man	lel Calculation	s								
FHWA NOISE MOD										
VehicleType	REMEL	Traffic Flow	Distan	ce Fi	nite Road	Fres	nel	Barrier Att	en Ber	m Atten
		Traffic Flow 1.44		ce Fi -2.06	nite Road -1.20	Fres	nel -4.72	Barrier Att 0.0		
VehicleType	71.78					Fresi		0.0		0.000
VehicleType Autos:	71.78 82.40	1.44		2.06	-1.20	Fres	-4.72	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	1.44 -15.80 -19.75		-2.06 -2.05 -2.05	-1.20 -1.20 -1.20	Fres	-4.72 -4.88	0.0 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40 e Levels (with Leq Peak Hou	1.44 -15.80 -19.75 out Topo and Ir Leq Day	barrier a	-2.06 -2.05 -2.05 ttenuati q Evenir	-1.20 -1.20 -1.20 on) g Leq	Night	-4.72 -4.88 -5.26	0.0 0.0 0.0	000 000 000 Ci	0.000 0.000 0.000 NEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	71.78 82.40 86.40 e Levels (with Leq Peak Hou 70	1.44 -15.80 -19.75 out Topo and <i>I</i> r Leq Day .0	barrier a	-2.06 -2.05 -2.05 ttenuation of Evenir	-1.20 -1.20 -1.20 -1.20 on) g Leq 66.3	Night 60.:	-4.72 -4.88 -5.26	0.0 0.0 0.0 <i>Ldn</i> 68.9	000 000 000 Ci	0.000 0.000 0.000 NEL 69.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	71.78 82.40 86.40 e Levels (with Leg Peak Hou 70 63	1.44 -15.80 -19.75 out Topo and <i>ir</i> Leq Day .0 .4	<i>barrier a</i> / <i>Le</i> 68.1 61.9	-2.06 -2.05 -2.05 ttenuati q Evenir e	-1.20 -1.20 -1.20 on) g Leq 66.3 55.5	Night 60.: 53.:	-4.72 -4.88 -5.26 2 9	0.0 0.0 0.0 <i>Ldn</i> 68.9 62.4	000 000 000 Ci	0.000 0.000 0.000 NEL 69.5 62.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	71.78 82.40 86.40 e Levels (with Leg Peak Hou 70 63	1.44 -15.80 -19.75 out Topo and <i>ir</i> Leq Day .0 .4	barrier a	-2.06 -2.05 -2.05 ttenuati q Evenir e	-1.20 -1.20 -1.20 -1.20 on) g Leq 66.3	Night 60.:	-4.72 -4.88 -5.26 2 9	0.0 0.0 0.0 <i>Ldn</i> 68.9	000 000 000 Ci	0.000 0.000 0.000 NEL 69.5 62.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	71.78 82.40 86.40 e Levels (with Leg Peak Hou 70 63 63	1.44 -15.80 -19.75 out Topo and <i>Ir</i> Leq Day .0 .4 .4	<i>barrier a</i> / <i>Le</i> 68.1 61.9	-2.06 -2.05 -2.05 <i>ttenuati</i> <i>q Evenir</i>	-1.20 -1.20 -1.20 on) g Leq 66.3 55.5	Night 60.: 53.:	-4.72 -4.88 -5.26 2 9	0.0 0.0 0.0 <i>Ldn</i> 68.9 62.4	000 000 000 Ci	0.000 0.000 0.000 NEL 69.5 62.6 62.7
VehicleType Autos: Medium Trucks: Heavy Trucks: Unnitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	71.78 82.40 86.40 e Levels (with Leg Peak Hot 70 63 63 71	1.44 -15.80 -19.75 out Topo and <i>Ir</i> Leq Day .0 .4 .4 .5	barrier a 68.1 61.9 62.0 69.8	-2.06 -2.05 -2.05 -2.05 <i>ttenuational for the second secon</i>	-1.20 -1.20 -1.20 -1.20 000 -1.20 000 -1.2	Night 60.: 53.: 54.: 62.:	-4.72 -4.88 -5.26 2 9 2 0	0.0 0.0 0.0 68.9 62.4 62.5 70.5	000 000 000 000 Ci 3 5	0.000 0.000 0.000 NEL 69.5 62.6 62.7 71.0
VehicleType Autos: Medium Trucks: Heavy Trucks: Unnitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	71.78 82.40 86.40 e Levels (with Leg Peak Hot 70 63 63 71	1.44 -15.80 -19.75 out Topo and rr Leq Day .0 .4 .4 .5 ontour (in feet	<i>barrier a</i> 68.1 61.9 62.0 69.8	2.06 -2.05 -2.05 -2.05 ttenuati q Evenir 6 5 5 6 70 dBA	-1.20 -1.20 -1.20 -1.20 0n) <u>100</u> 66.3 55.5 52.9 66.8 66.8	Night 60.: 53.: 54.: 62.: dBA	-4.72 -4.88 -5.26 2 9 2 0	0.0 0.0 0.0 68.9 62.4 62.5 70.5	000 000 000 Ci 3 5 5 55	0.000 0.000 0.000 NEL 69.5 62.6 62.7 71.0 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40 e Levels (with Leg Peak Hot 70 63 63 71	1.44 -15.80 -19.75 out Topo and ir Leq Day 0. .4 .4 .5 Dontour (in feet	barrier a 68.1 61.9 62.0 69.8	-2.06 -2.05 -2.05 -2.05 <i>ttenuational for the second secon</i>	-1.20 -1.20 -1.20 -1.20 on) g Leq 66.3 55.5 52.9 56.8 65 65	Night 60.: 53.: 54.: 62.:	-4.72 -4.88 -5.26 2 9 2 0	0.0 0.0 0.0 68.9 62.4 62.5 70.5	000 000 000 000 000 000 000 000 000 00	0.000 0.000 NEL 69.5 62.6 62.7 71.0

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	FH\	WA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIO	N MC	DEL			
	 D: Existing W e: Luna Rd. at: e/o SR-395 					Project N Job Nur			Grove		
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,000 vehicle	s					Autos:	15		
	Percentage:	10%				dium Truc			15		
	our Volume:	700 vehicle	S		He	avy Truck	s (3+ .	Axles):	15		
	nicle Speed:	40 mph		ν	ehicle l	Nix					
Near/Far Lar	ne Distance:	11 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet			Me	edium True	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	40.0 feet			loise Sr	ource Elev	ation	s (in fe	pet)		
Centerline Dist. t	o Observer:	40.0 feet		-	0130 00	Autos:		000			
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (/	,	5.0 feet				y Trucks:		006	Grade Ad	justmen	: 0.0
	d Elevation:	0.0 feet		-		·					
	d Elevation:	0.0 feet		L	ane Eq	uivalent D			'eet)		
F	Road Grade:	0.0%				Autos:		934			
	Left View:	-90.0 degre				n Trucks:		712			
	Right View:	90.0 degre	es		Heav	y Trucks:	39.	734			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresi		Barrier Att		rm Atten
Autos:	66.51	-2.99		1.36		-1.20		-4.59		000	0.00
Medium Trucks:	77.72			1.40		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			1.39		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise						1	and a d	1	Late		
VehicleType Autos:	Leq Peak Hou		61.8	.eq Ev	ening 60.0	Leq Ni	gnt 54.0		Ldn 62.6		NEL 63.
Medium Trucks:			56.2		49.8		48.3		56.7	-	57.
Heavy Trucks:			57.6		48.5		40.		58.2		58.
Vehicle Noise:			64.0		60.7		56.		64.7	-	65.
Centerline Distanc	e to Noise C	ontour (in feet)								
				70 d	BA	65 dE	BA	6	0 dBA	55	dBA
			Ldn:	18		38			82		77
		C	NEL:	19		41			88		89

	FHW	A-RD-77-108	HIGH	HWAY NO	DISE PR	EDICT	ION MO	DEL			
Scenario: Existin Road Name: Palmd Road Segment: e/o Ca	ale Ro	d. (SR-18)					Name: umber:		Grove		
SITE SPECIFI	C INI	PUT DATA				Ν	IOISE N	/ODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	łt): 2	7,100 vehicles	s					Autos:	15		
Peak Hour Percentag	je:	10%			Med	dium Tri	ucks (2 /	Axles):	15		
Peak Hour Volun	ie: :	2,710 vehicle	s		Hea	avy True	cks (3+ A	Axles):	15		
Vehicle Spee	ed:	55 mph		V	ehicle N	<i>Nix</i>					
Near/Far Lane Distant	e:	51 feet		-		cleType		Day	Evening	Night	Daily
Site Data					1011			77.5%	•	9.6%	
Barrier Heig	he.	0.0 feet			Me	dium T		84.8%		10.3%	
Barrier Type (0-Wall, 1-Berr		0.0 feet			h	leavy T		86.5%		10.8%	
Centerline Dist. to Barri		72.0 feet									
Centerline Dist. to Observ		72.0 feet		N	loise So				eet)		
Barrier Distance to Observ		0.0 feet				Auto		000			
Observer Height (Above Pa	d):	5.0 feet			Mediun			297			
Pad Elevatio	·	0.0 feet			Heav	y Truck	s: 8.0	006	Grade Ad	justment.	0.0
Road Elevation	on:	0.0 feet		L	ane Equ	iivalen	Distan	ce (in i	feet)		
Road Grad	le:	0.0%				Auto	s: 67.	519			
Left Vie	w:	-90.0 degree	es		Mediun	n Truck	s: 67.	387			
Right Vie	W.	90.0 degree	es		Heav	y Truck	s: 67.	400			
FHWA Noise Model Calcula	tions										
VehicleType REME	-	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
	1.78	1.51		-2.06		-1.20		-4.72		000	0.00
	2.40	-15.73		-2.05		-1.20		-4.88		000	0.00
Heavy Trucks: 8	5.40	-19.69		-2.05		-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (-								
VehicleType Leq Peak				Leq Ev		Leq	Night		Ldn		VEL
Autos:	70.0		68.1		66.4		60.3		68.9		69.
Medium Trucks:	63.4		61.9		55.6		54.0		62.5		62.
Heavy Trucks:	63.		62.0		53.0		54.3		62.6		62.
Vehicle Noise:	71.0	-	69.8		66.9		62.0)	70.6	6	71.
Centerline Distance to Nois	e Co	ntour (in feet)	70 -		67	dD A		C dBA	57	dD A
			Ldn:	70 di 79			dBA 69	1 6	365 365		dBA 86
											86 46
			VFI :	85			32		392		

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		WA-RD-77-108	HIGH	MATI	TOISE FI		-				
	rio: Existing Wi					Project N			Grove		
	ne: Palmdale F ent: e/o Cobalt					Job Nur	nber: 1	1724			
Ŷ	SPECIFIC IN					NG					
Highway Data	SPECIFIC IN	PUIDAIA			Site Con	ditions (F				•	
Average Daily	Traffic (Adt):	28,100 vehicle	s				A	Autos:	15		
• •	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak I	lour Volume:	2,810 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	ehicle Speed:	55 mph		H	Vehicle I	Mix					
Near/Far La	ane Distance:	51 feet		-		icleType		Day	Evening	Night	Daily
Site Data								77.5%	v	9.6%	
	rrier Heiaht:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	
Barrier Type (0-V		0.0 feet				leavy Tru		86.5%		10.8%	
Centerline D	ist. to Barrier:	72.0 feet		F	Noise Sc	ource Elev	ations	: (in fe	eet)		
Centerline Dist.	to Observer:	72.0 feet		F		Autos:	0.0				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height	· /	5.0 feet				v Trucks:	8.0		Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
Ro	ad Elevation:	0.0 feet		-	Lane Eq	uivalent L			feet)		
	Road Grade:	0.0%				Autos:	67.5				
	Left View:	-90.0 degree				n Trucks:	67.3				
	Right View:	90.0 degree	es		Heav	y Trucks:	67.4	100			
FHWA Noise Mod	lel Calculation	-		1							
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite		Fresn	-	Barrier Atte		rm Atten
Autos:	•			-2.0		-1.20		4.72	0.0		0.000
Medium Trucks:				-2.0	-	-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40	-19.53		-2.0	5	-1.20		5.26	0.0	00	0.000
Unmitigated Nois				r atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	· ·		Ldn	C	NEL
Autos:			68.3		66.5		60.5		69.1		69.7
Medium Trucks:			62.1		55.7		54.2		62.6		62.9
Heavy Trucks:		-	62.2		53.2		54.4		62.8		62.9
Vehicle Noise.	71	.8	70.0		67.0		62.2		70.7		71.2
Centerline Distan	ce to Noise C	ontour (in feet)								
					dBA	65 dE		6	60 dBA		5 dBA
						173			374	,	805
			Ldn: VFL:		31 37	1/3			402		303 866

FHWA-RD-77-108 HIC	GHWAY N		REDICTIO	N MODEL		
Scenario: Existing With Phase 1 Road Name: Palmdale Rd. (SR-18) Road Segment: e/o Amethyst Rd.			Project Na Job Nun	ame: Des nber: 1172		
SITE SPECIFIC INPUT DATA			NO	ISE MOD	DEL INPUT	s
Highway Data		Site Con	ditions (H	ard = 10,	Soft = 15)	
Average Daily Traffic (Adt): 27,200 vehicles				Auto	is: 15	
Peak Hour Percentage: 10%		Me	dium Truci	s (2 Axles	s): 15	
Peak Hour Volume: 2,720 vehicles		He	avy Trucks	(3+ Axles	s): 15	
Vehicle Speed: 55 mph	-	Vehicle I	Mise			
Near/Far Lane Distance: 51 feet	-		icleType	Dav	Evening	Night Daily
Site Data		VCIII	Au			9.6% 97.42
Barrier Height: 0.0 feet		Me	edium Truc	ks: 84.8		10.3% 1.84
Barrier Type (0-Wall, 1-Berm): 0.0		F	leavy Truc	ks: 86.5	5% 2.7%	10.8% 0.74
Centerline Dist, to Barrier: 72.0 feet	_					
Centerline Dist. to Observer: 72.0 feet	1	Noise Sc	ource Elev		i feet)	
Barrier Distance to Observer: 0.0 feet			Autos:	0.000		
Observer Height (Above Pad): 5.0 feet			m Trucks:	2.297	Out of a date	
Pad Elevation: 0.0 feet		Heav	y Trucks:	8.006	Grade Ad	justment: 0.0
Road Elevation: 0.0 feet	1	Lane Eq	uivalent D	istance (i	n feet)	
Road Grade: 0.0%			Autos:	67.519		
Left View: -90.0 degrees		Mediur	m Trucks:	67.387		
Right View: 90.0 degrees		Heav	y Trucks:	67.400		
FHWA Noise Model Calculations						
VehicleType REMEL Traffic Flow L	Distance	Finite	Road	Fresnel	Barrier Att	en Berm Atter
Autos: 71.78 1.52	-2.0	-	-1.20	-4.7		0.00
Medium Trucks: 82.40 -15.72	-2.0	-	-1.20	-4.8		0.00
Heavy Trucks: 86.40 -19.67	-2.0	5	-1.20	-5.2	6 0.0	0.00
Unmitigated Noise Levels (without Topo and bar	-					
VehicleType Leq Peak Hour Leq Day		vening	Leq Ni		Ldn	CNEL
Autos: 70.0 68.1		66.4		60.3	68.9	
Medium Trucks: 63.4 61.9		55.6		54.0	62.	
Heavy Trucks: 63.5 62.1		53.0		54.3	62.6	
Vehicle Noise: 71.6 69.9	Ð	66.9		62.0	70.6	6 71
Centerline Distance to Noise Contour (in feet)	70	10.4	05.15		00.004	55 104
		dBA	65 dB	A	60 dBA	55 dBA
Centerline Distance to Noise Contour (in feet) Ldn CNEL	. 7	9	65 dB 170 183	A	60 dBA 366 393	55 dBA 788 848

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	FHV	/A-RD-77-108 HI	GHWAY	NOISE PF	REDICTION	N MODEL		
Road Nam	o: Existing Wi e: SR-395 nt: n/o Palmda	,				ame: Deser aber: 11724		
SITE	SPECIFIC IN	PUT DATA			NO	ISE MODE	L INPUTS	
Highway Data				Site Con	ditions (H	ard = 10, S	oft = 15)	
	Percentage:	3,700 vehicles 10% 4,370 vehicles				Autos s (2 Axles) (3+ Axles)	15	
Ve	hicle Speed:	55 mph	F	Vehicle I	Mix			
Near/Far La	ne Distance:	75 feet	-		icleType	Dav	Evening N	light Daily
Site Data					Aut		•	9.6% 97.42%
Bar	rier Heiaht:	0.0 feet		Me	edium Truc	ks: 84.8%	6 4.9% ·	10.3% 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0		ŀ	leavy Truc	ks: 86.5%	6 2.7% ⁻	10.8% 0.74%
Centerline Dis		84.0 feet		Noise So	ource Elev	ations (in f	eet)	
	to Observer: Above Pad): ad Elevation:	84.0 feet 0.0 feet 5.0 feet 0.0 feet	-	Mediur Heav	Autos: n Trucks: y Trucks:	0.000 2.297 8.006	Grade Adjus	tment: 0.0
	ad Elevation:	0.0 feet	-	Lane Eq		istance (in	feet)	
I	Road Grade:	0.0%			Autos:	75.331		
	Left View: Right View:	-90.0 degrees 90.0 degrees			n Trucks: y Trucks:	75.213 75.225		
FHWA Noise Mode	el Calculation:	6						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.58	-2.7	7	-1.20	-4.75	0.000	0.000
Medium Trucks:	82.40	-13.66	-2.7	6	-1.20	-4.88	0.000	0.00
Heavy Trucks:	86.40	-17.61	-2.7	-	-1.20	-5.21	0.000	0.00
Unmitigated Noise			1					
VehicleType	Leq Peak Hou			vening	Leq Nig		Ldn	CNEL
Autos:	71.		-	67.7		61.7	70.3	70.9
Medium Trucks:	64.		-	56.9		55.4	63.8	64.1
Heavy Trucks:	64.		·	54.4		55.6	64.0	64.
Vehicle Noise:	73.		2	68.3		63.4	71.9	72.4
Centerline Distance	e to Noise Co	ntour (in feet)	70	dDA	6E - 1D	4	60 dBA	EE dDA
		l dr		dBA 13	65 dB. 243	A	60 dBA 525	55 dBA
		Lar CNFI		13 22	243		525 564	1,130
		CNEL	. 1	22	262		504	1,216

	-HW	A-RD-77-108	HIG	HWAY N	IOISE PR	EDICTI	ON MO	DDEL			
Scenario: Existing Road Name: SR-395 Road Segment: n/o Dos		,				Project Job N		Deser 11724			
SITE SPECIFIC	IN	PUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				5	Site Con						
Average Daily Traffic (Adt Peak Hour Percentage Peak Hour Volume	.	9,900 vehicles 10% 4.990 vehicles				dium Tru avy Truc			15		
Vehicle Speed		55 mph	5	L		,	101	/ 0000).	10		
Near/Far Lane Distance		75 feet		1	Vehicle N						
Near a Earle Distance	<i>.</i>	70 1001			Vehi	cleType		Day	Evening	Night	Daily
Site Data							lutos:	77.5%		9.6%	
Barrier Heigh	t:	0.0 feet				dium Tr		84.8%		10.3%	
Barrier Type (0-Wall, 1-Berm):	0.0			H	leavy Tr	ucks:	86.5%	5 2.7%	10.8%	0.749
Centerline Dist. to Barrie	r:	84.0 feet			Noise So	urco El	ovatio	ne (in f	iont)		
Centerline Dist. to Observe	r:	84.0 feet		Ľ.	10/36 30	Autos		0.000	eel)		
Barrier Distance to Observe	r:	0.0 feet			1.4 m - 15	n Trucks		.297			
Observer Height (Above Pad):	5.0 feet							Grade Ad	iustmont	
Pad Elevation	1:	0.0 feet			Heav	y Trucks	S: 8	.006	Grade Au	Jusuneni	. 0.0
Road Elevation	n:	0.0 feet		1	Lane Equ	iivalent	Distar	nce (in	feet)		
Road Grade	e:	0.0%				Autos	s: 75	5.331			
Left Viev	V:	-90.0 degree	s		Mediun	n Trucks	s: 75	5.213			
Right View	V:	90.0 degree	es		Heav	y Trucks	s: 75	5.225			
FHWA Noise Model Calculat	ions										
VehicleType REMEL		Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier At	en Ber	m Atter
Autos: 71	78	4.16		-2.77	7	-1.20		-4.75	0.0	000	0.00
Medium Trucks: 82	40	-13.08		-2.76	6	-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 86	40	-17.04		-2.76	6	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Levels (w			barri								
VehicleType Leq Peak				Leq Ev		Leq	Night		Ldn		NEL
Autos:	72.0	-	70.1		68.3		62.		70.		71.
Medium Trucks:	65.4		63.9		57.5		55.		64.		64.
Heavy Trucks:	65.4		64.0		54.9		56.		64.	-	64.
Vehicle Noise:	73.		71.8		68.8		64	.0	72.	5	73.
Centerline Distance to Noise	Co	ntour (in feet,)								
			L	70 c			dBA		60 dBA		dBA
			Ldn:	12	3	26	66		573	1,	235
			IFI :	13			36		617		328

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Scenar	io: Existing Wi	th Full Project				Proiect N	ama.	Decort	Grove		
	10: Existing VI 1e: SR-395	ann an Froject				Job Nu			Giove		
	nt: n/o Luna R	d.									
SITE	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions (l	lard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	46,500 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	ks (2 .	Axles):	15		
Peak H	lour Volume:	4,650 vehicle	s		Hea	avy Truck	s (3+ .	Axles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		ł		cleType		Dav	Evening	Night	Dailv
Site Data						AL	tos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			H	łeavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	84.0 feet		ŀ	Noise So	urco Elo	vation	s (in fa	oot)		
Centerline Dist.	to Observer:	84.0 feet		ŀ	110/30 00	Autos:		000			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				y Trucks:		006	Grade Adj	ustment	· 0.0
P	ad Elevation:	0.0 feet				·				aoanon	. 0.0
	ad Elevation:	0.0 feet			Lane Equ				feet)		
	Road Grade:	0.0%				Autos:		.331			
	Left View:	-90.0 degree	es			n Trucks:		.213			
	Right View:	90.0 degree	es		Heav	y Trucks:	75.	.225			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Atte	en Bei	rm Atten
Autos:	71.78	3.85		-2.7	-	-1.20		-4.75	0.0		0.000
Medium Trucks:				-2.7	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-17.34		-2.7	6	-1.20		-5.21	0.0	00	0.000
Unmitigated Nois					· · ·						
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	<u> </u>		Ldn		NEL
Autos:			69.8		68.0		61.9	-	70.6		71.3
Medium Trucks:	65		63.5		57.2		55.	-	64.1		64.3
Heavy Trucks:	65		63.7		54.6		55.9	-	64.2		64.4
Vehicle Noise:	73	.2	71.5		68.5		63.	6	72.2		72.7
Centerline Distan	ce to Noise C	ontour (in feet)								
			L		dBA	65 di		6	0 dBA		dBA
			Ldn:	1	18	254			547		178
			VEL:		27	273			588		267

