

Rancho Diamante (TTM No. 36841) Noise Impact Analysis City of Hemet

PREPARED BY:

Bill Lawson, PE, INCE blawson@urbanxroads.com (949) 336-5979

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LIST OF ABBREVIATED TERMS

(1) Reference

ADT Average Daily Traffic

ANSI American National Standards Institute

BNSF Burlington Northern Santa Fe
Calveno California Vehicle Noise

CEQA California Environmental Quality Act
CNEL Community Noise Equivalent Level

dBA A-weighted decibels

EIR Environmental Impact Report
EPA Environmental Protection Agency
FHWA Federal Highway Administration
FTA Federal Transit Administration

INCE Institute of Noise Control Engineering

Leq Equivalent continuous (average) sound level
Lmax Maximum level measured over the time interval
Lmin Minimum level measured over the time interval

mph Miles per hour

PPV Peak Particle Velocity

Project Rancho Diamante (TTM No. 36841)

RC ALUCP Riverside County Airport Land Use Compatibility Plan

REMEL Reference Energy Mean Emission Level

RMS Root-mean-square
TTM Tentative Tract Map
VdB Vibration Decibels



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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Rancho Diamante (TTM No. 36841) development ("Project"). The Project site is located on the southwest corner of Warren Road and the new Stetson Avenue extension in the City of Hemet. The Project is proposed to consist of the development of up to 588 single-family detached residential dwelling units and approximately 100,000 square feet of neighborhood commercial retail use. This study has been prepared to satisfy the City of Hemet noise standards and to ensure that adequate noise mitigation measures are incorporated into the Project's development.

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 37 roadway segments surrounding the Project site were estimated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (1) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 traffic conditions. The off-site traffic noise analysis indicates that the Project's contributions to roadway noise levels at adjacent sensitive land uses will be *less than significant* for Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 conditions.

On-Site Transportation Noise Analysis

The results of this analysis indicate that future transportation noise from Stetson Avenue, Warren Road, and Mustang Way are the principal source of community noise that will impact the Project site. The Project will also experience some background traffic noise impacts from the Project's internal streets, however, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a significant contribution to the noise environment. Additional potential on-site noise impacts are expected from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site. The BNSF rail lines are currently used for freight transportation, however, future Metrolink rail activity is expected with the planned extension of the Metrolink 91 Line in the City of Perris. The on-site noise mitigation measures recommended in this noise analysis have been designed to reduce the exterior and interior noise levels to satisfy the City of Hemet transportation related CNEL noise criteria for residential and commercial development. With the recommended noise mitigation measures shown on Exhibit ES-A, the on-site noise impacts will be *less than significant*.



ON-SITE EXTERIOR TRAFFIC NOISE MITIGATION

To satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential land use, the planned 6-foot high noise barriers are required for the outdoor living areas (backyards) of lots 303 to 305, 306, 315, 316, 322, 362, 363, 371 to 379, 393, 394, 398 to 402, 412, 414 to 422 adjacent to Stetson Avenue, and lots 1 to 17, 512, 519, 520, 522, 540, 541, 574, 585, 586 adjacent to Warren Road. With the planned noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 58.0 to 64.8 dBA CNEL. This noise analysis shows that the planned noise barriers will satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential development. The planned noise barriers used in this analysis are consistent with the October 16th, 2015 fence and wall plans for the Project prepared by Gillespie Moody Patterson, Inc. In addition, the future unmitigated exterior noise levels approaching 68.5 dBA CNEL will satisfy the 70 dBA CNEL exterior noise level standard for commercial uses.

The planned noise barriers shall be constructed so that the top of each wall and /or berm combination extends to the planned height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the planned height above the highest point between the residential home and the road. The barrier shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The noise barrier shall be constructed using the following materials:

- Masonry block
- Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot
- Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot
- Earthen berm
- Any combination of these construction materials

The barrier shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking.

ON-SITE EXTERIOR RAIL NOISE MITIGATION

The results of the Federal Transit Administration (FTA) model for railroad noise indicates that the single-family residential homes closest to the BNSF rail lines will experience unmitigated average daily noise levels approaching 51.7 dBA CNEL due to freight and Metrolink commuter rail activities. The average daily railroad noise analysis indicates that no exterior rail noise mitigation is required to satisfy the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. In addition, since the exterior noise levels due to rail activity will result in interior noise levels which are lower than the on-site traffic-related interior noise levels, the recommended interior traffic noise mitigation measures will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. While the average daily railroad noise activities are not expected to exceed the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards, peak rail pass-by events may



negatively impact the nearby residential homes. The City of Hemet General Plan *Final Environmental Impact Report* indicates that the noise sources associated with the BNSF rail line pass-by events include warning horns/wayside horns, at-grade crossing bells, and locomotive engine and rail car noise. (2) However, due to the planned 6-foot high barriers, residential lots with higher pad elevations than the rail centerline, and setback distances to the residential lots, the infrequent peak rail pass-by event noise levels will be further reduced at the outdoor living areas (backyards). To ensure that residents within the Rancho Diamante (TTM No. 36841) community understand the potential for short-term noise events, occupancy disclosure notices shall be required for all future homeowners. The occupancy disclosures shall indicate that rail pass-by and aircraft flyover noise will be clearly noticeable due to the location of the Project site in relation to the BNSF/Metrolink extension rail lines, and the Hemet-Ryan Airport. The on-site rail noise mitigation measures are outlined on Exhibit ES-A.

While this analysis considers the potential future noise activity associated with the planned Metrolink rail line extension, any planned extension will require additional CEQA analysis and approval by the lead agency.

ON-SITE INTERIOR TRANSPORTATION NOISE MITIGATION

Based on the interior noise analysis, all lots adjacent to Stetson Avenue, Warren Road, and Mustang Way will require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning). In order to meet the City of Hemet 45 dBA CNEL interior noise standards the Project shall provide the following or equivalent noise mitigation measures:

- Windows: All windows and sliding glass doors shall be well fitted, well weather-stripped
 assemblies and shall have a minimum STC rating of 27; While a minimum STC rating of 27 will
 satisfy the City of Hemet requirements, upgraded windows with STC ratings of 30 to 32 for all lots
 are recommended to further reduce the interior noise levels and to minimize the potential noise
 impacts associated with peak pass-by events.
- <u>Doors</u>: All exterior doors shall be well weather-stripped and have minimum STC ratings of 25. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating. (3)
- <u>Walls</u>: At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- Roof: Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or wellsealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- Attic: Attic vents should be oriented away from Stetson Avenue and Warren Road. If such an
 orientation cannot be avoided, then an acoustical baffle shall be placed in the attic space behind
 the vents. Insulation with at least a rating of R-19 shall be used in the attic space.
- <u>Ventilation</u>: When any habitable room is in use, arrangements shall be such that circulated air is
 received when any exterior door(s) or window(s) are closed. A forced air circulation system (e.g.
 air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which
 satisfies the requirements