	FH\	VA-RD-77-108	HIGHW	AY NC	DISE PR	EDICTI		EL			
Road Nan	io: Existing Wi ne: SR-395 nt: n/o La Mes	,					Name: De umber: 11		Grove		
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Si	ite Con	ditions	Hard = 1), Sc	oft = 15)		
Average Daily	Traffic (Adt):	43,100 vehicle	6				AL	itos:	15		
	Percentage:	10%			Med	lium Tru	cks (2 Ax	les):	15		
Peak F	lour Volume:	4,310 vehicles	6		Hea	avy Truc	ks (3+ Ax	les):	15		
Ve	hicle Speed:	55 mph		14			-	-			
	ne Distance:	11 feet		Ve	ehicle N	lix cleTvpe			Evening	Might	Deilu
011 0 1				_	venie			ay	Evening	Night	Daily
Site Data				_				7.5%		9.6%	
	rrier Height:	0.0 feet				dium Tr		1.8%		10.3%	
Barrier Type (0-V	. ,	0.0			н	leavy Tr	UCKS: 8	6.5%	2.7%	10.8%	0.74%
Centerline Di		40.0 feet		N	oise So	urce El	evations	(in fe	eet)		
Centerline Dist.		40.0 feet				Autos	: 0.00	0			
Barrier Distance		0.0 feet			Mediun	n Trucks	: 2.29	7			
Observer Height	· ,	5.0 feet			Heav	/ Trucks	: 8.00	6	Grade Ad	iustmeni	: 0.0
	ad Elevation:	0.0 feet					Distance	() m			
	ad Elevation:	0.0 feet		Lé	ane Equ		Distance		eet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	es		Heavy	/ Trucks	: 39.73	4			
	al Calculation	s									
FHWA Noise Mod	ei Calculation										
FHWA Noise Mod VehicleType	REMEL	Traffic Flow	Distar	ice	Finite I	Road	Fresnel		Barrier Att	en Be	m Atten
		Traffic Flow 3.52	Distar	ice 1.36	Finite I	Road -1.20		.59	Barrier Atte 0.0		m Atten 0.000
VehicleType	REMEL 71.78		Distar		Finite I		-4			000	
VehicleType Autos:	REMEL 71.78 82.40	3.52	Distar	1.36	Finite I	-1.20	-4 -4	.59	0.0	000	0.000
VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40	3.52 -13.72 -17.67		1.36 1.40 1.39		-1.20 -1.20	-4 -4	.59 .87	0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40	3.52 -13.72 -17.67 out Topo and	barrier a	1.36 1.40 1.39	ation)	-1.20 -1.20	-4 -4 -5	.59 .87	0.0	000 000 000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (with	3.52 -13.72 -17.67 out Topo and Ir Leq Day	barrier a	1.36 1.40 1.39	ation)	-1.20 -1.20 -1.20	-4 -4 -5	.59 .87	0.0 0.0 0.0	000 000 000 <i>C</i>	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 75	3.52 -13.72 -17.67 out Topo and r Leq Day .5	barrier a	1.36 1.40 1.39	ation) ening	-1.20 -1.20 -1.20	-4 -4 -5 Vight	.59 .87	0.0 0.0 0.0	000 000 000 C	0.000 0.000 0.000 NEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 75 68	3.52 -13.72 -17.67 out Topo and <i>ir</i> Leq Day .5 .9	barrier a	1.36 1.40 1.39	ation) ening 71.8	-1.20 -1.20 -1.20	-4 -4 -5 Vight 65.7	.59 .87	0.0 0.0 0.0 <i>Ldn</i> 74.4	000 000 000 C	0.000 0.000 0.000 NEL 75.0
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leg Peak Hou 75 68 68	3.52 -13.72 -17.67 out Topo and <i>r</i> Leq Day .5 .9 .9	barrier a Le 73.6 67.4	1.36 1.40 1.39	ation) ening 71.8 61.0	-1.20 -1.20 -1.20	-4 -4 -5 Vight 65.7 59.5	.59 .87	0.0 0.0 0.0 <i>Ldn</i> 74.4 67.9	000 000 000 C	0.000 0.000 0.000 NEL 75.0 68.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 75 68 68 77	3.52 -13.72 -17.67 out Topo and <i>ir</i> Leq Day 5 .9 .9 .1	barrier a 73.6 67.4 67.5 75.3	1.36 1.40 1.39 attenua	ation) ening 71.8 61.0 58.5 72.3	-1.20 -1.20 -1.20 <i>Leq I</i>	-4 -4 -5 Vight 65.7 59.5 59.7 67.5	.59 .87 .56	0.0 0.0 0.0 <i>Ldn</i> 74.4 67.9 68.1 76.0	000 000 000 000 C	0.000 0.000 NEL 75.0 68.2 68.2 76.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 75 68 68 77	3.52 -13.72 -17.67 <i>out Topo and</i> <i>ir</i> Leq Day 5 .9 .9 .1 <i>ontour (in feet</i>	barrier a 73.6 67.4 67.5 75.3	1.36 1.40 1.39 attenua eq Eve	ation) ening 71.8 61.0 58.5 72.3 3A	-1.20 -1.20 -1.20 <i>Leq I</i>	-4 -4 -5 Vight 65.7 59.5 59.7 67.5	.59 .87 .56	0.0 0.0 0.0 74.4 67.9 68.1 76.0	000 000 000 000 C L 0 0 55	0.000 0.000 0.000 NEL 75.0 68.2 68.2 76.5 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hot 75 68 68 77	3.52 -13.72 -17.67 out Topo and ir Leg Day 5 .9 .9 .1 Dontour (in feet	barrier a 73.6 67.4 67.5 75.3	1.36 1.40 1.39 attenua	ation) ening 71.8 61.0 58.5 72.3 3A	-1.20 -1.20 -1.20 <i>Leq I</i>	-4 -4 -5 05.7 59.5 59.7 67.5 <i>IBA</i> 7	.59 .87 .56	0.0 0.0 0.0 <i>Ldn</i> 74.4 67.9 68.1 76.0	000 000 000 L L D 55 1	0.000 0.000 NEL 75.0 68.2 68.2 76.5

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGHWA	Y NO	ISE PF	REDICTIO	N MOI	DEL			
Scenari Road Nam Road Segmen		,				Project Na Job Nurr			Grove		
SITES	SPECIFIC IN	PUT DATA				NO	ISE N	IODE	L INPUT	s	
Highway Data				Si	te Con	ditions (H	ard =	10, Sc	oft = 15)		
Average Daily Peak Hour I Peak He	, ,	38,800 vehicles 10% 3,880 vehicles				dium Truck avy Trucks	(2 A	/	15 15 15		
Vel	nicle Speed:	55 mph		Ve	hicle I	liv					
Near/Far Lar	ne Distance:	11 feet		ve		cleType		Dav	Evening	Night	Daily
Site Data					1011	Aut		77.5%	•	9.6%	
	rier Height:	0.0 feet			Me	dium Truc	ks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy Truc	ks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		40.0 feet		No	oise So	urce Elev	ations	s (in fe	et)		
Centerline Dist. t		40.0 feet				Autos:	0.0	00			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (/	,	5.0 feet			Heav	v Trucks:	8.0	06	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet		-		·					
	d Elevation:	0.0 feet		La	ne Equ	ivalent D			'eet)		
F	Road Grade:	0.0%				Autos:	39.9				
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks: y Trucks:	39.7 39.7				
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distand	e	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	71.78	3.07		1.36		-1.20		4.59	0.0	000	0.000
Medium Trucks:	82.40	-14.17		1.40		-1.20		4.87	0.0	000	0.000
Heavy Trucks:	86.40	-18.13		1.39		-1.20		5.56	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and I	barrier at	tenua	ation)						
	Leq Peak Hou			q Eve		Leq Nig			Ldn		NEL
Autos:	75		3.1		71.3		65.3		73.9	-	74.
Medium Trucks:	68		6.9		60.6		59.0		67.5	-	67.
Heavy Trucks:	68		57.0		58.0		59.3		67.6		67.7
Vehicle Noise:	76		'4.8		71.9		67.0		75.6	6	76.
Centerline Distanc	e to Noise Co	ontour (in feet)					-			1	
				70 dB	A	65 dB	A	6	0 dBA		dBA
		1	.dn:	94		202			436	ę	939
			IFL:	101		218			469		.010

FI	HWA-RD-77-108	BHIGHW	AY NOIS			DEL			
Scenario: Existing V Road Name: Palmdale Road Segment: w/o SR-3	Rd. (SR-18)			Project I Job Nu	Name: Imber:		Grove		
SITE SPECIFIC	INPUT DATA						L INPUT	s	
Highway Data			Site	Conditions ('Hard =	10, Sc	ft = 15)		
Average Daily Traffic (Adt):	27,100 vehicle	es			,	Autos:	15		
Peak Hour Percentage:	10%			Medium Tru	cks (2 A	(xles):	15		
Peak Hour Volume:	2,710 vehicle	es		Heavy Truc	ks (3+ A	(xles):	15		
Vehicle Speed:	55 mph		Vohi	le Mix					
Near/Far Lane Distance:	51 feet			VehicleType		Day	Evening	Night	Daily
Site Data						77.5%	•		97.429
				Medium Tr		84.8%		10.3%	
Barrier Height:				Heavy Tr		86.5%		10.8%	
Barrier Type (0-Wall, 1-Berm). Centerline Dist. to Barrier.				moury m	10/10.	00.070	2.170	10.070	0.1 17
Centerline Dist. to Barrier. Centerline Dist. to Observer.			Nois	e Source Ele	evation	s (in fe	et)		
Barrier Distance to Observer.				Autos	: 0.0	000			
Observer Height (Above Pad).			Me	dium Trucks	: 2.2	297			
Pad Elevation			ŀ	leavy Trucks	: 8.0	006	Grade Ad	justment.	0.0
Road Elevation			Land	Equivalent	Distan	no (in i	(aat)		
Road Elevation. Road Grade:	0.0 1000		Lanc	Autos			001/		
Left View			1.4	dium Trucks					
Right View.	00.0 009.0			leavy Trucks					
FHWA Noise Model Calculation	ons								
VehicleType REMEL	Traffic Flow	Dista	nce Fi	nite Road	Fresn	-	Barrier Att	en Ber	m Atten
Autos: 71.7	8 1.51		-2.06	-1.20		-4.72	0.0	000	0.00
Medium Trucks: 82.4			-2.05	-1.20		-4.88		000	0.00
Heavy Trucks: 86.4	0 -19.69		-2.05	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (wi				-				1	
VehicleType Leq Peak H			.eq Evenir				Ldn		VEL
	70.0	68.1		6.4	60.3		68.9		69.
	63.4	61.9		5.6	54.0		62.		62.
	63.5	62.0		3.0	54.3		62.6	-	62.
	71.6	69.8	6	6.9	62.0)	70.6	6	71.
Centerline Distance to Noise	Contour (in fee	t)	70 -/04	05.	04		0 -104		-10.4
		Ldn:	70 dBA 79	65 d		6	0 dBA 365		dBA 86
		Lan: NEL:	79 85	16			365 392		86 46
					2		392	ö	40

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	rio: Existing Wi ne: Luna Rd.	th Full Project				Project Job Nu	Name: ımber:				
Road Segme	ent: e/o SR-395										
	SPECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions (
Average Daily	Traffic (Adt):	7,700 vehicles						Autos:			
Peak Hour	Percentage:	10%				dium Tru					
Peak H	Hour Volume:	770 vehicles			He	avy Truc	ks (3+)	Axles):	15		
Ve	ehicle Speed:	40 mph		F	Vehicle I	Mix					
Near/Far La	ane Distance:	11 feet				cleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%	•	9.6%	
Ba	wier Height	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	
ва Barrier Type (0-И	rrier Height:	0.0 reet			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	
<i>,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ist. to Barrier:	40.0 feet									
Centerline Dist.		40.0 feet			Noise Sc				eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height		5.0 feet				n Trucks		297			
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.	006	Grade Adj	ustment	: 0.0
	ad Elevation: ad Elevation:	0.0 feet		F	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%		F		Autos		934			
	Left View:	-90.0 degree	~		Modiuu	n Trucks		712			
	Right View:	90.0 degree				y Trucks		734			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Atte	en Ber	rm Atten
Autos:	66.51	-2.57		1.3	6	-1.20		-4.59	0.0	00	0.00
Medium Trucks:	77.72	-19.81		1.4	0	-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	82.99	-23.77		1.3	9	-1.20		-5.56	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening	Leq I	·		Ldn		NEL
Autos:	÷		62.2		60.4		54.4	-	63.0		63.
Medium Trucks:			6.6		50.2		48.7		57.1		57.
Heavy Trucks:			58.0		49.0		50.2		58.6		58.
Vehicle Noise:	66	.1 6	64.4		61.1		56.6	6	65.1		65.
Centerline Distan	ce to Noise Co	ontour (in feet)		70	10.4	05		п.,			
			dn:		dBA 19	65 c			60 dBA		dBA
									87		88
			_an: IFL :		20	4			94		202

	FHV	VA-RD-77-108	HIGHW	VAY N		REDICT		EL			
Road Nan	io: Existing Wi ne: Palmdale R nt: e/o Cantina	d. (SR-18)					Name: De lumber: 11		Grove		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE MO	DDE	L INPUTS	5	
Highway Data				5	Site Con	ditions	(Hard = 1	0, So	ft = 15)		
• •	Traffic (Adt): 2		S					itos:	15		
	Percentage:	10%					ucks (2 Ax	· · ·	15		
	lour Volume:	2,770 vehicles	S		He	avy Tru	cks (3+ Ax	ies):	15		
	hicle Speed:	55 mph		١	Vehicle I	Mix					
Near/Far La	ne Distance:	51 feet			Veh	icleType	D	ay	Evening	Night	Daily
Site Data							Autos: 7	7.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium T	rucks: 84	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			ŀ	leavy T	rucks: 80	6.5%	2.7%	10.8%	0.74%
Centerline Di		72.0 feet		1	Voise Sc	ource E	levations	(in fe	et)		
Centerline Dist.		72.0 feet				Auto	s: 0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediur	m Truck	s: 2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	y Truck	s: 8.00	6	Grade Adj	ustment.	0.0
P	ad Elevation:	0.0 feet						-			
Ro	ad Elevation:	0.0 feet		L	ane Eq		t Distance	· ·	eet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree	es			m Truck					
	Right View:	90.0 degree	es		Heav	y Truck	s: 67.40	0			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel		Barrier Atte	en Ber	m Atten
Autos:	71.78	1.60		-2.06	6	-1.20	-4	1.72	0.0	00	0.000
Medium Trucks:	82.40	-15.64		-2.05	5	-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.59		-2.05	5	-1.20	-5	5.26	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	′ L	Leq Ev	/ening	Leq	Night		Ldn	CI	VEL
Autos:	70	.1	68.2		66.5		60.4		69.0		69.6
Medium Trucks:	63	.5	62.0		55.7		54.1		62.6		62.8
Heavy Trucks:	63	.6	62.1		53.1		54.3		62.7		62.8
Vehicle Noise:	71	.7	69.9		67.0		62.1		70.7		71.1
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 a	1BA	65	dBA	6	0 dBA	55	dBA
			Ldn:	80	0	1	72		370	7	98
		CI	VEL:	86	6	1	85		398	8	58

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	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTIO	N MODEL		
	e: Palmdale R	()				ame: Deser aber: 11724		
SITE S	PECIFIC IN	IPUT DATA			NO	ISE MODE	L INPUTS	
Highway Data				Site Co	nditions (H	ard = 10, S	oft = 15)	
Average Daily T Peak Hour I Peak Ho	, ,	28,600 vehicle 10% 2,860 vehicle			edium Truck eavy Trucks	. ,	15	
	nicle Speed:	55 mph		Vehicle	Mix			
Near/Far Lar	e Distance:	51 feet		Vel	nicleType	Day	Evening	Night Daily
Site Data					Aut	os: 77.5%	5 12.9%	9.6% 97.42%
Bar	rier Height:	0.0 feet		N	ledium Truc	ks: 84.8%	4.9%	10.3% 1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Truc	ks: 86.5%	2.7%	10.8% 0.74%
Centerline Dis		72.0 feet		Noise S	ource Elev	ations (in f	eet)	
Centerline Dist. t		72.0 feet			Autos:	0.000		
Barrier Distance t		0.0 feet		Mediu	ım Trucks:	2.297		
Observer Height (/	Above Pad): d Elevation:	5.0 feet 0.0 feet		Hea	vy Trucks:	8.006	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet		Lane Ec	uivalent D	istance (in	feet)	
	load Grade:	0.0%			Autos:	67.519		
	Left View:	-90.0 degree	25	Mediu	im Trucks:	67.387		
	Right View:	90.0 degree		Hea	vy Trucks:	67.400		
FHWA Noise Mode	Calculation	s						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	71.78	1.74		2.06	-1.20	-4.72	0.00	
Medium Trucks:	82.40	-15.50		2.05	-1.20	-4.88	0.00	
Heavy Trucks:	86.40	-19.45		2.05	-1.20	-5.26	0.00	0 0.00
Unmitigated Noise				,	1			
VehicleType Autos:	Leq Peak Hou 70		68.4	Evening	Leq Nig	60.5	Ldn 69.2	CNEL 69.8
Autos: Medium Trucks:	70		68.4 62.2	55.8		60.5 54.2	62.7	62.9
Heavy Trucks:	63		62.2 62.3	53.2		54.2 54.5	62.8	63.0
Vehicle Noise:	71		70.1	67.1	-	62.3	70.8	71.3
Centerline Distanc	e to Noise Co	ontour (in feet)					
				70 dBA	65 dB.	A I	60 dBA	55 dBA
			Ldn:	81	176		378	815
			VFL:	88				

	FHW	A-RD-77-108 H	IGHWA	Y NOISE P	REDICTI	ON MODE	L		
	Existing With Palmdale Ro e/o Amethys	I. (SR-18)				Name: De umber: 113			
SITE S	PECIFIC INF	PUT DATA					DEL INPUT	s	
Highway Data				Site Cor	nditions	(Hard = 10	, Soft = 15)		
Average Daily Ti	raffic (Adt): 2	7,600 vehicles				Au	os: 15		
Peak Hour P	ercentage:	10%		Me	edium Tru	icks (2 Axle	es): 15		
Peak Ho	ur Volume:	2,760 vehicles		He	eavy Truc	ks (3+ Axle	es): 15		
Vehi	cle Speed:	55 mph		Vehicle	Mix				
Near/Far Lane	e Distance:	51 feet			nicleType	Da	y Evening	Night	Daily
Site Data				10.			.5% 12.9%		97.429
	er Height:	0.0 feet		М	Iedium Tr		.8% 4.9%	10.3%	
Barrier Type (0-Wa	•	0.0 reet			Heavy Tr	ucks: 86	.5% 2.7%	10.8%	
Centerline Dist.		72.0 feet							
Centerline Dist. to		72.0 feet		Noise S		evations (
Barrier Distance to		0.0 feet			Autos				
Observer Height (A		5.0 feet			m Trucks				
0 1	Elevation:	0.0 feet		Hear	vy Trucks	8.006	Grade Ad	justment	: 0.0
Road	Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
Re	oad Grade:	0.0%			Autos	67.519)		
	Left View:	-90.0 degrees		Mediu	m Trucks	67.387	,		
F	Right View:	90.0 degrees		Hear	vy Trucks	67.400)		
FHWA Noise Model	Calculations								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Att	en Bei	m Atten
Autos:	71.78	1.59	-3	2.06	-1.20	-4.	72 0.0	000	0.00
Medium Trucks:	82.40	-15.65	-3	2.05	-1.20	-4.	88 0.0	000	0.00
Heavy Trucks:	86.40	-19.61	-3	2.05	-1.20	-5.	26 0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and ba	arrier at	tenuation)					
VehicleType L	eq Peak Hour	Leq Day	Leo	g Evening	Leq	Vight	Ldn	С	NEL
Autos:	70.1		3.2	66.4		60.4	69.0		69.
Medium Trucks:	63.5		2.0	55.6		54.1	62.6		62.
Heavy Trucks:	63.5		2.1	53.1		54.3	62.		62.
Vehicle Noise:	71.7		9.9	67.0		62.1	70.3	7	71.
Centerline Distance	to Noise Col	ntour (in feet)		70 -10 4	05	10.4	00-104		-10.4
				70 dBA		1BA	60 dBA		dBA
		10	in:	80	17	' 1	369	7	'96
		CNE	-	86		34	397		356

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Scena		VA-RD-77-108 I ear 2019 Withou				Project N			Grove		
	ne: SR-395 nt: n/o Palmda	le Rd. (SR-18)				Job Nu	mber:	11724			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (I	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	55,500 vehicles						Autos:	15		
Peak Hour	Percentage:	10%				dium Truc					
Peak H	lour Volume:	5,550 vehicles			He	avy Truck	:s (3+ /	(xles)	15		
Ve	hicle Speed:	55 mph		F	Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		F		cleType		Day	Evening	Night	Daily
Site Data							itos:	77.5%	· ·	9.6%	
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	84.0 feet			Noise Sc	ource Ele	vation	s (in fe	eet)		
Centerline Dist.		84.0 feet				Autos:	0.	000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height	· /	5.0 feet			Heav	y Trucks:	8.	006	Grade Adj	ustmen	t: 0.0
-	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		1	Lane Eq				teet)		
	Road Grade:	0.0%				Autos:		331			
	Left View:	-90.0 degree				n Trucks:		213			
	Right View:	90.0 degree	5		Heav	y Trucks:	75.	225			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresr		Barrier Atte	en Be	rm Atten
Autos:	71.78	4.62		-2.7	7	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-12.62		-2.7	6	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-16.57		-2.7	6	-1.20		-5.21	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and L	arrier	atten	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	L	.eq E	vening	Leq N	light		Ldn	C	NEL
Autos:	72	.4 7	0.5		68.8		62.7	,	71.3	3	71.9
Medium Trucks:	65	.8 6	4.3		58.0		56.4	ļ.	64.9)	65.
Heavy Trucks:	65	.9 6	4.4		55.4		56.7	·	65.0)	65.
Vehicle Noise:	74	.0 7	2.2		69.3		64.4	Ļ	73.0)	73.4
Centerline Distan	ce to Noise Co	ontour (in feet)									
					dBA	65 di		6	60 dBA		i dBA
									615	4	.325
		L CN	dn:		33 43	286			662		,325 .426

Cooperiou	FHW	A-RD-77-108 HIC	GHWAY	NOISE PI	REDICTIO	ON MODEL		
Road Name: Scenario. (Road Name: S Road Segment: I	SR-395	ar 2019 Without nas Rd.				Name: Des mber: 117		
SITE SPE	ECIFIC INF	PUT DATA			N	DISE MOI	DEL INPUTS	
Highway Data				Site Con	ditions (Hard = 10,	Soft = 15)	
Average Daily Trai	ffic (Adt): 56	6,500 vehicles				Auto	os: 15	
Peak Hour Per	centage:	10%		Me	dium Tru	cks (2 Axle	s <i>):</i> 15	
Peak Hour	Volume:	5,650 vehicles		He	avy Truck	ks (3+ Axle	s <i>):</i> 15	
Vehicle	e Speed:	55 mph		Vehicle	Mise			
Near/Far Lane [Distance:	75 feet			icleType	Day	Evening	Night Daily
Site Data				Ven		utos: 77.	•	9.6% 97.42%
					Al edium Tri			9.0% 97.42% 10.3% 1.84%
	Height:	0.0 feet			Heavy Tru			10.8% 0.74%
Barrier Type (0-Wall,	,	0.0		,	leavy III	icks. 00.	576 2.176	10.0 % 0.74 %
Centerline Dist. to		84.0 feet		Noise Se	ource Ele	vations (in	n feet)	
Centerline Dist. to C		84.0 feet			Autos.	0.000		
Barrier Distance to C		0.0 feet		Mediu	m Trucks.	2.297		
Observer Height (Abo	,	5.0 feet		Heav	y Trucks.	8.006	Grade Adj	ustment: 0.0
	levation:	0.0 feet		l ano Err	uivalent	Distance (in foot)	
	d Grade:	0.0 feet 0.0%		Lane Ly	Autos		in leety	
	a Grade: eft View:	-90.0 degrees		Madiu	m Trucks.			
-	aht View:	90.0 degrees			vy Trucks.			
κι	yn view.	90.0 degrees		i iea	y mucks.	13.223		
FHWA Noise Model C								
VehicleType F			Distance		Road	Fresnel	Barrier Atte	
Autos:	71.78	4.70	-2.7		-1.20	-4.7		
Medium Trucks:	82.40	-12.54	-2.7		-1.20	-4.8		
Heavy Trucks:	86.40	-16.50	-2.7	76	-1.20	-5.2	1 0.0	0.000
Unmitigated Noise Le			-	,				
<i>,</i> ,	q Peak Hour			Evening	Leq N	0	Ldn	CNEL
Autos:	72.5			68.8		62.8	71.4	72.0
Medium Trucks:	65.9			58.0		56.5	64.9	65.2
Heavy Trucks:	65.9		-	55.5		56.7	65.1	65.2
	74.1	1 72.3	3	69.4		64.5	73.0	73.5
Vehicle Noise:								
	o Noise Coi	ntour (in feet)	1					
Vehicle Noise:	o Noise Coi			dBA	65 d		60 dBA	55 dBA
Vehicle Noise:	o Noise Coi	ntour (in feet) Ldn CNFI	c 1	dBA 34 44	65 d 28 31	9	60 dBA 623 670	55 dBA 1,341 1,443

Tuesday, January 08, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PR	EDICTIO	N MOE	DEL			
Road Nam	io: Opening Ye ne: SR-395 nt: n/o Luna R	ear 2019 Witho d.	ut			Project Na Job Nurr			Grove		
SITE	SPECIFIC IN	IPUT DATA				NO	ISE M	IODE		s	
Highway Data				S	te Con	ditions (H	ard =	10, So	ft = 15)		
Peak Hour	Traffic (Adt): Percentage: lour Volume:	56,900 vehicles 10% 5.690 vehicles				dium Truck avy Trucks	ks (2 A	/	15 15 15		
	hicle Speed:	55 mph	, ,			,	. (
	ne Distance:	75 feet		V	hicle I	lix cleType		Dav	Evening	Niaht	Dailv
Site Data					veni	Aut		77.5%	12.9%	9.6%	
				_	M	dium Truc		34.8%	4.9%	10.3%	
Barrier Type (0-W		0.0 feet 0.0				leavy Truc		36.5%		10.8%	
Centerline Di		84.0 feet		N	oise So	urce Elev	ations	; (in fe	et)		
	to Observer: 'Above Pad): ad Elevation:	84.0 feet 0.0 feet 5.0 feet 0.0 feet			Heav	Autos: n Trucks: y Trucks:	0.0 2.2 8.0	97 06	Grade Adj	iustment	± 0.0
	ad Elevation:	0.0 feet		La	ine Equ	Autos:	75.3		eet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos: n Trucks: y Trucks:	75.3 75.2 75.2	13			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	e/ l	Barrier Att	en Bei	rm Atten
Autos:	71.78	4.73		-2.77		-1.20		4.75	0.0	000	0.000
Medium Trucks:	82.40	-12.51		-2.76		-1.20	-	4.88	0.0	000	0.000
Heavy Trucks:	86.40	-16.47		-2.76		-1.20	-	5.21	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	L	eq Eve	ening	Leq Nig	ght		Ldn		NEL
Autos:	72		70.6		68.9		62.8		71.4		72.0
Medium Trucks:	65		64.4		58.1		56.5		65.0		65.2
Heavy Trucks:	66	-	64.5		55.5		56.8		65.1		65.2
Vehicle Noise:	74	l.1	72.4		69.4		64.5		73.1	I	73.6
Centerline Distant	ce to Noise C	ontour (in feet))								
				70 dE	BA	65 dB	A	6	0 dBA	55	dBA
			Ldn:	135		290			625	1,	348
		CI	IEL:	145		312			673	1,	450

	FHV	VA-RD-77-108	HIGH	WAY NO	DISE PRI	EDICTI	on Moi	DEL			
Scenario: Openi Road Name: SR-39 Road Segment: n/o La	5		ut		I		Name: I Imber: 1		Grove		
SITE SPECIFI	C IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	ite Cond	itions (Hard =	10, Sc	oft = 15)		
Average Daily Traffic (A	dt): 5	56,900 vehicles	5					Autos:	15		
Peak Hour Percenta	qe:	10%			Med	ium Tru	cks (2 A	xles):	15		
Peak Hour Volur	ne:	5,690 vehicles	5		Hea	vy Truc	ks (3+ A	xles):	15		
Vehicle Spe	ed:	55 mph		V	ehicle M	iv					
Near/Far Lane Distan	ce:	11 feet		v		leType		Day	Evening	Night	Daily
Site Data					VOINO			77.5%	•	9.6%	
	h.c.	0.0.4			Med	dium Tri		84.8%		10.3%	
Barrier Heig Barrier Type (0-Wall, 1-Ber		0.0 feet 0.0				avy Tri		86.5%		10.8%	
Centerline Dist, to Barr		0.0 40.0 feet				,					
Centerline Dist. to Observ		40.0 feet		N	loise Sou				eet)		
Barrier Distance to Observ		0.0 feet				Autos		000			
Observer Height (Above Pa		5.0 feet			Medium			297			
Pad Flevati		0.0 feet			Heavy	Trucks	: 8.0	006	Grade Ad	justment.	0.0
Road Elevati		0.0 feet		L	ane Equ	ivalent	Distand	e (in i	feet)		
Road Gra	de:	0.0%				Autos	: 39.9	934	í		
Left Vie	ew:	-90.0 degree	s		Medium	Trucks	: 39.7	712			
Right Vie	ew:	90.0 degree			Heavy	Trucks	: 39.7	734			
FHWA Noise Model Calcul	ation	s		1							
VehicleType REME	L	Traffic Flow	Dis	stance	Finite F	Road	Fresn	el	Barrier Att	en Ber	m Atten
	1.78	4.73		1.36		-1.20		-4.59		000	0.00
	2.40	-12.51		1.40		-1.20		-4.87		000	0.00
	6.40	-16.47		1.39		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise Levels										1 -	
VehicleType Leq Pear			74.8	Leq Ev		Leq I			Ldn		VEL
Autos: Medium Trucks:	76 70		74.8 58.6		73.0 62.2		67.0 60.7		75.6 69.1		76. 69.
	70		58.6 58.7		62.2 59.7		60.7		69.1		69. 69.
Heavy Trucks:										-	
Vehicle Noise:	78	-	76.5		73.5		68.7		77.3	2	77.
Centerline Distance to Noi	se Co	ontour (in feet)	1	70 d	RA	65 c	IRA	F	0 dBA	55	dBA
				70 0		50 0			o abh	00	00/1
			dn:	121	1	26	1		563	1	212

Tuesday, January 08, 2019

	io: Opening Ye ne: SR-395	ear 2019 Witho	ut			Project I Job Nu	Vame: I mber: *		Grove		
Road Segme	nt: n/o Bear Va	alley Rd.									
	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data				1	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	51,700 vehicles	5					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	5,170 vehicles	5		Hea	avy Truci	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	11 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			H	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	40.0 feet		1	Voise So	urce Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	40.0 feet		Ľ.	10.00 00	Autos		000	.00		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks		97			
Observer Height	(Above Pad):	5.0 feet				v Trucks		006	Grade Adj	ustment	t: 0.0
P	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		1	ane Equ				feet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	S		Heav	y Trucks	39.7	734			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Atte		rm Atten
Autos:	71.78	4.31		1.36		-1.20		-4.59	0.0		0.000
Medium Trucks:	82.40			1.40		-1.20		-4.87	0.0		0.000
Heavy Trucks:	86.40	-16.88		1.39	9	-1.20		-5.56	0.0	00	0.000
Unmitigated Nois					,					-	
VehicleType	Leq Peak Hou			leq Ev	ening	Leq N	·		Ldn		NEL
Autos:	76		74.4		72.6		66.5		75.2		75.8
Medium Trucks:	69 69		58.2 58.3		61.8 59.3		60.3 60.5		68.7 68.9		69.0
Heavy Trucks:											69.0
Vehicle Noise:			76.1		73.1		68.3		76.8		77.3
	co to Noiso C	ontour (in feet									
Centerline Distan	Le lo Noise Ci			70 -							
Centerline Distan			dn:	70 c		65 d		6	0 dBA 528		dBA ,137

	FHW	A-RD-77-108	HIGHW	AY NO	ISE PR	EDICTI		DEL			
Road Nam	io: Opening Yea e: Palmdale Ro nt: w/o SR-395		ut			Project I Job Nu	Vame: [Imber: 1		Grove		
SITE	SPECIFIC INF	PUT DATA				N	OISE N	ODE	L INPUTS	5	
Highway Data				Sit	e Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	7.100 vehicles	5				A	utos:	15		
• •	Percentage:	10%			Med	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	2,710 vehicles	3		Hea	avy Truci	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		1/-	h / - /		-	-			
Near/Far La	ne Distance:	51 feet		ve	hicle N	nix cleType		Day	Evening	Night	Deilu
Site Data				_	veni				•	•	Daily
						A dium Tru		77.5% 34.8%		9.6%	97.42% 1.84%
	rrier Height:	0.0 feet						34.8% 36.5%		10.3%	
Barrier Type (0-W	. ,	0.0			h	leavy Tru	ICKS: 0	50.5%	2.1%	10.8%	0.74%
Centerline Dis		72.0 feet		No	ise So	urce Ele	vations	(in fe	eet)		
Centerline Dist.		72.0 feet				Autos	: 0.0	00			
Barrier Distance		0.0 feet			Mediun	n Trucks	: 2.2	97			
Observer Height (,	5.0 feet			Heav	v Trucks	: 8.0	06	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		La	ne Equ	iivalent			eet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	s		Heav	y Trucks	: 67.4	00			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	71.78	1.51		-2.06		-1.20		4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.73		-2.05		-1.20		4.88	0.0	00	0.000
				-2.05				5.26	0.0	00	0.000
Heavy Trucks:	86.40	-19.69		2.00		-1.20					
Heavy Trucks: Unmitigated Noise					tion)	-					
Unmitigated Noise VehicleType	e Levels (witho Leq Peak Hour	ut Topo and Leq Day	barrier a		ning	-1.20 Leq N	light		Ldn		VEL
Unmitigated Noise VehicleType Autos:	e Levels (witho Leq Peak Hour 70.0	ut Topo and Leq Day	barrier a	attenua	ning 66.4	-	light 60.3		68.9		69.5
Unmitigated Noise VehicleType	e Levels (witho Leq Peak Hour	ut Topo and Leq Day	barrier a	attenua	ning	-	light				69.5
Unmitigated Noise VehicleType Autos:	e Levels (witho Leq Peak Hour 70.0	ut Topo and Leq Day	barrier a	attenua	ning 66.4	-	light 60.3		68.9		69.5 62.7
Unmitigated Noise VehicleType Autos: Medium Trucks:	e Levels (witho Leq Peak Hour 70.0 63.4	ut Topo and Leq Day	barrier a Le 58.1 51.9	attenua	ning 66.4 55.6	-	<i>light</i> 60.3 54.0		68.9 62.5		69.5 62.7 62.7
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	e Levels (witho Leq Peak Hour 70.0 63.4 63.4 71.6	ut Topo and Leq Day	barrier a 68.1 61.9 62.0 69.8	attenua eq Evel	ning 66.4 55.6 53.0 66.9	Leq N	light 60.3 54.0 54.3 62.0		68.9 62.5 62.6 70.6		69.5 62.7 62.7 71.0
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	e Levels (witho Leq Peak Hour 70.0 63.4 63.4 71.6	ut Topo and Leq Day	barrier a 26 58.1 51.9 52.0 59.8 0	attenua eq Eve 70 dB	ning 66.4 55.6 53.0 66.9	Leq N 65 a	light 60.3 54.0 54.3 62.0		68.9 62.5 62.6 70.6	55	69.5 62.7 62.7 71.0 dBA
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	e Levels (witho Leq Peak Hour 70.0 63.4 63.4 71.6	ut Topo and Leq Day	barrier a 68.1 61.9 62.0 69.8	attenua eq Evel	ning 66.4 55.6 53.0 66.9	Leq N	<i>light</i> 60.3 54.0 54.3 62.0 <i>BA</i> 9		68.9 62.5 62.6 70.6	55	69.5 62.7 62.7 71.0

Tuesday, January 08, 2019

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIO	N MC	DEL			
Road Nam	io: Opening Y e: Luna Rd. nt: e/o SR-39	ear 2019 Witho 5	ut			Project N Job Nur			Grove		
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	5,500 vehicle	s					Autos:	15		
	Percentage:	10%				dium Truc					
	our Volume:	550 vehicle	s		He	avy Truck	s (3+.	Axles):	15		
	hicle Speed:	40 mph		V	ehicle l	Nix					
Near/Far La	ne Distance:	11 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.429
Bai	rier Height:	0.0 feet			Me	edium True	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	40.0 feet		N	oise Sc	ource Elev	vation	s (in fe	et)		
Centerline Dist.		40.0 feet		-		Autos:		000			
Barrier Distance		0.0 feet			Mediur	n Trucks:		297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.	006	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		-		·					
	ad Elevation:	0.0 feet		L	ane Eq	uivalent D			reet)		
1	Road Grade:	0.0%			Marthur	Autos: n Trucks:		.934			
	Left View: Right View:	-90.0 degre 90.0 degre				y Trucks:		.712 .734			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-4.04		1.36		-1.20		-4.59	0.0	000	0.00
Medium Trucks:	77.72			1.40		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-25.23		1.39		-1.20		-5.56	0.0	000	0.00
Unmitigated Noise			-								
VehicleType	Leq Peak Ho			eq Eve		Leq Ni			Ldn		NEL
Autos:			60.7		59.0		52.		61.		62.
Medium Trucks:			55.1		48.8		47.	-	55.		55.
Heavy Trucks:			56.5		47.5		48.		57.		57.
Vehicle Noise:			62.9		59.6		55.	1	63.	D	64.
Centerline Distant	ce to Noise C	ontour (in feet)	70 dł	34	65 dE	RΔ	F	0 dBA	55	i dBA
			I dn:	15		32	er 1		70		151
		C	VFI :	16		35			75		161
		0.				50			-		

I	HWA-RD-77-1	08 HIGH	IWAY NO	DISE PREDICT		DEL			
Scenario: Opening Road Name: Palmda Road Segment: e/o Can	e Rd. (SR-18)	hout			Name: lumber:		Grove		
SITE SPECIFIC	INPUT DAT	4		N	IOISE I	NODE	L INPUT	s	
Highway Data			S	ite Conditions					
Average Daily Traffic (Adt	: 29.200 vehic	les				Autos:	15		
Peak Hour Percentage				Medium Tri	ucks (2)	Axles):	15		
Peak Hour Volume		les		Heavy True	cks (3+)	Axles):	15		
Vehicle Speed	: 55 mph		14	ehicle Mix					
Near/Far Lane Distance	51 feet		V	VehicleType		Dav	Evening	Night	Daily
Site Data					Autos:	77.5%			97.42%
				/ Medium T		84.8%		9.0%	
Barrier Heigh		1		Heavy T		86.5%		10.3%	
Barrier Type (0-Wall, 1-Berm				neavy I	ucks.	00.3%	2.170	10.0%	0.745
Centerline Dist. to Barrie			N	oise Source E	levation	s (in fe	eet)		
Centerline Dist. to Observe				Auto	s: 0.	000			
Barrier Distance to Observe	0.0 1000			Medium Truck	s: 2.	297			
Observer Height (Above Pad				Heavy Truck	s: 8.	006	Grade Ad	iustment:	0.0
Pad Elevation				,					
Road Elevation	0.0 1000		L	ane Equivalen			leet)		
Road Grade	0.070			Auto		519			
Left Viev	· 00.0 dog	rees		Medium Truck		387			
Right Viev	" 90.0 deg	rees		Heavy Truck	s: 67.	400			
FHWA Noise Model Calculat	ons								
VehicleType REMEL	Traffic Flov		stance	Finite Road	Fresi		Barrier Att		m Atten
Autos: 71.			-2.06	-1.20		-4.72	0.0		0.00
Medium Trucks: 82.			-2.05	-1.20		-4.88	0.0		0.00
Heavy Trucks: 86.	40 -19.3	36	-2.05	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (w								T	
VehicleType Leq Peak			Leq Eve		Night		Ldn		VEL
Autos:	70.4	68.5		66.7	60.0		69.3		69.
Medium Trucks:	63.7	62.2		55.9	54.3	-	62.8		63.
Heavy Trucks:	63.8	62.4		53.3	54.6		62.9		63.
Vehicle Noise:	71.9	70.2		67.2	62.3	3	70.9)	71.
Centerline Distance to Noise	Contour (in fe	et)	70 //		10.4				
		L	70 dl		dBA	6	i0 dBA		dBA
		Ldn: CNFI :	83 89		78 91		383 413		26 89

Tuesday, January 08, 2019

	FHV	va-RD-77-108	HIGH	IWAY I	NOISE PR	REDICTIC		DEL			
			ut			Project N			Grove		
	Road Name: Palmdale Rd. (SR-18) Road Segment: elo Cobalt Rd. SITE SPECIFIC INPUT DATA vay Data verage Daily Traffic (Adt): 30,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,070 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 51 feet					Job Nu	nper:	11724			
•											
SITE Highway Data	ad Segment: e/o Cobalt Rd. SITE SPECIFIC INPUT DATA y Data rarge Daily Traffic (Adt): 30,700 vehicles Peak Hour Percentage: 10% Peak Hour Potenentage: 10% Peak Hour Volume: 3,070 vehicles Vehicle Speed: 55 mph lear/Far Lane Distance: 51 feet ta 0.0 feet Type (0-Wall, 1-Berm): 0.0 feet robstance to Observer: 72.0 feet robstance to Observer: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Beltype REMEL Traffic Flow Distance to set (without Topo and barri 915 yppe					NC ditions (F			L INPUTS off = 15)	5	
* *	Scenario: Opening Year 2019 Wit Road Name: Palmdale Rd. (SR-18) bad Segment: elo Cobalt Rd. SITE SPECIFIC INPUT DAT/ y Data arage Daily Traffic (Adt): 30,700 vehic Peak Hour Porcentage: 10% Peak Hour Porcentage: 3,070 vehic Vehicle Speed: 55 mph Vehicle Speed: 50 feet Type (O-Wall, 1-Berrn): 0.0 enterline Dist. to Observer: 72.0 feet ra Distance to Observer: 72.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.1 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.1 feet Road Elevation: 0.0							Autos:	,		
• •	range Daily Traffic (Adt): 30 Peak Hour Percentage: Peak Hour Volume: 3 Vehicle Speed: Near/Far Lane Distance: Ita Barrier Height: rType (0-Wall, 1-Berm): enterline Dist. to Barrier: terline Dist. to Observer: er Distance to Observer: ver Height (Above Pad): Pad Elevation: Road Grade: Left View:		3		Me	dium Truc					
						avy Truck					
		-,	, ,	L		·	- (
				L	Vehicle I						
	no Biotanoo.	01 1001			Vehi	cleType		Day	Evening	Night	Daily
Site Data								77.5%		9.6%	
Ba	rrier Height:	0.0 feet				edium Tru		84.8%		10.3%	
		0.0			F	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	72.0 feet		Ē	Noise Sc	ource Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	72.0 feet		Ē		Autos:		000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		97			
	,				Heav	v Trucks:	8.0	006	Grade Adj	ustment	: 0.0
				L							
				L	Lane Eq				feet)		
		0.070				Autos:	67.				
		•				n Trucks:	67.3				
	Right View:	90.0 degree	es		Heav	y Trucks:	67.4	400			
FHWA Noise Mod	el Calculation	s		- 1							
VehicleType			Dis	tance	Finite		Fresn	-	Barrier Atte		rm Atten
				-2.0		-1.20		-4.72	0.0		0.000
Medium Trucks:				-2.0	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-19.15		-2.0	15	-1.20		-5.26	0.0	00	0.000
VehicleType				Leq E	vening	Leq N	<u> </u>		Ldn		NEL
					66.9		60.9		69.5		70.1
Medium Trucks:	• ·				56.1		54.6		63.0		63.2
Heavy Trucks:	64	-			53.5		54.8		63.1		63.3
Vehicle Noise:	72	.2	70.4		67.4		62.6		71.1		71.6
Centerline Distan	ce to Noise Co	ontour (in feet)								
					dBA	65 dl		6	60 dBA		dBA
			Ldn:	-	35	184			396	-	354
			IFI :		12	198			427		919

	FHW	A-RD-77-108 HIC	GHWAY	NOISE PI	REDICTIO	N MODEL			
Road Nam	io: Opening Yea le: Palmdale Rd nt: e/o Amethyst	. (SR-18)				ame: Dese nber: 1172			
SITE	SPECIFIC INP	UT DATA			NO	ISE MOD	EL INPUT	s	
Highway Data				Site Con	ditions (H	lard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt): 29	,700 vehicles				Auto	s: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles): 15		
Peak H	lour Volume: 2	970 vehicles		He	avy Truck	s (3+ Axles): 15		
Ve	hicle Speed:	55 mph		Vehicle I	Mise				
Near/Far La	ne Distance:	51 feet			icleType	Dav	Evening	Night	Daily
Site Data				Ven		tos: 77.5	•	9.6%	
				M	edium Tru			10.3%	1.84%
	rrier Height:	0.0 feet 0.0			leavy Tru			10.8%	0.74%
Barrier Type (0-W Centerline Dis		72.0 feet							
Centerline Dist.		72.0 feet		Noise So		ations (in	feet)		
Barrier Distance		0.0 feet			Autos:	0.000			
Observer Height (5.0 feet			m Trucks:	2.297			
	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Ad	justment:	0.0
	ad Elevation:	0.0 feet		Lane Eq	uivalent D) istance (ii	n feet)		
	Road Grade:	0.0%			Autos:	67.519	,		
	Left View:	-90.0 degrees		Mediu	n Trucks:	67.387			
	Right View:	90.0 degrees			y Trucks:	67.400			
FHWA Noise Mod	el Calculations								
VehicleType	REMEL	Traffic Flow L	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	71.78	1.91	-2.0)6	-1.20	-4.72		000	0.000
Medium Trucks:	82.40	-15.33	-2.0)5	-1.20	-4.88	3 0.0	000	0.000
Heavy Trucks:	86.40	-19.29	-2.0)5	-1.20	-5.20	6 0.0	000	0.000
Unmitigated Noise	e Levels (withou	ut Topo and bar	rier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ght	Ldn	CI	VEL
Autos:	70.4		5	66.8		60.7	69.3	3	69.9
Medium Trucks:	63.8		-	56.0		54.4	62.9		63.1
Heavy Trucks:	63.9	62.4	4	53.4		54.7	63.0		63.1
Vehicle Noise:	72.0	70.2	2	67.3		62.4	71.0)	71.4
Centerline Distant	ce to Noise Con	ntour (in feet)							
				dBA	65 dE		60 dBA		dBA
		Ldn		34	180		388		36
		CNEL	.: 9	90	194		417	8	99

Tuesday, January 08, 2019

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE P	REDICTIC	N MO	DEL			
Scenario: Road Name: Road Segment:	SR-395	ar 2019 w/ Ph le Rd. (SR-18)				Project N Job Nu			Grove		
SITE SP	ECIFIC IN	PUT DATA				NC	DISE N	/IODE	L INPUT	s	
Highway Data				5	Site Cor	nditions (I	Hard =	10, Se	oft = 15)		
Average Daily Tra Peak Hour Pe Peak Hou	rcentage:	6,100 vehicle 10% 5.610 vehicle				edium Truc eavy Truck	:ks (2 A	/			
Vehic	le Speed:	55 mph			/ehicle						
Near/Far Lane	Distance:	75 feet		· ·		iviix nicleType		Dav	Evening	Niaht	Dailv
Site Data					ven			77.5%	Ű	9.6	
	er Height: 1-Berm):	0.0 feet 0.0				edium Tru Heavy Tru	cks:	84.8% 86.5%	4.9%	10.3 10.8	% 1.84%
Centerline Dist.	to Barrier:	84.0 feet			laise S	ource Ele	vation	e (in f	oot)		
	Observer: ove Pad): Elevation:	84.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Heav	Autos: m Trucks: vy Trucks:	0.0 2.2 8.0	000 297 006	Grade Ad	ljustme	nt: 0.0
	Elevation:	0.0 feet		1	ane Eq	uivalent I Autos:			teet)		
	ad Grade: Left View: ight View:	0.0% -90.0 degree 90.0 degree				m Trucks: vy Trucks:	75.2	213			
FHWA Noise Model (Calculation	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	71.78	4.67		-2.77	,	-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-12.57		-2.76		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-16.53		-2.76		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise L	evels (with	out Topo and	barrie	er atten	uation)						
VehicleType Le	eq Peak Hou	r Leq Day	1	Leq Ev	rening	Leq N	light		Ldn		CNEL
Autos:	72.	-	70.6		68.8		62.8		71.4		72.0
Medium Trucks:	65.	-	64.4		58.0		56.5		64.	-	65.
Heavy Trucks:	65.		64.5		55.4		56.7		65.		65.3
Vehicle Noise:	74.		72.3		69.3		64.5		73.	0	73.
Centerline Distance	to Noise Co	ontour (in feet)			r.					
			L	70 d		65 di		6	60 dBA	-	5 dBA
			Ldn:	13		288	-		620		1,335
		CI	VEL:	14	4	309	9		667		1,436

F	HWA-RD-77-10	8 HIGH	WAY NC	DISE PREDIC	TION MO	DDEL			
Scenario: Opening Road Name: SR-395 Road Segment: n/o Dos		hase 1			ct Name: Number:				
SITE SPECIFIC	INPUT DATA				NOISE	MODE	L INPUT	s	
Highway Data			S	te Condition					
Average Daily Traffic (Adt)	60.000 vehicl	es				Autos:	15		
Peak Hour Percentage				Medium 1	Trucks (2	Axles):	15		
Peak Hour Volume		es		Heavy Tr	,				
Vehicle Speed						· ·			
Near/Far Lane Distance			Ve	ehicle Mix			1		
A ¹ A				VehicleTy		Day	Evening	Night	Daily
Site Data				Medium	Autos:	77.5% 84.8%		9.6% 10.3%	
Barrier Height								10.3%	
Barrier Type (0-Wall, 1-Berm)				Heavy	Trucks:	80.5%	2.7%	10.8%	0.74
Centerline Dist. to Barrier			N	oise Source	Elevatio	ns (in f	eet)		
Centerline Dist. to Observer	01.01001			Au	tos: 0	.000	1		
Barrier Distance to Observer				Medium Truc	ks: 2	.297			
Observer Height (Above Pad)				Heavy Truc	:ks: 8	.006	Grade Ad	justment.	0.0
Pad Elevation				,				·	
Road Elevation			La	ane Equivale			feet)		
Road Grade						.331			
Left View	00.0 0090	ees		Medium Truc		.213			
Right View	90.0 degr	ees		Heavy Truc	cks: 75	.225			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Flow	_	tance	Finite Road		_	Barrier At		m Atter
Autos: 71.3		-	-2.77	-1.20	-	-4.75		000	0.00
Medium Trucks: 82.4			-2.76	-1.20		-4.88		000	0.00
Heavy Trucks: 86.4	40 -16.24	4	-2.76	-1.20)	-5.21	0.0	000	0.00
Unmitigated Noise Levels (w				,					
VehicleType Leq Peak F			Leq Eve		q Night		Ldn		VEL
	72.8	70.9		69.1	63		71.		72
	66.2	64.7		58.3	56		65.		65.
	66.2	64.8		55.7	57.		65.		65.
	74.3	72.6		69.6	64.	8	73.	3	73
Centerline Distance to Noise	Contour (in fee	et)							
		L	70 dE		5 dBA	6	60 dBA		dBA
		Ldn: CNEL:	140 150		301 324		648 697		396 502

Tuesday, January 08, 2019

Road Nam		ar 2019 w/ Phas	ie 1			Project N Job Nu			Grove		
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				Site Con	ditions (I			,			
Average Daily	. ,						Autos:				
	Percentage:	10%				dium Truc					
		5,960 vehicles			He	avy Truck	is (3+7	Axles):	15		
	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data				-	Autos: 77.5% 12.9% 9.6%						97.42%
Ba	rier Heiaht:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	84.0 feet			Noise Sc	ource Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	84.0 feet		F		Autos		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (Above Pad):	5.0 feet				v Trucks:		006	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet				· · · ·	-				
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalent l	Distan	ce (in	feet)		
I	Road Grade:	0.0%				Autos:	75.	331			
	Left View:	-90.0 degrees			Mediur	n Trucks:	75.	213			
	Right View:	90.0 degrees			Heav	y Trucks:	75.	225			
FHWA Noise Mode				- 1							
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresi		Barrier Atte		rm Atten
Autos:	71.78	4.93		-2.7		-1.20		-4.75		000	0.000
Medium Trucks:	82.40	-12.31		-2.7	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-16.26		-2.7	6	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Hour			eq E	vening	Leq N	<u> </u>		Ldn		NEL
Autos:	72.).8		69.1		63.0	-	71.6	-	72.2
Medium Trucks:	66.		1.6		58.3		56.		65.2	-	65.4
Heavy Trucks:	66.3		1.7		55.7		57.0		65.3		65.4
Vehicle Noise:	74.:	3 7:	2.6		69.6		64.7	7	73.3	\$	73.8
Centerline Distand	e to Noise Co	ntour (in feet)		70	-10.4	05 4	0.4		0.104		-10.4
			dn:		dBA 39	65 d		6	645		dBA .390

	FHWA	A-RD-77-108 HI	GHWAY	NOISE PI	REDICTI	on Mode	EL		
Road Nam	io: Opening Year ne: SR-395 nt: n/o La Mesa I		1			Name: De umber: 11	esert Grove 724		
SITE	SPECIFIC INP	UT DATA			N	OISE MO	DEL INPUT	S	
Highway Data				Site Cor	nditions (Hard = 10), Soft = 15)		
Average Daily	Traffic (Adt): 57	,600 vehicles				Au	tos: 15		
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Axi	les): 15		
Peak H	lour Volume: 5	,760 vehicles		He	avy Truc	ks (3+ Axi	les): 15		
Ve	hicle Speed:	55 mph		Vehicle	Miy				
Near/Far La	ne Distance:	11 feet			icleType	Da	ay Evening	Night Da	ilv
Site Data				ven			.5% 12.9%	9.6% 97.4	· ·
				M	edium Tr		.8% 4.9%		34%
	rrier Height:	0.0 feet 0.0			Heavy Tr		3.5% 2.7%		74%
Barrier Type (0-W Centerline Dis	. ,	40.0 feet			loary m	uono. oc		10.070 0.1	
Centerline Dist.		40.0 feet		Noise S	ource Ele	evations ('in feet)		
Barrier Distance		40.0 feet			Autos	: 0.00	0		
Observer Height (5.0 feet		Mediu	m Trucks	2.29	7		
	ad Elevation:	0.0 feet		Heav	/y Trucks	: 8.00	6 Grade Adj	iustment: 0.0	
	ad Elevation:	0.0 feet		Lane Eo	uivalent	Distance	(in feet)		
	Road Grade:	0.0%			Autos		. ,		
		-90.0 degrees		Mediu	m Trucks				
	Right View:	90.0 degrees			/y Trucks		4		
FHWA Noise Mod	el Calculations								
VehicleType		raffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berm Att	len
Autos:	71.78	4.78	1.3	36	-1.20	-4	.59 0.0	00 0.	.000
Medium Trucks:	82.40	-12.46	1.4	40	-1.20	-4	.87 0.0	00 0.	.000
Heavy Trucks:	86.40	-16.41	1.3	39	-1.20	-5	.56 0.0	000 0.	.000
Unmitigated Noise		ıt Topo and baı	rrier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq E	evening	Leq I	Vight	Ldn	CNEL	
Autos:	76.7	74.8	-	73.1		67.0	75.6		76.2
Medium Trucks:	70.1	68.6	-	62.3		60.7	69.2		69.4
Heavy Trucks:	70.2	68.8	8	59.7		61.0	69.3	8 6	69.5
Vehicle Noise:	78.3	76.0	6	73.6		68.7	77.3	3	77.7
Centerline Distant	ce to Noise Con	tour (in feet)				-			
				dBA	65 0		60 dBA	55 dBA	
		Ldr		22	26	-	567	1,222	
		CNEL	.: 1	31	28	13	610	1,314	

Tuesday, January 08, 2019

Site Data Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.4 Barrier Type (0-Wall, 1-Berm): 0.0 Centeline Dist. to Barrier: 40.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.3% 1.4 Barrier Distance to Observer: 40.0 feet Noise Source Elevations: (in feet) Autos: 2.7% 10.8% 0.7 Observer Height (Above Pad): 5.0 feet Noise Source Elevations: 0.000 Medium Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 39.34 Medium Trucks: 39.34 Heavy Trucks: 82.40 -12.89 1.40 -1.20 -4.59 0.000 0. Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.57 0.000 0. Medium Trucks: 82.40 -16.85 1.39 -1.20 -4.57 0.000 0. Medium Trucks: 82.40		FHWA	-RD-77-108 HIG	HWAY N		REDICTIO				
Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 52,100 vehicles Autos: 15 Peak Hour Porentage: 10% Medium Trucks (2 Ackes): 15 Peak Hour Volume: 5,210 vehicles Medium Trucks (2 Ackes): 15 Vehicle Speed: 55 mph Medium Trucks (2 Ackes): 15 Near/Far Lane Distance: 11 feet Vehicle Mix Vehicle Mix Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97. Centerline Dist. to Observer: 40.0 feet Heavy Trucks: 88.5% 2.7% 10.8% 0.3 Road Grade. 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Autos: 39.934 Vehicle Type REMEL Traffic Flow Distance Finite Road Freenel Barrier Atten Berm Att Vehicle Type REMEL Traffic Flow Distance Finite Road Freenel Barrier Atten Berm Att Vehicle Type REMEL Traffic Flow Distance <td< th=""><th>Road Nam</th><th>e: SR-395</th><th></th><th>I</th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	Road Nam	e: SR-395		I						
Average Daily Traffic (Adt): 52,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 5,210 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 11 feet Site Data Autos: 15 Barrier Height: 0.0 feet Autos: 77.5% Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 14. Centerline Dist. to Barrier: 40.0 feet Medium Trucks: 86.5% 2.7% 10.3% 14. Barrier Height: 0.0 feet Medium Trucks: 86.5% 2.7% 10.3% 14. Centerline Dist. to Diserver: 0.0 feet Autos: 0.000 Medium Trucks: 8.006 Grade Adjustment: 0.0 Barrier Jeight (Above Pad): 5.0 feet Heavy Trucks: 39.934 Medium Trucks: 39.934 Road Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 39.712 Heavy Trucks: 86.40 -16.85 1.36 -1.20 -4.69	SITE	SPECIFIC INPU	UT DATA			NO	ISE MOI	DEL INPUT	'S	
Notes Medium Trucks (2 Akles): 15 Peak Hour Volume: 5,210 vehicles Heavy Trucks (3 Akles): 15 Vehicle Speed: 55 mph Vehicle Type Day Evening Night Da Site Data Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.5% 4.9% 10.3% 1.5 Centerline Dist. to Barrier: 40.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0.7 Deserver Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos: 39.934 Autos: 39.934 Left View: -90.0 degrees Medium Trucks: 39.712 Heavy Trucks: 9.0000 0.0 Medium Trucks: 8.40 -18.5 1.36 -1.20 -4.59 0.000 0.0 Medium Trucks:	Highway Data			41	Site Con	ditions (H	ard = 10,	Soft = 15)		
Venicle Mix Venicle Mix Venicle Mix Venicle Mix Site Data Venicle Mix Utos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.5% 4.9% 10.3% 1.8 Barrier Dist. to Dasrier: 40.0 feet Medium Trucks: 86.5% 2.7% 10.3% 1.8 Barrier Dist. to Dasrier: 40.0 feet Moise Source Elevations (in feet) Moise Source Elevations (in feet) Moise Source Elevations (in feet) Model mix 0.000 Medium Trucks: 39.934 Left View: 90.0 degrees Medium Trucks: 39.712 Heavy Trucks: 39.734 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Freenel Barrier Atten Berm Attance Autos: 71.78 4.35 1.36 -1.20 -4.59 0.000 0.00 Medium Trucks: 86.40 -16.85	Peak Hour	Percentage:	10%				s (2 Axle	s): 15		
Near/Far Lane Distance: 11 feet VehicleType Day Evening Night Day Site Data Autos: 77.5% 1.2.9% 9.6.8% 97.4 0.0 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 0.9% 97.4 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Desrver: 40.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0.7 Barrier Type (0-Wall, 1-Berm): 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.7 Centerline Dist. to Doserver: 0.0 feet Moise Source Elevations (in feet) Medium Trucks: 39.934 Road Elevation: 0.0 feet Road Grade: 0.0% Autos: 39.712 Heavy Trucks: 81.00 feerees Filter Road Fresnel Barrier Atten Berrier Atten Autos: 71.78 4.35 1.36 -1.20 -4.56 0.000 0.0	Ve	hicle Speed:	55 mph	1	/ehicle	Mix				
Site Data Autos: 77.5% 12.9% 9.6% 97.4 Barrier Height: 0.0 feet Medium Trucks: 84.9% 4.9% 10.3% 1.8 Barrier Type (0-Wall, 1-Berm): 0.0 Centeine Dist. to Barrier: 40.0 feet Heavy Trucks: 86.5% 4.9% 10.3% 1.8 Barrier Dist. to Dserver: 40.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Noise Source Ilevations 0.000 Medium Trucks: 2.97 Heavy Trucks: 3.934 Heavy Trucks: 3.934 Left View: 9.0.0 degrees Medium Trucks: 3.934 Left View: 9.0.0 degrees Medium Trucks: 3.9.34 1.28 Noise Source 1.29% 0.000 0.0 Medium Trucks: 3.9.34 Left View: 9.0.0 degrees Medium Trucks: 3.9.34 1.28 </td <td>Near/Far La</td> <td>ne Distance:</td> <td>11 feet</td> <td>E E</td> <td></td> <td></td> <td>Dai</td> <td>/ Evenina</td> <td>Niaht</td> <td>Daily</td>	Near/Far La	ne Distance:	11 feet	E E			Dai	/ Evenina	Niaht	Daily
Barrier Treight: Utilitie Barrier Treight: 0.0 teet Barrier Treight: 0.0 teet Centerline Dist. to Doserver: 40.0 feet Centerline Dist. to Doserver: 0.0 feet Barrier Tstep (Web) 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 39.712 Heavy Trucks: 39.734 FHWA Noise Model Calculations VehicleType VehicleType REMEL Traffic Flow Distance VehicleType ReMel Traffic Flow Distance Heavy Trucks: 86.40 -16.85 1.39 -1.20 -4.59 0.000 0.0 Heavy Trucks: 86.40 -16.85 1.39 -1.20 -4.56 0.000 0.0 Unitigated Noise Levels (without Topo and barrier attenuation) VelicleType Leg Peak Hour Leg D	Site Data							•		
Centerline Dist. to Observer: 40.0 feet Noise Source Elevations (in feet) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Left View: -90.0 degrees Autos: 39.934 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.59 0.000 0.0 Medium Trucks: 82.40 -16.85 1.39 -120 -5.56 0.000 0.0 Medium Trucks: 89.7 68.3 59.3 60.5 68.8 6 Medium Trucks:		•								
Centerline Dist. to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: -90.0 degrees Heavy Trucks: 39.74 VehicleType REMET Autos: 71.78 Medium Trucks: 86.40	Centerline Dis	st. to Barrier:	40.0 feet	,	Voise Sc	urce Flev	ations (ii	1 feet)		
Left View: -90.0 degrees Medium Trucks: 39.712 Right View: 90.0 degrees Heavy Trucks: 39.734 FHWA Noise Model Calculations Medium Trucks: 39.734 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 71.78 4.35 1.36 -1.20 -4.59 0.000 0. Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.67 0.000 0. Medium Trucks: 82.40 -16.85 1.39 -1.20 -5.66 0.000 0. Unnitigated Noise Levels (without Top on and barrier attenuation) Medium Trucks: 69.7 68.2 61.8 60.3 68.8 60 Medium Trucks: 69.7 68.3 59.3 60.5 68.9 60 Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 60 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 60 dBA	Barrier Distance Observer Height (Pa	to Observer: Above Pad): ad Elevation:	0.0 feet 5.0 feet 0.0 feet		Mediur Heav	Autos: n Trucks: y Trucks:	0.000 2.297 8.006	Grade Ad	djustmen	t: 0.0
Right View: 90.0 degrees Heavy Trucks: 93.734 FHWA Noise Model Calculations Heavy Trucks: 93.734 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Medium Trucks: 24.0 -12.89 1.40 -1.20 -4.67 0.000 0.0 Heavy Trucks: 86.40 -16.85 1.39 -1.20 -5.56 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Pay Leq Evening Leq Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 7.68.2 61.8 60.3 68.8 0.00 Medium Trucks: 69.7 68.3 59.3 60.5 68.9 0.00 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8 76.8	1	Road Grade:	0.0%			Autos:	39.934			
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Autos: 71.78 4.35 1.36 -1.20 -4.59 0.000 00. Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.67 0.000 00. Heavy Trucks: 86.40 -16.85 1.39 -1.20 -5.66 0.000 0. Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 5 Medium Trucks: 69.7 68.3 59.3 60.5 68.9 6 Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 6 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 Centerline Distance to Noise Contour (In feet) 10 dBA 65 dBA 60 dBA 55 dBA <td></td>										
Autos: 71.78 4.35 1.36 -1.20 -4.59 0.000 0. Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.87 0.000 0. Heavy Trucks: 82.40 -12.89 1.40 -1.20 -4.87 0.000 0. Unitigated Noise Levels (without Topo and barrier attenuation) -120 -5.56 0.000 0. VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Medium Trucks: 69.7 68.2 61.8 60.3 68.8 0. Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 0. Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 Centerline Distance to Noise Contour (in feet) TO dBA 65 dBA 60 dBA 55 dBA	FHWA Noise Mode	el Calculations								
Medium Trucks: 82.40 -12.89 1.40 -1.20 -4.87 0.000 0. Heavy Trucks: 86.40 -16.85 1.39 -1.20 -5.56 0.000 0. Umitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 7 Medium Trucks: 69.7 68.2 61.8 60.3 68.8 60 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 7 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 7 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA	VehicleType	REMEL T	raffic Flow Di	stance	Finite	Road	Fresnel	Barrier At	ten Be	rm Atten
Heavy Trucks: 86.40 -16.85 1.39 -1.20 -5.56 0.000 0. Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 . Medium Trucks: 69.7 68.3 59.3 60.5 68.9 0 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.	Autos:	71.78	4.35	1.36	5	-1.20	-4.5	i9 0.	000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 1 Medium Trucks: 69.7 68.3 59.3 60.5 68.9 0 Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 0 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Medium Trucks:	82.40	-12.89	1.40)	-1.20	-4.8	7 0.	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 76.3 74.4 72.6 66.6 75.2 75.4 76.8	Heavy Trucks:	86.40	-16.85	1.39)	-1.20	-5.5	i6 0.	000	0.00
Autos: 76.3 74.4 72.6 66.6 75.2 7 Medium Trucks: 69.7 68.2 61.8 60.3 68.8 6 Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 6 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 7 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Unmitigated Noise	e Levels (withou	t Topo and barr	ier atten	uation)					
Medium Trucks: 69.7 68.2 61.8 60.3 68.8 60.3 Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 60.5 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	VehicleType	Leg Peak Hour	Leq Day	Leg Ev	ening	Leq Nig	pht	Ldn	C	NEL
Heavy Trucks: 69.7 68.3 59.3 60.5 68.9 60 Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 76.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Autos:	76.3	74.4	,	72.6		66.6	75.	2	75.
Vehicle Noise: 77.9 76.1 73.2 68.3 76.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Medium Trucks:	69.7	68.2		61.8		60.3	68.	8	69.0
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Heavy Trucks:	69.7	68.3		59.3		60.5	68.	9	69.0
70 dBA 65 dBA 60 dBA 55 dBA	Vehicle Noise:	77.9	76.1		73.2		68.3	76.	.8	77.3
	Centerline Distance	ce to Noise Cont	tour (in feet)							
Ldn: 114 246 530 1,143				70 a	IBA	65 dB.	A	60 dBA	55	dBA
			Ldn:	11	4	246		530	1	,143
CNEL: 123 265 571 1,229			CNEL:	12	3	265		571	1	,229

	FHW	/A-RD-77-108	HIGH	VAY NO	OISE PF	REDICTI	ON MOD	EL			
	Palmdale R	ar 2019 w/ Pha d. (SR-18)	se 1				Name: Do umber: 11		Grove		
SITE SE	PECIFIC IN	PUT DATA					OISE M			s	
Highway Data				S	ite Con	ditions	(Hard = 1	0, Sof	t = 15)		
Average Daily Tr	affic (Adt): 2	8,000 vehicles					A	utos:	15		
Peak Hour Pe	ercentage:	10%			Mee	dium Tru	icks (2 Ax	les):	15		
Peak Hou	ur Volume:	2,800 vehicles			Hea	avy Truc	ks (3+ Ax	les):	15		
Vehio	cle Speed:	55 mph		V	ehicle l	Niv					
Near/Far Lane	Distance:	51 feet		-		cleType		ay	Evening	Night	Daily
Site Data					1011			7.5%	12.9%	9.6%	
	or Hoight	0.0 feet			Me	dium Tr		4.8%	4.9%	10.3%	
	er Height:	0.0 feet				leavy Tr		6.5%	2.7%	10.8%	
Barrier Type (0-Wal Centerline Dist.		0.0 72.0 feet				,					
Centerline Dist. to		72.0 feet		Ν	loise So	urce El	evations	(in fee	et)		
Barrier Distance to		0.0 feet				Autos		0			
Observer Height (Al		5.0 feet			Mediur	n Trucks	3: 2.29	7			
U 1	Flevation:	0.0 feet			Heav	y Trucks	8: 8.00	6 (Grade Adj	iustment.	0.0
	Elevation:	0.0 feet		1	ano Fai	uvalent	Distance	(in fe	of)		
	ad Grade:	0.0 reet		-	ane Ly	Autos					
AC AC	l eft View:	-90.0 degree	_		Modiur	n Trucks					
F	Right View:	90.0 degree				y Trucks					
	°	•	0								
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite		Fresne		Barrier Atte	en Ber	m Atten
Autos:	71.78	1.65		-2.06		-1.20		1.72	0.0		0.00
Medium Trucks:	82.40	-15.59		-2.05		-1.20		1.88	0.0		0.00
Heavy Trucks:	86.40	-19.55		-2.05		-1.20	-8	5.26	0.0	000	0.00
Unmitigated Noise L	Levels (witho	out Topo and I	oarrier	attenu	uation)						
	eq Peak Hou			Leq Ev		Leq			Ldn		VEL
Autos:	70.		8.3		66.5		60.5		69.1		69.
Medium Trucks:	63.		2.1		55.7		54.2		62.6		62.
Heavy Trucks:	63.		2.2		53.1		54.4		62.7	,	62.
Vehicle Noise:	71.	8 7	0.0		67.0		62.2		70.7	,	71.
Centerline Distance	to Noise Co	ntour (in feet)								1	
				70 d			'BA) dBA		dBA
			.dn: IEL:	80 86		17			373 401		03 64

Tuesday, January 08, 2019

	o: Opening Ye	ar 2019 w/ Pha	ase 1			Project N	lame:	Desert	Grove		
Road Name Road Segment						Job Nu	mber:	11724			
SITE S	PECIFIC IN	PUT DATA		1		N	DISE	NODE	L INPUTS	5	
Highway Data				Site Con	ditions (l	Hard =	10, So	oft = 15)			
Average Daily T	raffic (Adt):					Autos:	15				
Peak Hour P	age Daily Traffic (Adt): 7,300 Peak Hour Percentage: 10 Peak Hour Volume: 7300 Vehicle Speed: 40 pear/Far Lane Distance: 111 Barrier Height: 00 Type (0-Wall, 1-Berm): 00 nterline Dist. to Barrier: 400 drine Dist. to Observer: 400 Distance to Observer: 00 er Height (Above Pad): 53 Pad Elevation: 00 Road Elevation: 00 Road Grade: 00				Mee	dium Truc	:ks (2 /	Axles):	15		
Peak Ho	our Volume:	730 vehicles	5		Hea	avy Truck	is (3+7	Axles):	15		
Veh	icle Speed:	40 mph		-	Vehicle I	<i>li</i> v					
Near/Far Lan	e Distance:	11 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							itos:	77.5%	•	9.6%	5 97.429
Parr	ior Hoight:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	5 1.849
		0.0			H	leavy Tru	cks:	86.5%	2.7%	10.8%	6 0.749
		40.0 feet			Noise So	urce Ele	vation	s (in fe	eet)		
		40.0 feet				Autos:	0.	000			
		0.0 feet			Mediur	n Trucks:	2.	297			
0 1	,	5.0 feet			Heav	v Trucks:	8.	006	Grade Adj	ustmen	t: 0.0
		0.0 feet		F			Di- 1	(!			
		0.0 feet		F	Lane Equ				teet)		
R		0.0%				Autos:		934			
		-90.0 degree				n Trucks:		712 734			
	Right View:	90.0 degree	S		Heav	y Trucks:	39.	734			
FHWA Noise Model		-									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresr		Barrier Atte		rm Atten
Autos:	66.51	-2.81		1.3	-	-1.20		-4.59	0.0		0.00
Medium Trucks:	77.72	-20.04		1.4		-1.20		-4.87	0.0		0.00
Heavy Trucks:	82.99	-24.00		1.3	19	-1.20		-5.56	0.0	00	0.00
Unmitigated Noise					· · ·						
21	eq Peak Hou	. ,		Leq E	vening	Leq N	<u> </u>		Ldn		NEL
Autos:	63.		52.0		60.2		54.1		62.8		63.
Medium Trucks:	57.		56.4		50.0		48.5		56.9		57.
Heavy Trucks:	59.		57.8		48.7		50.0	-	58.3		58.
Vehicle Noise:	65.		64.2		60.9		56.3	3	64.9)	65.
Centerline Distance	e to Noise Co	ntour (in feet)	1	70							
			Later		dBA	65 d		6	60 dBA		5 dBA
			Ldn:	1	8	39			84		182

	FHW	A-RD-77-108	HIGHWA	AY NOIS	E PREDIC	TION MO	DEL			
Road Nam	io: Opening Yea e: Palmdale Ro nt: e/o Cantina	d. (SR-18)	ise 1			ct Name: Number:		Grove		
	SPECIFIC INI	PUT DATA						L INPUTS	5	
Highway Data				Site	Condition	s (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 3	0,700 vehicles					Autos:	15		
Peak Hour	Percentage:	10%			Medium 7	rucks (2 /	Axles):	15		
Peak H	lour Volume:	3,070 vehicles			Heavy Tr	ucks (3+ /	Axles):	15		
Ve	hicle Speed:	55 mph		Vah	cle Mix					
Near/Far La	ne Distance:	51 feet		ven	VehicleTyp	20	Day	Evening	Night	Daily
Site Data				_	veniciery	Autos:	77.5%	•	•	97.42%
				_	Medium		84.8%		9.0%	
	rrier Height:	0.0 feet				Trucks: Trucks:	84.8%		10.3%	
Barrier Type (0-W	. ,	0.0			neavy	TTUCKS.	00.3%	2.170	10.0%	0.74%
Centerline Di		72.0 feet		Nois	e Source	Elevation	s (in f	eet)		
Centerline Dist.		72.0 feet			Aut	os: 0.	000			
Barrier Distance		0.0 feet		M	edium Truc	ks: 2.	297			
Observer Height	· · · ·	5.0 feet		1	Heavy Truc	ks: 8.	006	Grade Adj	ustment.	: 0.0
	ad Elevation:	0.0 feet		Lon	Employeda	nt Dioton	aa (in	fa a 4)		
	ad Elevation:	0.0 feet		LdII	e Equivale			ieel)		
	Road Grade:	0.0%			Aut		519			
	Left View:	-90.0 degree			edium Truc		387			
	Right View:	90.0 degree	S		Heavy Truc	KS: 67.	400			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow	Distan	ce F	inite Road	Fresr	nel	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.05		2.06	-1.20)	-4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.19		2.05	-1.20)	-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.15		-2.05	-1.20)	-5.26	0.0	00	0.000
Unmitigated Nois		<u> </u>								
VehicleType	Leq Peak Hour			q Evenii	0	q Night		Ldn		NEL
	70.0	-	8.7 32.5		56.9 56.1	60.9	-	69.5		70.1
Autos:						54.6	>	63.0		63.2
Medium Trucks:	64.0									
Medium Trucks: Heavy Trucks:	64.0	0 (62.6		53.5	54.8	-	63.1		
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.0 72.1	2	62.6 70.4				-	63.1 71.1		
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.0 72.1	2	32.6 70.4	-	53.5 67.4	54.8 62.0	6	71.1		71.6
Medium Trucks: Heavy Trucks:	64.0 72.1	2 ntour (in feet,	32.6 70.4	70 dBA	53.5 67.4 68	54.8 62.0 5 dBA	6	71.1 60 dBA	55	63.3 71.6 dBA
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.0 72.1	2 ntour (in feet,	32.6 70.4	-	53.5 67.4	54.8 62.0	6	71.1	55	71.6

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	FH\	WA-RD-77-108	HIGHWA	Y NOISE P	REDICTIO	N MODEL			
	e: Palmdale F		ase 1			ame: Dese aber: 11724			
	PECIFIC IN	IPUT DATA					EL INPUTS	S	
Highway Data				Site Co	nditions (H	ard = 10, S	oft = 15)		
Average Daily 1	raffic (Adt):		s			Autos			
Peak Hour I		10%			edium Truck	. ,			
	our Volume:	3,200 vehicle	S	He	eavy Trucks	(3+ Axles)	: 15		
	icle Speed:	55 mph		Vehicle	Mix				
Near/Far Lar	e Distance:	51 feet		Vel	nicleType	Day	Evening	Night	Daily
Site Data					Aut	os: 77.5%	6 12.9%	9.6%	97.42%
Ban	rier Height:	0.0 feet			ledium Truc			10.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Truc	ks: 86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	72.0 feet		Noise S	ource Elev	ations (in	feet)		
Centerline Dist. t		72.0 feet			Autos:	0.000	,		
Barrier Distance t		0.0 feet		Mediu	im Trucks:	2.297			
Observer Height (A	,	5.0 feet		Hea	vy Trucks:	8.006	Grade Adj	iustment	0.0
	d Elevation:	0.0 feet		1	, 	I-4 (1	6		
	d Elevation: Road Grade:	0.0 feet		Lane Ec	uivalent D Autos:	67.519	reet)		
F	l eft View:	0.0%		Modii	im Trucks:	67.387			
	Right View:	-90.0 degre 90.0 degre			vy Trucks:	67.400			
FHWA Noise Mode	l Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	e Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.23		2.06	-1.20	-4.72	0.0		0.00
Medium Trucks:	82.40			-2.05	-1.20	-4.88			0.00
Heavy Trucks:	86.40			-2.05	-1.20	-5.26	0.0	00	0.00
Unmitigated Noise				,	1				
21	Leq Peak Hou			q Evening	Leq Nig		Ldn		NEL
Autos: Medium Trucks:	70 64		68.9 62.6	67.1 56.3		61.0 54.7	69.7 63.2		70.3 63.4
Heavy Trucks:	64		62.8	53.7		54.7 55.0	63.3		63.4
Vehicle Noise:	72		70.6	67.6		62.7	71.3		71.
Centerline Distanc	e to Noise Co	ontour (in fee)						-
			, 	70 dBA	65 dB	A	60 dBA	55	dBA
			Ldn:	88	189		408	. 8	78

FI	HWA-RD-77-108 H	IIGHWA	Y NO	SE PREDICT	ION MO	DEL			
<i>Scenario:</i> Opening <i>Road Name:</i> Palmdale <i>Road Segment:</i> e/o Amet	Rd. (SR-18)	se 1			Name: lumber:		Grove		
SITE SPECIFIC	INPUT DATA							s	
Highway Data			Sit	e Conditions	(Hard =	10, Sc	ft = 15)		
Average Daily Traffic (Adt):	30,800 vehicles					Autos:	15		
Peak Hour Percentage:	10%			Medium Tr	ucks (2)	Axles):	15		
Peak Hour Volume:	3,080 vehicles			Heavy Tru	cks (3+)	Axles):	15		
Vehicle Speed:	55 mph		Vo	hicle Mix					
Near/Far Lane Distance:	51 feet		ve	VehicleType		Day	Evening	Night	Daily
Site Data					, Autos:	77.5%	•	9.6%	
			-	Medium T		84.8%		10.3%	
Barrier Height:				Heavy T		86.5%		10.8%	
Barrier Type (0-Wall, 1-Berm): Centerline Dist, to Barrier:				nouty i	dono.	00.070	2.770	10.070	0.1 17
Centerline Dist. to Barrier: Centerline Dist. to Observer:			No	ise Source E	levation	s (in fe	et)		
Barrier Distance to Observer:				Auto	s: 0.	000			
	0.0 1001		1	Aedium Truck	s: 2.	297			
Observer Height (Above Pad): Pad Elevation:				Heavy Truck	s: 8.	006	Grade Adj	justment:	0.0
Pad Elevation: Road Elevation:			1.2	ne Equivalen	t Dicton	oo (in i	inot)		
Road Elevation: Road Grade:	0.0 1001		Lai	Auto		519	eer)		
Left View:	0.070			Auto Aedium Truck		387			
Right View:				Heavy Truck		307 400			
right view.	30.0 degrees	>		moury maon	0. 07.	100			
FHWA Noise Model Calculation	ons								
VehicleType REMEL	Traffic Flow	Distand	ce 🛛	Finite Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos: 71.7	8 2.06	-	2.06	-1.20		-4.72	0.0	000	0.00
Medium Trucks: 82.4	0 -15.18	-	2.05	-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 86.4	0 -19.13	-	2.05	-1.20		-5.26	0.0	000	0.00
Unmitigated Noise Levels (wi	thout Topo and b	arrier at	tenua	tion)					
VehicleType Leq Peak H	our Leq Day	Le	q Ever	ning Leq	Night		Ldn	CI	VEL
		8.7		66.9	60.9		69.5		70.
Medium Trucks:	64.0 6	2.5		56.1	54.6	6	63.0)	63.
Heavy Trucks:	64.0 6	2.6		53.6	54.8	3	63.2	2	63.
Vehicle Noise:	72.2 7	0.4		67.4	62.6	6	71.1		71.
Centerline Distance to Noise	Contour (in feet)								
			70 dB/	A 65	dBA	6	0 dBA	55	dBA
					~ -		007	0	56
	L	dn:	86	1	84		397	0	30

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		VA-RD-77-108			NOISE PH						
Road Nan	ne: SR-395	ear 2019 w/ Pha	ise 1	&		Project Job N	Name: umber:				
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	56,300 vehicles						Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles).	15		
Peak H	lour Volume:	5,630 vehicles			He	avy Truc	ks (3+	Axles).	15		
Ve	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	75 feet		-		cleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	0	9.6%	
	rrier Height:	0.0 feet			Me	, edium Tr		84.8%		10.3%	
Barrier Type (0-W		0.0 1001			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	. ,	84.0 feet		-		,					
Centerline Dist.		84.0 feet		L	Noise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		.000			
Observer Height	(Above Pad):	5.0 feet				n Trucks		.297	Grade Adj		
P	ad Elevation:	0.0 feet			Heav	y Trucks	. 8.	.006	Grade Adj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		Γ	Lane Eq	uivalent	Distan	ice (in	feet)		
	Road Grade:	0.0%				Autos	: 75	.331			
	Left View:	-90.0 degree	s		Mediur	n Trucks		.213			
	Right View:	90.0 degree	s		Heav	y Trucks	: 75	.225			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	4.68		-2.7	7	-1.20		-4.75	0.0	00	0.00
Medium Trucks:	82.40	-12.56		-2.7	6	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-16.51		-2.7	6	-1.20		-5.21	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening	Leq	Vight		Ldn	-	NEL
Autos:	72		0.6		68.8		62.	-	71.4		72.
Medium Trucks:	65		64.4		58.0		56.	-	64.9		65.
Heavy Trucks:	65		64.5		55.5		56.		65.1		65.
Vehicle Noise:	74	.1 1	2.3		69.4		64.	5	73.0		73.
Centerline Distan	ce to Noise C	ontour (in feet)		70	-10.4	05	10.4		0.404		
			L		dBA		1BA		60 dBA		6 dBA
			dn: IFI :		34	28			621		,338
		CA		1.	44	31	U		668	1	,439

	FHW	A-RD-77-108 H	IGHWA	Y NOISE P	REDICTIC	ON MODE			
Road Nan	io: Opening Ye ne: SR-395 nt: n/o Dos Pali	ar 2019 w/ Phas mas Rd.	e1&			lame: Des mber: 117			
SITE	SPECIFIC IN	PUT DATA			N	DISE MO	DEL INPUT	s	
Highway Data				Site Cor	nditions (l	Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt): 6	1,200 vehicles				Aut	os: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	cks (2 Axle	s): 15		
Peak H	lour Volume:	6,120 vehicles		He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	55 mph		Vehicle					
Near/Far La	ne Distance:	75 feet			icleType	Da	/ Evening	Night	Daily
Site Data				Ven		utos: 77.	-		97.42%
					Al edium Tri			9.6%	
	rrier Height:	0.0 feet					8% 4.9% 5% 2.7%	10.3%	
Barrier Type (0-V	. ,	0.0		1	Heavy Tru	ICKS: 86.	5% 2.7%	10.8%	0.74%
Centerline Di		84.0 feet		Noise S	ource Ele	vations (i	n feet)		
Centerline Dist.		84.0 feet			Autos:	0.000			
Barrier Distance		0.0 feet		Mediu	m Trucks:	2.297			
Observer Height	,	5.0 feet		Heav	/y Trucks:	8.006	Grade Ad	ljustmeni	t: 0.0
	ad Elevation:	0.0 feet		Long En		Distance	(m. f		
	ad Elevation:	0.0 feet		Lane Eq		Distance (in reet)		
	Road Grade:	0.0%			Autos:				
	Left View:	-90.0 degrees			m Trucks:				
	Right View:	90.0 degrees		Heav	/y Trucks:	75.225			
FHWA Noise Mod	el Calculations								
FHWA Noise Mod VehicleType	el Calculations REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Att	ten Be	rm Atten
				e Finite 2.77	Road -1.20	Fresnel -4.		ten Bei 000	rm Atten 0.000
VehicleType	REMEL	Traffic Flow	-2				75 0.0		
VehicleType Autos:	REMEL 71.78	Traffic Flow 5.04	-2 -2	2.77	-1.20	-4.	75 0.0 38 0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40 e Levels (witho	Traffic Flow 5.04 -12.19 -16.15 out Topo and ba	-2 -2 -2 arrier att	2.77 2.76 2.76 enuation)	-1.20 -1.20 -1.20	-4. -4.	75 0.0 38 0.0 21 0.0	000 000 000	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hour	Traffic Flow 5.04 -12.19 -16.15 out Topo and bar Leq Day	-2 -2 -2 arrier att Leq	2.77 2.76 2.76 enuation) Evening	-1.20 -1.20 -1.20 <i>Leq N</i>	-4. -4. -5.	75 0.0 38 0.0 21 0.0 Ldn	000 000 000	0.000 0.000 0.000 NEL
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hour 72.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and bar Control of the second se	-2 -2 -2 arrier att Leq .0	2.77 2.76 2.76 eenuation) Evening 69.2	-1.20 -1.20 -1.20 Leq N	-4. -4. -5. light 63.1	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.8	000 000 000 000 C 8	0.000 0.000 0.000 NEL 72.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (without Leg Peak Hourt 72.: 66.:	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and base Composition Leq Day 9 71 2 64	-2 -2 -2 arrier att Leq .0 .7	2.77 2.76 2.76 Evening 69.2 58.4	-1.20 -1.20 -1.20 Leg N	-4. -4. -5. -5. light 63.1 56.8	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.8 65.3	000 000 000 000 C 8 3	0.000 0.000 0.000 NEL 72.4 65.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (without Leq Peak Hout 72. 66. 66.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and base Leq Day 9 71 2 64 3 64	-2 -2 -2 arrier att Leq .0 .7 .9	2.77 2.76 2.76 Eenuation) Evening 69.2 58.4 55.8	-1.20 -1.20 -1.20 <i>Leq N</i>	-4. -4. -5. light 63.1 56.8 57.1	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.3 65.3 65.4	000 000 000 000 8 3 4	0.000 0.000 0.000 NEL 72.4 65.5 65.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitgated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (without leaves) Clear Peak Hour 72: 66: 66: 74.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and base r Leq Day 9 71 2 64 3 64 4 72	-2 -2 -2 arrier att Leq .0 .7 .9	2.77 2.76 2.76 Evening 69.2 58.4	-1.20 -1.20 -1.20 <i>Leq N</i>	-4. -4. -5. -5. light 63.1 56.8	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.8 65.3	000 000 000 000 8 3 4	0.000 0.000 0.000 NEL 72.4 65.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (without leaves) Clear Peak Hour 72: 66: 66: 74.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and base r Leq Day 9 71 2 64 3 64 4 72	-2 -2 -2 arrier att Leq .0 .7 .9	2.77 2.76 2.76 Evening 69.2 58.4 55.8 69.7	-1.20 -1.20 -1.20 <i>Leq</i> N	-4. -4. -5. light 63.1 56.8 57.1 64.8	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.1 65.3 65.4 73.4	000 000 000 8 3 4 4	0.000 0.000 0.000 NEL 72.4 65.5 65.6 73.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (without leaves) Clear Peak Hour 72: 66: 66: 74.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and ba 2 64 3 64 72 ntour (in feet)	-2 -2 -2 arrier att Leq .0 .7 .9 2.7	2.77 2.76 2.76 2.76 Evening 69.2 58.4 55.8 69.7 70 dBA	-1.20 -1.20 -1.20 <i>Leq N</i> 65 d	-4. -4. -5. 63.1 56.8 57.1 64.8 BA	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.1 65.5 65.4 73.4 60 dBA	000 000 8 3 4 4 55	0.000 0.000 0.000 NEL 72.4 65.5 65.6 73.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (without leaves) Clear Peak Hour 72: 66: 66: 74.	Traffic Flow 5.04 -12.19 -16.15 Dut Topo and base r Leq Day 9 71 2 64 3 64 4 72	-2 -2 -2 arrier att Leg .0 .7 .7 .7 .7 .7	2.77 2.76 2.76 Evening 69.2 58.4 55.8 69.7	-1.20 -1.20 -1.20 <i>Leq</i> N	-4. -4. -5. -6.1 -5. -6.8 -5.1 -64.8 	75 0.0 38 0.0 21 0.0 <u>Ldn</u> 71.1 65.3 65.4 73.4	000 000 000 8 3 4 4 4 55	0.000 0.000 0.000 NEL 72.4 65.5 65.6 73.9

Tuesday, January 08, 2019

Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1. Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 84.0 feet Medium Trucks: 86.8% 2.7% 10.8% 0. Centerline Dist. to Dasrier: 84.0 feet Moles Eucations (in feet) Moles Eucations (in feet) Moles Guades 0.00 Deserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Autos: 0.000 Medium Trucks: 2.97 Heavy Trucks: 2.006 Grade Adjustment: 0.00 Road Elevation: 0.0 feet Autos: 75.213 Medium Trucks: 75.213 Heavy Trucks: 8.006 Grade Adjustment: 0.00 0.000 Centerline Distance (in feet) Medium Trucks: 75.213 Heavy Trucks: 8.240 -12.24 -2.76 -1.20 -4.75 0.000 0.00 Heavy Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 <t< th=""><th></th><th>FH\</th><th>WA-RD-77-108</th><th>HIGHW</th><th>AY NO</th><th>ISE PF</th><th>REDICTIO</th><th>N MOD</th><th>EL</th><th></th><th></th><th></th></t<>		FH\	WA-RD-77-108	HIGHW	AY NO	ISE PF	REDICTIO	N MOD	EL			
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 60,500 vehicles Autos:: 15 Peak Hour Percentage: 10% Medium Trucks (24 Axles): 15 Peak Hour Volume: 6,050 vehicles Medium Trucks (24 Axles): 15 Vehicle Speed: 55 mph Medium Trucks (24 Axles): 15 Site Data Vehicle Type Day Evening Night D0 Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1. Barrier Jostance to Dbserver: 8.0 feet Medium Trucks: 82.9% 2.7% 10.8% 0. Centerline Dist. to Bserver: 8.0 feet Autos: 0.000 Medium Trucks: 8.2.97 Heavy Trucks: 8.0.06 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Medium Trucks: 75.213 Heavy Trucks: 75.213 WehicleType Reput Traffic Flow Distance Finite Roa	Road Nam	ie: SR-395		ase 1 &						Grove		
Average Daily Traffic (Adt): 60,500 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Vencentage: 10% Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Heavy Trucks (3+ Axles): 15 Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Medium Trucks: 84.9% 4.9% 10.3% 1. Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 84.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0. Centerline Dist. to Dserver: 0.0 feet Autos: 0.00 Medium Trucks: 8.06 Grade Adjustment: 0.00 Medium Trucks: 8.00 feet Autos: 7.5.213 Heavy Trucks: 8.006 Grade Adjustment: 0.00 Medium Trucks: 71.78 5.00 -2.77 -1.20 -4.75 0.000 0 Medium	SITE	SPECIFIC IN	IPUT DATA				NO	ISE M	ODEI		s	
Break Hour Percentage: 10% Medium Trucks (2 Adles): 15 Peak Hour Volume: 6,050 vehicles Heavy Trucks (3 Adles): 15 Vehicle Speed: 55 mph Vehicle Type Day Evening Night Du Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 Centerline Dist. to Observer: 84.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1. Barrier Dist. to Observer: 84.0 feet Motios: 2.7% 10.8% 0. Centerline Dist. to Observer: 84.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 teet Autos: 75.31 Medium Trucks: 8.000 0.0 VehicleType REMeL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten VehicleType REMEL Traffic Flow Distance	Highway Data				S	te Con	ditions (H	ard = 1	0, So	ft = 15)		
Vehicle Speed: Near/Far Lane Distance: 55 mph 75 feet Vehicle Mix Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97. Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 84.9% 4.9% 10.3% 1. Barrier Dist to Distrier: 84.0 feet Medium Trucks: 86.5% 2.7% 10.8% 0. Centerline Dist. to Diserver: 0.0 feet Autos: 0.000 Medium Trucks: 82.97 10.8% 0. Pad Elevation: 0.0 feet Autos: 75.331 Medium Trucks: 8.006 Grade Adjustment: 0.0 Road Grade: 0.0% Autos: 75.25 Heavy Trucks: 75.213 Heavy Trucks: 82.40 -12.24 -2.76 -1.20 -4.75 0.000 0.0 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 0.0 Medium Trucks:	Peak Hour	Percentage:	10%					(s (2 Ax	les):	15		
Near/Far Lane Distance: 75 feet Vehicle Mix Site Data Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 feet Autos: 77.5% 12.9% 9.6% 97. Barrier Height: 0.0 Centerline Dist. to Barrier: 84.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1. Centerline Dist. to Deserver: 84.0 feet Noise Source Elevations: (in feet) Autos: 2.7% 10.8% 0. Diserver Height (Above Pad): 5.0 feet Medium Trucks: 2.97 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 75.331 Medium Trucks: 75.213 Heavy Trucks: 75.213 Heavy Trucks: 75.213 Heavy Trucks: 8.000 0 <td></td> <td></td> <td></td> <td>6</td> <td></td> <td>Hea</td> <td>avy Trucks</td> <td>: (3+ Ax</td> <td>des):</td> <td>15</td> <td></td> <td></td>				6		Hea	avy Trucks	: (3+ Ax	des):	15		
Site Data Venicle type Day Leven to the term of		· · · /			V	ehicle I	Nix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 84.0 feet Barrier Distance to Observer: 84.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations VeniceType VehicleType REMEL Traffic Flow Distance VehicleType Legt Virbut Topo and barrier attenuation) VehicleType Leg Paek Hour Leg Paek Hour Legt Painter attenuation) VehicleType Leg Paek Hour Legt Virbut Topo and barrier attenuation) Cond VehicleType Leg Paek Hour Legt Paek Hour Legt Painter attenuation) VehicleType Legt	Near/Far La	ne Distance:	75 feet			Vehi	icleType	D	ay	Evening	Night	Daily
Barrier Treight: Utilities Barrier Treight: Utilities Centerline Dist. to Diserver: 84.0 feet Centerline Dist. to Observer: 0.0 feet Barrier Tseght: 0.0 feet Barrier Tseght: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Add Grade: 0.0% Barrier Tseght: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 82.40 Heavy Trucks: 82.40 VehicleType REMEL Medium Trucks: 71.78 5.00 -2.77 -1.20 -4.75 Medium Trucks: 82.40 -16.20 -2.76 -1.20 -4.88 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Devening Leq Night	Site Data						Aut	os: 7	7.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 0.0 Centerline Dist. to Dasriver: 84.0 feet Noise Source Elevations (in feet) Autos: 0.00 Deserver Height (Above Pad): 5.0 feet Autos: 0.00 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 75.331 Medium Trucks: 0.00 Road Grade: 0.0% Left View: 90.0 degrees Medium Trucks: 75.331 Medium Trucks: 75.213 FHWA Noise Model Calculations Eleft View: 90.0 degrees Frinite Road Fresnel Barrier Atten Bern Atten VehicleType REIMEL Traffic Flow Distance -1.20 -4.75 0.000 00 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -4.75 0.000 00 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -4.75 0.000 00 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -4.75	Ba	rrier Heiaht:	0.0 feet			Me	edium Truc	ks: 8	4.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer: 84.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Moless Cource Elevations (in feet) Moless 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.0.0 feet Medium Trucks: 8.0.0 feet Road Elevation: 0.0 feet Left View: -90.0 degrees Medium Trucks: 75.213 FHWA Nolse Model Calculations Medium Trucks: 75.213 Medium Trucks: 75.213 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 0 Medium Trucks: 82.40 -16.20 -2.76 -1.20 -4.75 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Day Leg Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7	Barrier Type (0-W	/all, 1-Berm):				H	leavy Truc	ks: 8	6.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Road Grade: 0.0% Autos: 75.31 Left View: 90.0 degrees Medium Trucks: 75.213 WhileTurks: 7.5.213 Heavy Trucks: 75.213 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 0 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -4.75 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Revering Leq Night Ldn CNEL Autos: 72.4 72.6 69.1 63.1 71.7 Medium Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicl			0110 1001		N	oise So	ource Elev	ations	(in fe	et)		
Observer Height (Above Pad): 5.0 feet Pad Elevation: Medium Trucks: 2.297 Heavy Trucks: 8.006 8.006 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0 % Autos: 75.331 Left View: -90.0 degrees Medium Trucks: 75.213 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten VehicleType REMEL Traffic Flow Distance -1.20 -4.75 0.000 C Medium Trucks: 82.40 -12.24 -2.76 -1.20 -5.21 0.000 C Medium Trucks: 82.40 -16.20 -2.76 -1.20 -5.21 0.000 C Ummitigated Noise Levels (without Topo and barrier attenuation) Uage Pash Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7							Autos:	0.00	00			
Pad Elevation: 0.0 feet Heavy Tracks: 8.006 Grad Adjustment. 0.01 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Cone Equivalent Dister <td< td=""><td></td><td></td><td></td><td></td><td></td><td>Mediur</td><td>n Trucks:</td><td>2.29</td><td>97</td><td></td><td></td><td></td></td<>						Mediur	n Trucks:	2.29	97			
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 75.331 Left View: 90.0 degrees Medium Trucks: 75.213 WehicleType REINEL Traffic Flow Distance Innie Road Fresnel Barrier Atten Berm Atten Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 0 Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.88 0.000 0 Medium Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Row 1 CNEL VehicleType 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA <td></td> <td>,</td> <td></td> <td></td> <td></td> <td>Heav</td> <td>y Trucks:</td> <td>8.00</td> <td>)6</td> <td>Grade Adj</td> <td>iustment</td> <td>: 0.0</td>		,				Heav	y Trucks:	8.00)6	Grade Adj	iustment	: 0.0
Road Grade: 0.0% Autos: 75.331 Left View: -90.0 degrees Medium Trucks: 75.213 Right View: 90.0 degrees Medium Trucks: 75.225 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 CO Medium Trucks: 82.40 -12.24 -2.76 -1.20 -5.21 0.000 CO Medium Trucks: 82.40 -16.20 -2.76 -1.20 -5.21 0.000 CO Unnitigated Noise Levels (without Topo and barrier attenuation) Uage State -10.0 -65.2 0.000 CO VehicleType Leg Peak Hour Leg Deay Leg Evening Leg Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.8 55.8 57.0 65.4<							uivelent D	iotonoc	(in f	(a a 4)		
Left View. -90.0 degrees Right View. Medium Trucks: 75.213 Heavy Trucks: Trucks: 75.213 Heavy Trucks: Medium Trucks: 75.225 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Al Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 CO Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.75 0.000 CO Medium Trucks: 86.40 -16.20 -2.76 -1.20 -4.75 0.000 CO Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Vening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 <td></td> <td></td> <td></td> <td></td> <td>Le</td> <td>ine Equ</td> <td></td> <td></td> <td></td> <td>eel)</td> <td></td> <td></td>					Le	ine Equ				eel)		
Right View: 90.0 degrees Heavy Trucks: 75.225 FHWA Noise Model Calculations Heavy Trucks: 75.225 VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 00 Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.88 0.000 00 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Deak Hour Leq Dey Leq Right Ldn CNEL VehicleType Eq2 Reak Hour Leq Dey Leq Right Edn T1.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Content In Distance to Noise Contour (in feet) Zenterline Distance to Noise Contour (in feet) ZodBA 65 dBA 6						Modium						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Al Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 00 Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.75 0.000 00 Heavy Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 00 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet)												
Autos: 71.78 5.00 -2.77 -1.20 -4.75 0.000 C Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.88 0.000 C Heavy Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 C Unnitigated Noise Levels (without Topo and barier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 20 70 dBA 65 dBA 60 dBA 55 dBA 55.2 1.404	FHWA Noise Mod	el Calculation	s									
Medium Trucks: 82.40 -12.24 -2.76 -1.20 -4.88 0.000 0 Heavy Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VerkiceType Leq Peak Hour Leq Day Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) Idv 302 652 1,404	VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	/ /	Barrier Atte	en Bei	rm Atten
Heavy Trucks: 86.40 -16.20 -2.76 -1.20 -5.21 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Medium Trucks: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) TO dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404	Autos:	71.78	5.00		-2.77		-1.20	-4	1.75	0.0	000	0.00
Vehicle Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 140 302 652 1,404	Medium Trucks:	82.40	-12.24		-2.76		-1.20	-4	1.88	0.0	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404	Heavy Trucks:	86.40	-16.20		-2.76		-1.20	-{	5.21	0.0	000	0.00
Autos: 72.8 70.9 69.1 63.1 71.7 Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404												
Medium Trucks: 66.2 64.7 58.3 56.8 65.2 Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) Image: Contour (in feet) Image: Contour (in feet) Image: Contour (in feet) Ldn: 140 302 652 1,404	,1				eq Eve		Leq Nig					
Heavy Trucks: 66.2 64.8 55.8 57.0 65.4 Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404												72.
Vehicle Noise: 74.4 72.6 69.7 64.8 73.3 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404											-	65.
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404	· · ·											65.
TO dBA 65 dBA 60 dBA 55 dBA Ldn: 140 302 652 1,404						69.7		64.8		73.3	3	73.
Ldn: 140 302 652 1,404	Centerline Distan	ce to Noise Co	ontour (in feet))	70 4		05 -10		-	0 -10 4		104
								А				
GIVEL. 131 323 /01 1,510												
			Cr	VLL.	101		325			/01	1,	510

	FHWA-	RD-77-108 HIG	HWAYI	NOISE PF	REDICTION		<u> </u>		
Scenario: Op Road Name: SR Road Segment: n/c	-395	2019 w/ Phase d.	1&		Project Na Job Nurr				
SITE SPEC	IFIC INPU	T DATA					DEL INPU	тs	
Highway Data	-		-	Site Con	ditions (H	ard = 10,	Soft = 15)		
Average Daily Traffic	(Adt): 57,9	00 vehicles				Aut	os: 15		
Peak Hour Perce	ntage:	10%		Me	dium Truck	s (2 Axle	s): 15		
Peak Hour V	olume: 5,7	90 vehicles		He	avy Trucks	(3+ Axle	s): 15		
Vehicle S	Speed:	55 mph	ŀ	Vehicle I	Mix				
Near/Far Lane Dis	tance:	11 feet	-		icleType	Da	/ Evening	Night	Daily
Site Data				Ven	Aut		•		97.429
				14	edium Truc				
Barrier H	•	0.0 feet			leavy Truc				
Barrier Type (0-Wall, 1-		0.0		'	leavy Iluc	ns. 00.	J/0 2.1/0	10.076	0.74
Centerline Dist. to E		10.0 feet	Ī	Noise Sc	ource Elev	ations (i	n feet)		
Centerline Dist. to Ob		10.0 feet	Ī		Autos:	0.000			
Barrier Distance to Ob		0.0 feet		Mediur	n Trucks:	2.297			
Observer Height (Above	,	5.0 feet		Heav	y Trucks:	8.006	Grade A	djustment	0.0
Pad Ele		0.0 feet	-	Laws Fre			(m. f. m. et)		
Road Ele		0.0 feet	-	Lane Eq	uivalent D		,		
	Grade:	0.0%			Autos:	39.934			
		0.0 degrees			n Trucks:	39.712			
Righ	t View: 9	0.0 degrees		Heav	y Trucks:	39.734			
FHWA Noise Model Cal									
			listance			Fresnel	Barrier A		m Atter
Autos:	71.78	4.80	1.3		-1.20	-4.5		.000	0.00
Medium Trucks:	82.40	-12.43	1.4		-1.20	-4.8		.000	0.00
Heavy Trucks:	86.40	-16.39	1.3	39	-1.20	-5.8	56 0	.000	0.00
Unmitigated Noise Leve			1	/ I					
	Peak Hour	Leq Day		vening	Leq Nig		Ldn	-	NEL
Autos:	76.7	74.8		73.1		67.0	75		76.
Medium Trucks:	70.2	68.7		62.3		60.8	69		69
Heavy Trucks:	70.2	68.8		59.7		61.0	69		69.
Vehicle Noise:	78.3	76.6	;	73.6		68.7	77	.3	77.
Centerline Distance to I	Noise Conto	our (in feet)							
				dBA	65 dB	4	60 dBA		dBA
		Ldn		23	264		569 612		226 319
		CNEL		32	284				

Tuesday, January 08, 2019

Road Nam		ar 2019 w/ Pha Iley Rd.	ise 1	&			Vame: D Imber: 1				
SITE S Highway Data	SPECIFIC IN	PUT DATA			Site Con					5	
					Sile Con	anuons		· ·	,		
Average Daily	, ,					dia and Tax		utos:			
	Percentage:	10%					cks (2 A.				
		5,230 vehicles			He	avy Truc	ks (3+ A	xies):	15		
	hicle Speed:	55 mph			Vehicle I	Nix					
Near/Far Lar	ne Distance:	11 feet		E F	Vehi	icleType	1	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	6 97.42%
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks: 8	34.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	łeavy Tr	ucks: 8	86.5%	2.7%	10.8%	6 0.74%
Centerline Dis		40.0 feet			Noise Sc	ource El	evations	(in fe	eet)		
Centerline Dist.		40.0 feet				Autos	: 0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	: 2.2	97			
Observer Height (J	,	5.0 feet			Heav	v Trucks	: 8.0	06	Grade Adj	ustmer	nt: 0.0
	d Elevation:	0.0 feet		_							
	d Elevation:	0.0 feet		_	Lane Eq				feet)		
F	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	s		Heav	y Trucks	: 39.7	34			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresne		Barrier Atte		erm Atten
Autos:	71.78	4.36		1.3	-	-1.20		4.59	0.0		0.000
Medium Trucks:	82.40	-12.88		1.4	-	-1.20		4.87	0.0		0.000
Heavy Trucks:	86.40	-16.83		1.3		-1.20	-	5.56	0.0	00	0.000
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou		-		vening	Leg I	light		l dn		ONEL
Autos:	26, 76.		144	Ley L	72.6	Leyi	66.6		75.2		75.8
Medium Trucks:	69.	• •	4.4 38.2		61.9		60.3		68.8		69.0
Heavy Trucks:	69.		38.3		59.3		60.6		68.9		69.0
Vehicle Noise:	77.		76.1		73.2		68.3		76.9		77.3
					13.2		00.3		76.9		11.3
Centerline Distanc	e to Noise Co	ntour (in feet)		70	dBA	65 (IBA	e	60 dBA	5	5 dBA
			L								
		1	dn:	1	15	24	7		532	1	1.146

	FHV	VA-RD-77-108	HIGHV	NAY N	NOISE PF	REDICTIO		EL			
Road Nam	io: Opening Ye ne: Palmdale R nt: w/o SR-395	d. (SR-18)	ase 1 &	k			Vame: De mber: 11		Grove		
	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions (Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	28,400 vehicles	6				AL	itos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 Ax	les):	15		
Peak H	lour Volume:	2,840 vehicles	6		He	avy Truck	ks (3+ Ax	les):	15		
Ve	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	51 feet		F		icleType	D	ay	Evening	Night	Daily
Site Data					VOII			7.5%	•		97.42%
					M	dium Tri		1.8%		10.3%	
	rrier Height:	0.0 feet				leavy Tru		4.0 <i>%</i> 6.5%		10.8%	
Barrier Type (0-W	. ,	0.0				,				10.07	0.1470
Centerline Di		72.0 feet		1	Noise So	ource Ele	vations	(in fe	eet)		
Centerline Dist. Barrier Distance		72.0 feet 0.0 feet				Autos.	0.00	0			
Observer Height		5.0 feet			Mediur	n Trucks.	2.29	7			
	ad Elevation:	0.0 feet			Heav	y Trucks.	8.00	6	Grade Adj	ustmen	t: 0.0
	ad Elevation: ad Elevation:	0.0 feet			Lane Eq	uivalent	Distance	(in t	feet)		
	Road Grade:	0.0%		F		Autos		· ·	,		
	Left View:	-90.0 degree			Modiur	n Trucks.					
	Right View:	90.0 degree				y Trucks.					
FHWA Noise Mod	el Calculation	s									
FHWA Noise Mod VehicleType	el Calculation REMEL	s Traffic Flow	Dista	ance	Finite	Road	Fresne		Barrier Atte	en Be	rm Atten
		-	Dista	ance -2.0		Road -1.20		1.72	Barrier Atte 0.0		
VehicleType	REMEL 71.78	Traffic Flow	Dista		6		-4			00	0.000
VehicleType Autos:	REMEL 71.78 82.40	Traffic Flow 1.71	Dista	-2.0	6 5	-1.20	-4 -4	1.72	0.0	00	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 71.78 82.40 86.40	Traffic Flow 1.71 -15.53 -19.48		-2.0	6 5 5	-1.20 -1.20	-4 -4	1.72 1.88	0.0 0.0	00	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40	Traffic Flow 1.71 -15.53 -19.48 out Topo and	barrier	-2.0 -2.0 -2.0	6 5 5	-1.20 -1.20	-4 -4 -5	1.72 1.88	0.0 0.0	00	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70	Traffic Flow 1.71 -15.53 -19.48 out Topo and ir Leq Day .2	barrier	-2.0 -2.0 -2.0	6 5 5 <i>nuation)</i> <i>ivening</i> 66.6	-1.20 -1.20 -1.20	-4 -4 -5 light 60.5	1.72 1.88	0.0 0.0 0.0 <i>Ldn</i> 69.1	00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 69.7
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63	Traffic Flow 1.71 -15.53 -19.48 out Topo and rr Leq Day .2 6	barrier 68.3 62.1	-2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	-1.20 -1.20 -1.20	-4 -4 -5 light 60.5 54.2	1.72 1.88	0.0 0.0 0.0 <i>Ldn</i> 69.1 62.7	00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 69.7 62.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63 63	Traffic Flow 1.71 -15.53 -19.48 out Topo and ir Leq Day .2 .6 .7 .6	barrier 68.3 62.1 62.2	-2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 6 6 6 6 5 5 .8 5 3.2	-1.20 -1.20 -1.20	-4 -4 -5 1ight 60.5 54.2 54.5	1.72 1.88	0.0 0.0 0.0 <i>Ldn</i> 69.1 62.7 62.8	00 00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 69.7 62.9 62.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63 71	Traffic Flow 1.71 -15.53 -19.48 Out Topo and rr Leq Day .6 .7 .8	barrier 68.3 62.1 62.2 70.1	-2.0 -2.0 -2.0	6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	-1.20 -1.20 -1.20	-4 -4 -5 light 60.5 54.2	1.72 1.88	0.0 0.0 0.0 <i>Ldn</i> 69.1 62.7	00 00 00 00 <i>C</i>	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63 71	Traffic Flow 1.71 -15.53 -19.48 Out Topo and rr Leq Day .6 .7 .8	barrier 68.3 62.1 62.2 70.1	-2.00 -2.03 -2.03 r atten Leq E	6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 8 5 5 8 5 5 2 6 7.1	-1.20 -1.20 -1.20 <i>Leq N</i>	-4 -4 -5 1ight 60.5 54.2 54.5 62.2	0.72 0.88 0.26	0.0 0.0 0.0 69.1 62.7 62.8 70.8	00 00 00 	0.000 0.000 0.000 NEL 69.7 62.9 62.9 71.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63 71	Traffic Flow 1.71 -15.53 -19.48 Out Topo and r Leq Day .2 .6 .7 .8 ontour (in feet)	barrier 68.3 62.1 62.2 70.1	-2.00 -2.09 -2.09 r atten Leg E	6 5 5 5 5 5 5 5 5 6 6.6 5 5.8 5 3.2 6 7.1 dBA	-1.20 -1.20 -1.20 <i>Leq N</i> 65 d	-4 -4 -5 light 60.5 54.2 54.5 62.2 BA	0.72 0.88 0.26	0.0 0.0 0.0 <u>Ldn</u> 69.1 62.7 62.8 70.8	00 00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 69.7 62.9 62.9 71.3
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 71.78 82.40 86.40 e Levels (with Leq Peak Hou 70 63 71	Traffic Flow 1.71 -15.53 -19.48 out Topo and r Leq Day .6 .7 .8 ontour (in feet)	barrier 68.3 62.1 62.2 70.1	-2.00 -2.03 -2.03 r atten Leq E	6 5 5 <u>ivening</u> 66.6 55.8 53.2 67.1 dBA	-1.20 -1.20 -1.20 <i>Leq N</i>	-4 -4 -5 60.5 54.2 54.5 62.2 BA 5	0.72 0.88 0.26	0.0 0.0 0.0 69.1 62.7 62.8 70.8	00 00 00	0.000 0.000 0.000 NEL 69.7 62.9 62.9 71.3

Tuesday, January 08, 2019

	FH\	WA-RD-77-108	HIGHW	AY NOISI	E PREDICTI	ON MO	DEL			
	e: Luna Rd.	ear 2019 w/ Ph 5	ase 1 &		Project I Job Nu	Vame: Imber:		Grove		
SITE S Highway Data	SPECIFIC IN	NPUT DATA		0/4-	N Conditions (S	
Average Daily Peak Hour Peak H	Percentage: our Volume: nicle Speed:	7,900 vehicle 10% 790 vehicle 40 mph			Medium Tru Heavy Truc Cle Mix	cks (2 A	Autos: Axles):	15 15 15 15		
	e Distance.	11 feet			VehicleType		Day	Evening	Night	Daily
Site Data Bar Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0			A Medium Tri Heavy Tri	ucks:	77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.849
	o Observer: o Observer: Above Pad): d Elevation:	40.0 feet 40.0 feet 0.0 feet 5.0 feet 0.0 feet		Me F	e Source Ele Autos edium Trucks leavy Trucks	: 0.0 : 2.1 : 8.0	297 206	Grade Ad	iustment	± 0.0
	d Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degree 90.0 degree		Me	Equivalent Autos dium Trucks leavy Trucks	: 39. : 39.		661)		
FHWA Noise Mode										
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 66.51 77.72 82.99	-19.70	Distar	nce Fi 1.36 1.40 1.39	nite Road -1.20 -1.20 -1.20		-4.59 -4.87 -5.56	0.0	en Bei 100 100 100	r <u>m Atter</u> 0.00 0.00 0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ottenuatio	on)					
	Leq Peak Ho			eq Evenin		light		Ldn	С	NEL
Autos: Medium Trucks:	58	3.2	62.3 56.7	5	0.5	54.5 48.8	5	63.1 57.3	3	63. 57.
Heavy Trucks: Vehicle Noise:			58.1 64.5		9.1 1.2	50.3 56.7		58.7 65.2		58 65
Centerline Distanc	e to Noise C	ontour (in feet)							
		•	Ldn:	<i>70 dBA</i> 19	65 d 41	1	6	0 dBA 89	1	dBA 192
		0	VFL:	21	44	1		95	2	205

F	HWA-RD-77-108	BHIGHW	AY NC	DISE PREDICT	ION MOI	DEL			
Scenario: Opening Road Name: Palmdal Road Segment: e/o Cant	e Rd. (SR-18)	ase 1 &			Name: I lumber: 1		Grove		
SITE SPECIFIC	INPUT DATA						INPUTS	5	
Highway Data			Si	ite Conditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt)	31,300 vehicle	s				Autos:	15		
Peak Hour Percentage	10%			Medium Tr	ucks (2 A	xles):	15		
Peak Hour Volume	3,130 vehicle	s		Heavy Tru	cks (3+ A	xles):	15		
Vehicle Speed	55 mph		14	ehicle Mix					
Near/Far Lane Distance	51 feet		-	VehicleType		Day	Evening	Night	Daily
Site Data						77.5%	12.9%	9.6%	
	0.0 feet		_	Medium T		84.8%	4.9%	10.3%	1.849
Barrier Height				Heavy T	rucks:	86.5%	2.7%	10.8%	
Barrier Type (0-Wall, 1-Berm) Centerline Dist, to Barrier									
Centerline Dist. to Observer			N	oise Source E			et)		
Barrier Distance to Observer				Auto		000			
Observer Height (Above Pad)	0.0 1001			Medium Truck		297			
Pad Elevation				Heavy Truck	s: 8.0	006	Grade Adj	ustment:	0.0
Road Elevation			Lá	ane Equivalen	t Distand	e (in f	eet)		
Road Grade				Auto	s: 67.5	519			
Left View	-90.0 degre	es		Medium Truck	s: 67.3	387			
Right View	90.0 degre	es		Heavy Truck	s: 67.4	400			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Flow	Dista	nce	Finite Road	Fresn	el l	Barrier Atte	en Beri	m Atten
Autos: 71.	78 2.13		-2.06	-1.20		-4.72	0.0	00	0.00
Medium Trucks: 82.4			-2.05	-1.20		-4.88	0.0		0.00
Heavy Trucks: 86.	40 -19.06		-2.05	-1.20		-5.26	0.0	00	0.00
Unmitigated Noise Levels (w									
VehicleType Leq Peak F			eq Eve		Night		Ldn		VEL
		68.8		67.0	60.9		69.6		70.:
	64.1	62.5		56.2	54.6		63.1		63.
	64.1	62.7		53.6	54.9		63.2		63.
	72.2	70.5		67.5	62.6		71.2		71.
Centerline Distance to Noise	Contour (in fee	<i>t)</i>	70 dE	65	dBA	6	0 dBA	55	dBA
		Ldn:	87		и <u>Б</u> А 86		402		<i>ив</i> я 65
	C	NFL:	93		01		432		31

Tuesday, January 08, 2019

					NOISE PR						
			ase 1	&		Project N			Grove		
						Job Nur	nber:	11724			
•											
SITE Highway Data	Prage Daily Traffic (Adt): 32,500 vehicle Peak Hour Percentage: 10% Peak Hour Volume: 3,250 vehicle Vehicle Speed: 55 mph Vear/Far Lane Distance: 51 feet Barrier Height: 0.0 feet r Type (0-Wall, 1-Berm): 0.0 enterline Dist. to Barrier: 72.0 feet terline Dist. to Observer: 72.0 feet Pad Elevation: 0.0 feet Road Cardee: 0.0% Left View: 90.0 degre Noise Model Calculations				Site Con	NC ditions (H			L INPUTS	5	
					Sile Con	unions (i		Autos:	15		
• •	, ,		5		Ma	dium Truc					
						avy Truck					
		-,	3		He	avy Truck	S (3+ A	ixies):	15		
					Vehicle I	Nix					
Near/Far La	ne Distance:	51 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):				ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:			F	Noise Sc	ource Elev	ation	s (in fe	et)		
Centerline Dist.	to Observer:	72.0 feet		Ē		Autos:	0.0		,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		97			
Observer Height	Above Pad):	5.0 feet				v Trucks:		006	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:				Lane Eq	uivalent L			feet)		
	Road Grade:	0.0%				Autos:	67.5				
	Left View:	-90.0 degree	es		Mediur	n Trucks:	67.3	387			
	Right View:	90.0 degree	es		Heav	y Trucks:	67.4	100			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fresn	-	Barrier Atte		rm Atten
Autos:	71.78	2.30		-2.0	6	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-14.94		-2.0	-	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-18.90		-2.0	5	-1.20		-5.26	0.0	00	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	· ·		Ldn		NEL
Autos:	70		68.9		67.2		61.1		69.7		70.3
Medium Trucks:	64		62.7		56.3		54.8		63.3		63.5
Heavy Trucks:	64	.2 (62.8		53.8		55.0		63.4		63.5
Vehicle Noise:	72	.4	70.6		67.7		62.8		71.4		71.8
Centerline Distan	ce to Noise Co	ontour (in feet))								
			L		dBA	65 dE		6	60 dBA		dBA
			Ldn:	8	19	191			412	8	387
			IFI :		95	206			443		954

	FHWA	-RD-77-108	HIGHW	AYN	NOISE PF	REDICT	ION MOI	DEL			
Scenario: Oper Road Name: Palm Road Segment: e/o A	dale Rd.	(SR-18)	ase 1 &				Name: I lumber: ·		Grove		
SITE SPECIF	IC INPL	JT DATA				N	IOISE N	IODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (/	Adt): 31,*	100 vehicle	6					Autos:	15		
Peak Hour Percent	age:	10%			Me	dium Tri	ucks (2 A	xles):	15		
Peak Hour Volu	ime: 3,1	110 vehicle	5		He	avy Tru	cks (3+ A	(xles):	15		
Vehicle Sp	eed:	55 mph		-	Vehicle I	Mise					
Near/Far Lane Dista	nce:	51 feet		-		icleType		Dav	Evening	Night	Dailv
Site Data					VOII			77.5%	~	9.6%	
				_	Me	, edium T		84.8%		10.3%	1.84%
Barrier Hei Barrier Type (0-Wall, 1-Be		0.0 feet				leavv T		86.5%		10.8%	0.74%
Centerline Dist. to Ba	· ·	72.0 feet				,					
Centerline Dist. to Obse		72.0 feet		4	Noise So				eet)		
Barrier Distance to Obse		0.0 feet				Auto		000			
Observer Height (Above F		5.0 feet				m Truck		297			
Pad Fleva	· ·	0.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	ustment.	0.0
Road Eleva		0.0 feet		1	Lane Eq	uivalen	t Distand	e (in i	feet)		
Road Gr		0.0%				Auto	s: 67.5	519	,		
Left V	'iew: -!	90.0 deare	s		Mediur	m Truck	s: 67.3	387			
Right V	ïew:	90.0 degre	es		Heav	y Truck	s: 67.4	400			
FHWA Noise Model Calcu	lations										
VehicleType REM	EL TI	raffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.11		-2.0	6	-1.20		-4.72	0.0	00	0.000
	82.40	-15.13		-2.0	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-19.09		-2.0	5	-1.20		-5.26	0.0	00	0.000
Unmitigated Noise Levels											
VehicleType Leq Pea		Leq Day		eq E	vening	Leq	Night		Ldn		VEL
Autos:	70.6		68.7		67.0		60.9		69.5		70.1
710100.	04.0		62.5		56.2		54.6		63.1		63.3
Medium Trucks:	64.0				FO 0		F1 0				
Medium Trucks: Heavy Trucks:	64.1		62.6		53.6		54.9		63.2		
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.1 72.2		62.6 70.4		53.6 67.5		54.9 62.6		63.2 71.2		
Medium Trucks: Heavy Trucks:	64.1 72.2		62.6 70.4	70	67.5		62.6		71.2		71.0
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.1 72.2	our (in feet	62.6 70.4		67.5 dBA		62.6 dBA		71.2	55	63.3 71.6 dBA
Medium Trucks: Heavy Trucks: Vehicle Noise:	64.1 72.2	our (in feet	62.6 70.4	8	67.5	1	62.6		71.2	55 8	71.0

Tuesday, January 08, 2019

APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS



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Observer Location: R1

Source: Roof-Top Air Conditioning Unit *Condition:* Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

	NOISE MODEL INPUTS								
Noise Distance to Observer	208.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	208.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	208.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4		
Shielding (Barrier Attenuation)	208.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		44.8	-32.4	-32.4	-32.4	-32.4	-32.4		
60 Minute Hourly Adjustmen	nt	44.8	-32.4	-32.4	-32.4	-32.4	-32.4		

S	TATIONARY SOURCE N	DISE PREDICTION MODEL	2/15/2019					
Observer Location: R1 Source: Drive-Thro Condition: Operation	ough Speakerphone al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	275.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	275.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	275.0	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3		
Shielding (Barrier Attenuation)	275.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		36.7	-25.3	-25.3	-25.3	-25.3	-25.3		
60 Minute Hourly Adjustmer	nt	36.7	-25.3	-25.3	-25.3	-25.3	-25.3		

Observer Location: R1

Source: Gas Station Activity Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

	NOISE MODEL INPUTS								
Noise Distance to Observer	885.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	885.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	885.0	-45.0	-45.0	-45.0	-45.0	-45.0	-45.0		
Shielding (Barrier Attenuation)	885.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		23.2	-45.0	-45.0	-45.0	-45.0	-45.0		
60 Minute Hourly Adjustmen	t	23.2	-45.0	-45.0	-45.0	-45.0	-45.0		

S	TATIONARY SOURCE NO	DISE PREDICTION MODEL	2/15/2019					
Observer Location: R1 Source: Parking L Condition: Operation	ot Vehicle Movements al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	232.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	232.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	232.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0		
Shielding (Barrier Attenuation)	232.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		35.1	-25.0	-25.0	-25.0	-25.0	-25.0		
60 Minute Hourly Adjustmer	nt	35.1	-25.0	-25.0	-25.0	-25.0	-25.0		

Observer Location: R1

Source: Car Wash Tunnel Entrance/Exit (Air Blow Condition: Operational

Project Name: Victorville Retail Job Number: 11724 2/15/2019

Analyst: A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	535.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	535.0 feet	Noise Source Height:	10.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	535.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0		
Shielding (Barrier Attenuation)	535.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		49.9	-25.0	-25.0	-25.0	-25.0	-25.0		
60 Minute Hourly Adjustmer	nt	49.9	-25.0	-25.0	-25.0	-25.0	-25.0		

STATIONARY SOURCE NOISE PREDICTION MODEL 2/1								
Observer Location: R1 Source: Car Wash Condition: Operation	e Entry/Vacuum Activity al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	471.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	471.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	471.0	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5		
Shielding (Barrier Attenuation)	471.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		35.1	-39.5	-39.5	-39.5	-39.5	-39.5		
60 Minute Hourly Adjustmer	nt	35.1	-39.5	-39.5	-39.5	-39.5	-39.5		

2/15/2019

Observer Location: R1 Source: Loading Dock Activity Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	670.0 feet	Barrier Height:	20.0 feet					
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet					
Barrier Distance to Observer:	660.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	670.0	-30.5	-30.5	-30.5	-30.5	-30.5	-30.5		
Shielding (Barrier Attenuation)	10.0	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7		
Raw (Distance + Barrier)		31.1	-46.2	-46.2	-46.2	-46.2	-46.2		
60 Minute Hourly Adjustmen	it	31.1	-46.2	-46.2	-46.2	-46.2	-46.2		

S	TATIONARY SOURC	E NOISE PREDICTION MODEL	2/15/2019					
Observer Location: R1 Source: Shopping Cart Corral Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	521.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	521.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	521.0	-40.4	-40.4	-40.4	-40.4	-40.4	-40.4		
Shielding (Barrier Attenuation)	521.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		32.5	-40.4	-40.4	-40.4	-40.4	-40.4		
60 Minute Hourly Adjustmer	nt	32.5	-40.4	-40.4	-40.4	-40.4	-40.4		

Observer Location: R1

Source: RV Idling/Parking Activity Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	284.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	284.0 feet	Noise Source Height:	6.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS										
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax			
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0			
Distance Attenuation	284.0	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8			
Shielding (Barrier Attenuation)	284.0	0.0	0.0	0.0	0.0	0.0	0.0			
Raw (Distance + Barrier)		54.6	-21.8	-21.8	-21.8	-21.8	-21.8			
60 Minute Hourly Adjustmer	nt	54.6	-21.8	-21.8	-21.8	-21.8	-21.8			

S	TATIONARY SOURCE NO	DISE PREDICTION MODEL	2/15/2019					
Observer Location: R2 Source: Roof-Top Air Conditioning Unit Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	206.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	206.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	206.0	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3		
Shielding (Barrier Attenuation)	206.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		44.9	-32.3	-32.3	-32.3	-32.3	-32.3		
60 Minute Hourly Adjustmer	nt	44.9	-32.3	-32.3	-32.3	-32.3	-32.3		

Observer Location: R2

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	289.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	289.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	289.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7		
Shielding (Barrier Attenuation)	289.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		36.3	-25.7	-25.7	-25.7	-25.7	-25.7		
60 Minute Hourly Adjustmer	nt	36.3	-25.7	-25.7	-25.7	-25.7	-25.7		

STATIONARY SOURCE NOISE PREDICTION MODEL			
Observer Location: R2 Source: Gas Station Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
		NODEL INPUTS	
Noise Distance to Observer	255.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	255.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	255.0	-34.2	-34.2	-34.2	-34.2	-34.2	-34.2		
Shielding (Barrier Attenuation)	255.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		34.0	-34.2	-34.2	-34.2	-34.2	-34.2		
60 Minute Hourly Adjustmer	nt	34.0	-34.2	-34.2	-34.2	-34.2	-34.2		

Observer Location: R2

Source: Parking Lot Vehicle Movements Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	184.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	184.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	184.0	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5		
Shielding (Barrier Attenuation)	184.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		36.6	-23.5	-23.5	-23.5	-23.5	-23.5		
60 Minute Hourly Adjustmen	nt	36.6	-23.5	-23.5	-23.5	-23.5	-23.5		

	STATIONARY SOURCE	NOISE PREDICTION MODEL	2/15/2019						
Observer Location: R2 Source: Car Wash Condition: Operation	n Tunnel Entrance/Exit (A nal	<i>Project Name:</i> Victorville Retail ir Blow <i>Job Number:</i> 11724 <i>Analyst:</i> A. Wolfe							
NOISE MODEL INPUTS									
Noise Distance to Observer	1,035.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	1,035.0 feet	Noise Source Height:	10.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,035.0	-30.8	-30.8	-30.8	-30.8	-30.8	-30.8		
Shielding (Barrier Attenuation)	1,035.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		44.1	-30.8	-30.8	-30.8	-30.8	-30.8		
60 Minute Hourly Adjustmer	nt	44.1	-30.8	-30.8	-30.8	-30.8	-30.8		

Observer Location: R2

Source: Car Wash Entry/Vacuum Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	976.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	976.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	976.0	-45.8	-45.8	-45.8	-45.8	-45.8	-45.8		
Shielding (Barrier Attenuation)	976.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		28.8	-45.8	-45.8	-45.8	-45.8	-45.8		
60 Minute Hourly Adjustmer	nt	28.8	-45.8	-45.8	-45.8	-45.8	-45.8		

S	TATIONARY SOURC	E NOISE PREDICTION MODEL	2/15/2019					
Observer Location: R2 Source: Loading Dock Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer Noise Distance to Barrier: Barrier Distance to Observer:	954.0 feet 10.0 feet 944.0 feet	Barrier Height: Noise Source Height: Observer Height:	20.0 feet 8.0 feet 5.0 feet					
<i>Observer Elevation: Noise Source Elevation: Barrier Elevation:</i>	0.0 feet 0.0 feet 0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient: 20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	954.0	-33.6	-33.6	-33.6	-33.6	-33.6	-33.6		
Shielding (Barrier Attenuation)	10.0	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7		
Raw (Distance + Barrier)		28.0	-49.3	-49.3	-49.3	-49.3	-49.3		
60 Minute Hourly Adjustmer	nt	28.0	-49.3	-49.3	-49.3	-49.3	-49.3		

Observer Location: R2

Source: Shopping Cart Corral Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	608.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	608.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	608.0	-41.7	-41.7	-41.7	-41.7	-41.7	-41.7		
Shielding (Barrier Attenuation)	608.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		31.2	-41.7	-41.7	-41.7	-41.7	-41.7		
60 Minute Hourly Adjustmen	nt	31.2	-41.7	-41.7	-41.7	-41.7	-41.7		

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	2/15/2019					
Observer Location: R2 Source: RV Idling/Parking Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	459.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	459.0 feet	Noise Source Height:	6.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling c 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	459.0	-24.9	-24.9	-24.9	-24.9	-24.9	-24.9		
Shielding (Barrier Attenuation)	459.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		51.5	-24.9	-24.9	-24.9	-24.9	-24.9		
60 Minute Hourly Adjustmer	nt	51.5	-24.9	-24.9	-24.9	-24.9	-24.9		

Observer Location: R3

Source: Roof-Top Air Conditioning Unit Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS						
Noise Distance to Observer	175.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	175.0 feet	Noise Source Height:	5.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet		 = 6 dBA per doubling of distance = 4.5 dBA per doubling of distance 			

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	175.0	-30.9	-30.9	-30.9	-30.9	-30.9	-30.9
Shielding (Barrier Attenuation)	175.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		46.3	-30.9	-30.9	-30.9	-30.9	-30.9
60 Minute Hourly Adjustmen	it	46.3	-30.9	-30.9	-30.9	-30.9	-30.9

S	TATIONARY SOURCE N	OISE PREDICTION MODEL	2/15/2019
Observer Location: R3 Source: Drive-Through Speakerphone <i>Condition:</i> Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE MO	DEL INPUTS	
Noise Distance to Observer	496.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	496.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation: Noise Source Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	496.0	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4
Shielding (Barrier Attenuation)	496.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.6	-30.4	-30.4	-30.4	-30.4	-30.4
60 Minute Hourly Adjustmer	nt	31.6	-30.4	-30.4	-30.4	-30.4	-30.4

Observer Location: R3

Source: Gas Station Activity Condition: Operational *Project Name:* Victorville Retail *Job Number:* 11724 *Analyst:* A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	157.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	157.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS										
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax			
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0			
Distance Attenuation	157.0	-29.9	-29.9	-29.9	-29.9	-29.9	-29.9			
Shielding (Barrier Attenuation)	157.0	0.0	0.0	0.0	0.0	0.0	0.0			
Raw (Distance + Barrier)		38.3	-29.9	-29.9	-29.9	-29.9	-29.9			
60 Minute Hourly Adjustmer	nt	38.3	-29.9	-29.9	-29.9	-29.9	-29.9			

S	TATIONARY SOURCE NC	DISE PREDICTION MODEL	2/15/2019						
Observer Location: R3 Source: Parking Lo Condition: Operationa	t Vehicle Movements al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe							
NOISE MODEL INPUTS									
Noise Distance to Observer	53.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	53.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	53.0	-15.4	-15.4	-15.4	-15.4	-15.4	-15.4		
Shielding (Barrier Attenuation)	53.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		44.7	-15.4	-15.4	-15.4	-15.4	-15.4		
60 Minute Hourly Adjustmer	nt	44.7	-15.4	-15.4	-15.4	-15.4	-15.4		

Observer Location: R3

Source: Car Wash Tunnel Entrance/Exit (Air Blow Condition: Operational

Project Name: Victorville Retail Job Number: 11724

Analyst: A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	1,113.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	1,113.0 feet	Noise Source Height:	10.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS										
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax			
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0			
Distance Attenuation	1,113.0	-31.4	-31.4	-31.4	-31.4	-31.4	-31.4			
Shielding (Barrier Attenuation)	1,113.0	0.0	0.0	0.0	0.0	0.0	0.0			
Raw (Distance + Barrier)		43.5	-31.4	-31.4	-31.4	-31.4	-31.4			
60 Minute Hourly Adjustmer	nt	43.5	-31.4	-31.4	-31.4	-31.4	-31.4			

STATIONARY SOURCE NOISE PREDICTION MODEL 2/15/201									
Observer Location: R3 Source: Car Wash B Condition: Operationa	Entry/Vacuum Activity I	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe							
NOISE MODEL INPUTS									
Noise Distance to Observer 1	,071.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier: 1	,071.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin							

NOISE MODEL PROJECTIONS										
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax			
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0			
Distance Attenuation	1,071.0	-46.6	-46.6	-46.6	-46.6	-46.6	-46.6			
Shielding (Barrier Attenuation)	1,071.0	0.0	0.0	0.0	0.0	0.0	0.0			
Raw (Distance + Barrier)		28.0	-46.6	-46.6	-46.6	-46.6	-46.6			
60 Minute Hourly Adjustmer	nt	28.0	-46.6	-46.6	-46.6	-46.6	-46.6			

Observer Location: R3

Source: Loading Dock Activity Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	894.0 feet	Barrier Height:	20.0 feet					
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet					
Barrier Distance to Observer:	884.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	894.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0		
Shielding (Barrier Attenuation)	10.0	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7		
Raw (Distance + Barrier)		28.6	-48.7	-48.7	-48.7	-48.7	-48.7		
60 Minute Hourly Adjustmen	nt	28.6	-48.7	-48.7	-48.7	-48.7	-48.7		

STATIONARY SOURCE NOISE PREDICTION MODEL								
Observer Location: R3 Source: Shopping Cart Corral Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	682.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	682.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	682.0	-42.7	-42.7	-42.7	-42.7	-42.7	-42.7		
Shielding (Barrier Attenuation)	682.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		30.2	-42.7	-42.7	-42.7	-42.7	-42.7		
60 Minute Hourly Adjustmer	nt	30.2	-42.7	-42.7	-42.7	-42.7	-42.7		

Observer Location: R3

Source: RV Idling/Parking Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	802.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	802.0 feet	Noise Source Height:	6.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	802.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6		
Shielding (Barrier Attenuation)	802.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		47.8	-28.6	-28.6	-28.6	-28.6	-28.6		
60 Minute Hourly Adjustmen	t	47.8	-28.6	-28.6	-28.6	-28.6	-28.6		

STATIONARY SOURCE NOISE PREDICTION MODEL								
Observer Location: R4 Source: Roof-Top Air C Condition: Operational	onditioning Unit	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer 1,302	2.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier: 1,302	2.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer: 0	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:).0 feet	Barrier Type (0-Wall, 1-Berm):	0					
).0 feet	Drop Off Coefficient:	20.0					
	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,302.0	-48.3	-48.3	-48.3	-48.3	-48.3	-48.3		
Shielding (Barrier Attenuation)	1,302.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		28.9	-48.3	-48.3	-48.3	-48.3	-48.3		
60 Minute Hourly Adjustmen	nt	28.9	-48.3	-48.3	-48.3	-48.3	-48.3		

Observer Location: R4

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	1,801.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	1,801.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,801.0	-41.6	-41.6	-41.6	-41.6	-41.6	-41.6		
Shielding (Barrier Attenuation)	1,801.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		20.4	-41.6	-41.6	-41.6	-41.6	-41.6		
60 Minute Hourly Adjustmen	t	20.4	-41.6	-41.6	-41.6	-41.6	-41.6		

ST	ATIONARY SOURCI	E NOISE PREDICTION MODEL	2/15/2019					
Observer Location: R4 Source: Gas Station Condition: Operational	•	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer 1	,484.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier: 1	,484.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,484.0	-49.4	-49.4	-49.4	-49.4	-49.4	-49.4		
Shielding (Barrier Attenuation)	1,484.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		18.8	-49.4	-49.4	-49.4	-49.4	-49.4		
60 Minute Hourly Adjustmen	nt	18.8	-49.4	-49.4	-49.4	-49.4	-49.4		

Observer Location: R4

Source: Parking Lot Vehicle Movements Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	1,315.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	1,315.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,315.0	-36.3	-36.3	-36.3	-36.3	-36.3	-36.3		
Shielding (Barrier Attenuation)	1,315.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		23.8	-36.3	-36.3	-36.3	-36.3	-36.3		
60 Minute Hourly Adjustmen	nt	23.8	-36.3	-36.3	-36.3	-36.3	-36.3		

8	STATIONARY SOURCE NOIS	SE PREDICTION MODEL	2/15/2019					
Observer Location: R4 Source: Car Wash Condition: Operation	n Tunnel Entrance/Exit (Air Blo nal	Project Name: Victorville Retail ow Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	2,106.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	2,106.0 feet	Noise Source Height:	10.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	2,106.0	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9		
Shielding (Barrier Attenuation)	2,106.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		38.0	-36.9	-36.9	-36.9	-36.9	-36.9		
60 Minute Hourly Adjustmer	nt	38.0	-36.9	-36.9	-36.9	-36.9	-36.9		

Observer Location: R4

Source: Car Wash Entry/Vacuum Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS						
Noise Distance to Observer	2,084.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	2,084.0 feet	Noise Source Height:	5.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0			
Noise Source Elevation: Barrier Elevation:	0.0 feet 0.0 feet	, 20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,084.0	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4
Shielding (Barrier Attenuation)	2,084.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.2	-52.4	-52.4	-52.4	-52.4	-52.4
60 Minute Hourly Adjustmer	nt	22.2	-52.4	-52.4	-52.4	-52.4	-52.4

STATIONARY SOURCE NOISE PREDICTION MODEL					
Observer Location: R4 Source: Loading Do Condition: Operational	•	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe			
	NOISE M	NODEL INPUTS			
Noise Distance to Observer 1	,820.0 feet	Barrier Height:	0.0 feet		
Noise Distance to Barrier: 1	,820.0 feet	Noise Source Height:	8.0 feet		
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet		
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0		
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0		
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling			

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,820.0	-39.2	-39.2	-39.2	-39.2	-39.2	-39.2
Shielding (Barrier Attenuation)	1,820.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.1	-39.2	-39.2	-39.2	-39.2	-39.2
60 Minute Hourly Adjustmer	nt	38.1	-39.2	-39.2	-39.2	-39.2	-39.2

STATIONA

Observer Location: R4 Source: Shopping Cart Corral

Condition: Operational

	•
Noise Distance to Observer	1,835.0 feet
Noise Distance to Barrier:	1,835.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Elevation:	0.0 feet
Noise Source Elevation:	0.0 feet

Barrier Elevation: 0.0 feet

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INP	UTS	
et	Barrier Height:	0.0 feet
et	Noise Source Height:	3.0 feet
et	Observer Height:	5.0 feet
ət	Barrier Type (0-Wall, 1-Berm):	0

Drop Off Coefficient: 20.0

20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,835.0	-51.3	-51.3	-51.3	-51.3	-51.3	-51.3
Shielding (Barrier Attenuation)	1,835.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.6	-51.3	-51.3	-51.3	-51.3	-51.3
60 Minute Hourly Adjustmer	nt	21.6	-51.3	-51.3	-51.3	-51.3	-51.3

STATIONARY SOURCE NOISE PREDICTION MODEL 2/15/20						
Observer Location: R4 Source: RV Idling/ Condition: Operation	U ,	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe				
NOISE MODEL INPUTS						
Noise Distance to Observer	2,090.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	2,090.0 feet	Noise Source Height:	6.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,090.0	-34.8	-34.8	-34.8	-34.8	-34.8	-34.8
Shielding (Barrier Attenuation)	2,090.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.6	-34.8	-34.8	-34.8	-34.8	-34.8
60 Minute Hourly Adjustmer	nt	41.6	-34.8	-34.8	-34.8	-34.8	-34.8

Observer Location: R5

Source: Roof-Top Air Conditioning Unit Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	781.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	781.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	781.0	-43.9	-43.9	-43.9	-43.9	-43.9	-43.9
Shielding (Barrier Attenuation)	781.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.3	-43.9	-43.9	-43.9	-43.9	-43.9
60 Minute Hourly Adjustmen	t	33.3	-43.9	-43.9	-43.9	-43.9	-43.9

STATIONARY SOURCE NOISE PREDICTION MODEL						
Observer Location: R5 Source: Drive-Throu Condition: Operational	• • •	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe				
NOISE MODEL INPUTS						
Noise Distance to Observer 1,	284.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier: 1,	284.0 feet	Noise Source Height:	3.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	1,284.0	-38.6	-38.6	-38.6	-38.6	-38.6	-38.6	
Shielding (Barrier Attenuation)	1,284.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		23.4	-38.6	-38.6	-38.6	-38.6	-38.6	
60 Minute Hourly Adjustmer	nt	23.4	-38.6	-38.6	-38.6	-38.6	-38.6	

Observer Location: R5

Source: Gas Station Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	1,157.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	1,157.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance				

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,157.0	-47.3	-47.3	-47.3	-47.3	-47.3	-47.3		
Shielding (Barrier Attenuation)	1,157.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		20.9	-47.3	-47.3	-47.3	-47.3	-47.3		
60 Minute Hourly Adjustmen	it	20.9	-47.3	-47.3	-47.3	-47.3	-47.3		

S	STATIONARY SOURCE NOISE PREDICTION MODEL					
Observer Location: R5 Source: Parking L Condition: Operation	ot Vehicle Movements al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe				
	NOISE MOD	EL INPUTS				
Noise Distance to Observer	766.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	766.0 feet	Noise Source Height:	5.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	766.0	-32.8	-32.8	-32.8	-32.8	-32.8	-32.8	
Shielding (Barrier Attenuation)	766.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		27.3	-32.8	-32.8	-32.8	-32.8	-32.8	
60 Minute Hourly Adjustmer	nt	27.3	-32.8	-32.8	-32.8	-32.8	-32.8	

Observer Location: R5

Source: Car Wash Tunnel Entrance/Exit (Air Blow Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS Barrier Height: Noise Distance to Observer 1,076.0 feet 0.0 feet Noise Source Height: 10.0 feet Noise Distance to Barrier: 1,076.0 feet **Observer Height:** 5.0 feet Barrier Distance to Observer: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet 20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet

15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	1,076.0	-31.1	-31.1	-31.1	-31.1	-31.1	-31.1	
Shielding (Barrier Attenuation)	1,076.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		43.8	-31.1	-31.1	-31.1	-31.1	-31.1	
60 Minute Hourly Adjustmer	nt	43.8	-31.1	-31.1	-31.1	-31.1	-31.1	

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R5 Source: Car Wash Condition: Operationa	Entry/Vacuum Activity I	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe		
	NOISE MOD	EL INPUTS		
Noise Distance to Observer 1	,052.0 feet	Barrier Height:	0.0 feet	
Noise Distance to Barrier: 1	,052.0 feet	Noise Source Height:	5.0 feet	
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublir		

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	1,052.0	-46.5	-46.5	-46.5	-46.5	-46.5	-46.5	
Shielding (Barrier Attenuation)	1,052.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		28.1	-46.5	-46.5	-46.5	-46.5	-46.5	
60 Minute Hourly Adjustmer	nt	28.1	-46.5	-46.5	-46.5	-46.5	-46.5	

Observer Location: R5

Source: Loading Dock Activity Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	809.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	809.0 feet	Noise Source Height:	8.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	809.0	-32.1	-32.1	-32.1	-32.1	-32.1	-32.1		
Shielding (Barrier Attenuation)	809.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		45.2	-32.1	-32.1	-32.1	-32.1	-32.1		
60 Minute Hourly Adjustmen	nt	45.2	-32.1	-32.1	-32.1	-32.1	-32.1		

ST	ATIONARY SOURC	E NOISE PREDICTION MODEL	2/15/2019
Observer Location: R5 Source: Shopping C Condition: Operationa		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE	MODEL INPUTS	
Noise Distance to Observer 1	,081.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier: 1	,081.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	1,081.0	-46.7	-46.7	-46.7	-46.7	-46.7	-46.7	
Shielding (Barrier Attenuation)	1,081.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		26.2	-46.7	-46.7	-46.7	-46.7	-46.7	
60 Minute Hourly Adjustmer	nt	26.2	-46.7	-46.7	-46.7	-46.7	-46.7	

Observer Location: R5

Source: RV Idling/Parking Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer 1,401.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier: 1,401.0 feet	Noise Source Height:	6.0 feet						
Barrier Distance to Observer: 0.0 feet	Observer Height:	5.0 feet						
Observer Elevation: 0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation: 0.0 feet Barrier Elevation: 0.0 feet	Drop Off Coefficient: 15.0 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,401.0	-32.2	-32.2	-32.2	-32.2	-32.2	-32.2		
Shielding (Barrier Attenuation)	1,401.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		44.2	-32.2	-32.2	-32.2	-32.2	-32.2		
60 Minute Hourly Adjustmen	nt	44.2	-32.2	-32.2	-32.2	-32.2	-32.2		

S	TATIONARY SOURCE NO	DISE PREDICTION MODEL	2/15/2019					
Observer Location: R6 Source: Roof-Top Condition: Operation	Air Conditioning Unit al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	140.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	140.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	140.0	-28.9	-28.9	-28.9	-28.9	-28.9	-28.9	
Shielding (Barrier Attenuation)	140.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		48.3	-28.9	-28.9	-28.9	-28.9	-28.9	
60 Minute Hourly Adjustmer	nt	48.3	-28.9	-28.9	-28.9	-28.9	-28.9	

Observer Location: R6

Source: Drive-Through Speakerphone Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	534.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	534.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	534.0	-31.0	-31.0	-31.0	-31.0	-31.0	-31.0		
Shielding (Barrier Attenuation)	534.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		31.0	-31.0	-31.0	-31.0	-31.0	-31.0		
60 Minute Hourly Adjustmer	nt	31.0	-31.0	-31.0	-31.0	-31.0	-31.0		

S	TATIONARY SOURCI	E NOISE PREDICTION MODEL	2/15/2019
Observer Location: R6 Source: Gas Station Activity		Project Name: Victorville Retail Job Number: 11724	
Condition: Operation		Analyst: A. Wolfe	
Noise Distance to Observer	495.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	495.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	495.0	-39.9	-39.9	-39.9	-39.9	-39.9	-39.9	
Shielding (Barrier Attenuation)	495.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		28.3	-39.9	-39.9	-39.9	-39.9	-39.9	
60 Minute Hourly Adjustmer	nt	28.3	-39.9	-39.9	-39.9	-39.9	-39.9	

Observer Location: R6

Source: Parking Lot Vehicle Movements Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS								
Noise Distance to Observer	126.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	126.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	126.0	-21.0	-21.0	-21.0	-21.0	-21.0	-21.0		
Shielding (Barrier Attenuation)	126.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		39.1	-21.0	-21.0	-21.0	-21.0	-21.0		
60 Minute Hourly Adjustmen	ıt	39.1	-21.0	-21.0	-21.0	-21.0	-21.0		

STATIONARY SOURCE NOISE PREDICTION MODEL								
Observer Location: R6 Source: Car Wash Condition: Operation	I Tunnel Entrance/Exit (Air Blo al	Project Name: Victorville Retail w Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	533.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	533.0 feet	Noise Source Height:	10.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	533.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0		
Shielding (Barrier Attenuation)	533.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		49.9	-25.0	-25.0	-25.0	-25.0	-25.0		
60 Minute Hourly Adjustmer	nt	49.9	-25.0	-25.0	-25.0	-25.0	-25.0		

Observer Location: R6

Source: Car Wash Entry/Vacuum Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe <u>2/15/2</u>019

NOISE MODEL INPUTS							
Noise Distance to Observer	500.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	500.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	500.0	-40.0	-40.0	-40.0	-40.0	-40.0	-40.0
Shielding (Barrier Attenuation)	500.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		34.6	-40.0	-40.0	-40.0	-40.0	-40.0
60 Minute Hourly Adjustmen	nt	34.6	-40.0	-40.0	-40.0	-40.0	-40.0

S	TATIONARY SOUR	E NOISE PREDICTION MODEL	2/15/2019				
Observer Location: R6 Source: Loading Dock Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe					
NOISE MODEL INPUTS							
Noise Distance to Observer	256.0 feet	Barrier Height:	20.0 feet				
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet				
Barrier Distance to Observer:	246.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	256.0	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1
Shielding (Barrier Attenuation)	10.0	-15.9	-15.9	-15.9	-15.9	-15.9	-15.9
Raw (Distance + Barrier)		39.3	-38.0	-38.0	-38.0	-38.0	-38.0
60 Minute Hourly Adjustmer	nt	39.3	-38.0	-38.0	-38.0	-38.0	-38.0

Observer Location: R6

S Cor γp

Source:	Shopping Cart Corral	
ndition:	Operational	

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Noise Distance to Observer	314.0 feet
Noise Distance to Barrier:	314.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Elevation:	0.0 feet
Noise Source Elevation:	0.0 feet
Barrier Elevation:	0.0 feet

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

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	NOISE MODEL INPUTS
314.0 feet	Barrier Height: 0.0 feet
314.0 feet	Noise Source Height: 3.0 feet
0.0 feet	Observer Height: 5.0 feet
0.0 feet	Barrier Type (0-Wall, 1-Berm): 0
0.0 feet	Drop Off Coefficient: 20.0
0.0 feet	20 - 6 dPA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	314.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0
Shielding (Barrier Attenuation)	314.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.9	-36.0	-36.0	-36.0	-36.0	-36.0
60 Minute Hourly Adjustmer	nt	36.9	-36.0	-36.0	-36.0	-36.0	-36.0

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	2/15/2019					
Observer Location: R6 Source: RV Idling/Parking Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe						
	NOISE MODEL INPUTS							
Noise Distance to Observer	631.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	631.0 feet	Noise Source Height:	6.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	631.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0
Shielding (Barrier Attenuation)	631.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.4	-27.0	-27.0	-27.0	-27.0	-27.0
60 Minute Hourly Adjustmer	nt	49.4	-27.0	-27.0	-27.0	-27.0	-27.0

Observer Location: R7

Source: Roof-Top Air Conditioning Unit *Condition:* Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	510.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	510.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:			20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	510.0	-40.2	-40.2	-40.2	-40.2	-40.2	-40.2
Shielding (Barrier Attenuation)	510.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		37.0	-40.2	-40.2	-40.2	-40.2	-40.2
60 Minute Hourly Adjustmen	nt	37.0	-40.2	-40.2	-40.2	-40.2	-40.2

s	TATIONARY SOURCE N	OISE PREDICTION MODEL	2/15/2019
Observer Location: R7 Source: Drive-Thro Condition: Operation	ough Speakerphone al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE MOI	DEL INPUTS	
Noise Distance to Observer	954.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	954.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	954.0	-36.1	-36.1	-36.1	-36.1	-36.1	-36.1
Shielding (Barrier Attenuation)	954.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.9	-36.1	-36.1	-36.1	-36.1	-36.1
60 Minute Hourly Adjustmer	nt	25.9	-36.1	-36.1	-36.1	-36.1	-36.1

2/15/2019

Observer Location: R7 Source: Gas Station Activity Condition: Operational

Project Name:	Victorville Retail
Job Number:	11724
Analyst:	A. Wolfe

NOISE MODEL INPUTS						
Noise Distance to Observer	1,239.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	1,239.0 feet	Noise Source Height:	5.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 0 15 = 4.5 dBA per doubling				

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,239.0	-47.9	-47.9	-47.9	-47.9	-47.9	-47.9
Shielding (Barrier Attenuation)	1,239.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		20.3	-47.9	-47.9	-47.9	-47.9	-47.9
60 Minute Hourly Adjustmer	nt	20.3	-47.9	-47.9	-47.9	-47.9	-47.9

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	2/15/2019
Observer Location: R7 Source: Parking Lo Condition: Operation	ot Vehicle Movements al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer	503.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	503.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	503.0	-30.0	-30.0	-30.0	-30.0	-30.0	-30.0
Shielding (Barrier Attenuation)	503.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.1	-30.0	-30.0	-30.0	-30.0	-30.0
60 Minute Hourly Adjustmer	nt	30.1	-30.0	-30.0	-30.0	-30.0	-30.0

Observer Location: R7

Source: Car Wash Tunnel Entrance/Exit (Air Blow Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS						
Noise Distance to Observer	503.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	503.0 feet	Noise Source Height:	10.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	503.0	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5
Shielding (Barrier Attenuation)	503.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.4	-24.5	-24.5	-24.5	-24.5	-24.5
60 Minute Hourly Adjustmer	nt	50.4	-24.5	-24.5	-24.5	-24.5	-24.5

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R7 Source: Car Wash Condition: Operation	Entry/Vacuum Activity al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe		
	NOISE MOD	EL INPUTS		
Noise Distance to Observer	480.0 feet	Barrier Height:	0.0 feet	
Noise Distance to Barrier:	480.0 feet	Noise Source Height:	5.0 feet	
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin		

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	480.0	-39.6	-39.6	-39.6	-39.6	-39.6	-39.6
Shielding (Barrier Attenuation)	480.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		35.0	-39.6	-39.6	-39.6	-39.6	-39.6
60 Minute Hourly Adjustmer	nt	35.0	-39.6	-39.6	-39.6	-39.6	-39.6

Observer Location: R7

Source: Loading Dock Activity Condition: Operational *Project Name:* Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS						
Noise Distance to Observer	472.0 feet	Barrier Height:	0.0 feet			
Noise Distance to Barrier:	472.0 feet	Noise Source Height:	8.0 feet			
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	472.0	-27.5	-27.5	-27.5	-27.5	-27.5	-27.5	
Shielding (Barrier Attenuation)	472.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		49.8	-27.5	-27.5	-27.5	-27.5	-27.5	
60 Minute Hourly Adjustmen	nt	49.8	-27.5	-27.5	-27.5	-27.5	-27.5	

STATIONARY SOURCE NOISE PREDICTION MODEL			
Observer Location: R7 Source: Shopping Cart Corral Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE N	MODEL INPUTS	
Noise Distance to Observer	815.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	815.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

	NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	815.0	-44.2	-44.2	-44.2	-44.2	-44.2	-44.2		
Shielding (Barrier Attenuation)	815.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		28.7	-44.2	-44.2	-44.2	-44.2	-44.2		
60 Minute Hourly Adjustmer	nt	28.7	-44.2	-44.2	-44.2	-44.2	-44.2		

Observer Location: R7

Source: RV Idling/Parking Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS									
Noise Distance to Observer	1,062.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	1,062.0 feet	Noise Source Height:	6.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 0 15 = 4.5 dBA per doubling							

	NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,062.0	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4		
Shielding (Barrier Attenuation)	1,062.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		46.0	-30.4	-30.4	-30.4	-30.4	-30.4		
60 Minute Hourly Adjustmer	nt	46.0	-30.4	-30.4	-30.4	-30.4	-30.4		

S	TATIONARY SOURCE NO	DISE PREDICTION MODEL	2/15/2019
Observer Location: R8 Source: Roof-Top Condition: Operation	Air Conditioning Unit al	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer	204.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	204.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	204.0	-32.2	-32.2	-32.2	-32.2	-32.2	-32.2
Shielding (Barrier Attenuation)	204.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		45.0	-32.2	-32.2	-32.2	-32.2	-32.2
60 Minute Hourly Adjustmer	nt	45.0	-32.2	-32.2	-32.2	-32.2	-32.2

Observer Location: R8

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS									
Noise Distance to Observer	411.0 feet	Barrier Height:	10.0 feet						
Noise Distance to Barrier:	90.0 feet	Noise Source Height:	3.0 feet						
Barrier Distance to Observer:	321.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	411.0	-28.8	-28.8	-28.8	-28.8	-28.8	-28.8		
Shielding (Barrier Attenuation)	90.0	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5		
Raw (Distance + Barrier)		25.7	-36.3	-36.3	-36.3	-36.3	-36.3		
60 Minute Hourly Adjustmer	nt	25.7	-36.3	-36.3	-36.3	-36.3	-36.3		

S	TATIONARY SOURC	E NOISE PREDICTION MODEL	2/15/2019
Observer Location: R8 Source: Gas Station Condition: Operation	•	Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE N	IODEL INPUTS	
Noise Distance to Observer	658.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	110.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	548.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

	NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	658.0	-42.4	-42.4	-42.4	-42.4	-42.4	-42.4		
Shielding (Barrier Attenuation)	110.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		25.8	-42.4	-42.4	-42.4	-42.4	-42.4		
60 Minute Hourly Adjustmer	nt	25.8	-42.4	-42.4	-42.4	-42.4	-42.4		

Observer Location: R8

Source: Parking Lot Vehicle Movements Condition: Operational Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe

NOISE MODEL INPUTS									
Noise Distance to Observer	166.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	166.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 0 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	166.0	-22.8	-22.8	-22.8	-22.8	-22.8	-22.8	
Shielding (Barrier Attenuation)	166.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		37.3	-22.8	-22.8	-22.8	-22.8	-22.8	
60 Minute Hourly Adjustmen	nt	37.3	-22.8	-22.8	-22.8	-22.8	-22.8	

S	TATIONARY SOURCE NOIS	E PREDICTION MODEL	2/15/2019					
Observer Location: R8 Source: Car Wash Condition: Operation	Tunnel Entrance/Exit (Air Blo al	Project Name: Victorville Retail N Job Number: 11724 Analyst: A. Wolfe						
NOISE MODEL INPUTS								
Noise Distance to Observer	694.0 feet	Barrier Height:	10.0 feet					
Noise Distance to Barrier:	365.0 feet	Noise Source Height:	10.0 feet					
Barrier Distance to Observer:	329.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	30.0	74.9	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	694.0	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3	
Shielding (Barrier Attenuation)	365.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2	
Raw (Distance + Barrier)		42.4	-32.5	-32.5	-32.5	-32.5	-32.5	
60 Minute Hourly Adjustmer	nt	42.4	-32.5	-32.5	-32.5	-32.5	-32.5	

Observer Location: R8

Source: Car Wash Entry/Vacuum Activity Condition: Operational

Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe <u>2/15/2</u>019

NOISE MODEL INPUTS							
Noise Distance to Observer	618.0 feet	Barrier Height:	10.0 feet				
Noise Distance to Barrier:	120.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	498.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	74.6	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	618.0	-41.8	-41.8	-41.8	-41.8	-41.8	-41.8		
Shielding (Barrier Attenuation)	120.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2		
Raw (Distance + Barrier)		26.6	-48.0	-48.0	-48.0	-48.0	-48.0		
60 Minute Hourly Adjustmer	nt	26.6	-48.0	-48.0	-48.0	-48.0	-48.0		

S	TATIONARY SOURC	E NOISE PREDICTION MODEL	2/15/2019
Observer Location: R8 Source: Loading Dock Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE I	MODEL INPUTS	
Noise Distance to Observer Noise Distance to Barrier: Barrier Distance to Observer:	725.0 feet 10.0 feet 715.0 feet	Barrier Height: Noise Source Height: Observer Height:	20.0 feet 8.0 feet 5.0 feet
Observer Elevation: Noise Source Elevation: Barrier Elevation:	0.0 feet 0.0 feet 0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient: 20 = 6 dBA per doubling of 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	20.0	77.3	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	725.0	-31.2	-31.2	-31.2	-31.2	-31.2	-31.2	
Shielding (Barrier Attenuation)	10.0	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7	
Raw (Distance + Barrier)		30.4	-46.9	-46.9	-46.9	-46.9	-46.9	
60 Minute Hourly Adjustmer	nt	30.4	-46.9	-46.9	-46.9	-46.9	-46.9	

Observer Location: R8

Source: Shopping Cart Corral Condition: Operational

Project Name: Victorville Retail *Job Number:* 11724 *Analyst:* A. Wolfe

NOISE MODEL INPUTS							
Noise Distance to Observer	471.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	471.0 feet	Noise Source Height:	3.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	72.9	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	471.0	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	
Shielding (Barrier Attenuation)	471.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		33.4	-39.5	-39.5	-39.5	-39.5	-39.5	
60 Minute Hourly Adjustmen	nt	33.4	-39.5	-39.5	-39.5	-39.5	-39.5	

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	2/15/2019
Observer Location: R8 Source: RV Idling/Parking Activity Condition: Operational		Project Name: Victorville Retail Job Number: 11724 Analyst: A. Wolfe	
	NOISE M	ODEL INPUTS	
Noise Distance to Observer	91.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	91.0 feet	Noise Source Height:	6.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 0 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	76.4	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	91.0	-14.4	-14.4	-14.4	-14.4	-14.4	-14.4		
Shielding (Barrier Attenuation)	91.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		62.0	-14.4	-14.4	-14.4	-14.4	-14.4		
60 Minute Hourly Adjustmer	nt	62.0	-14.4	-14.4	-14.4	-14.4	-14.4		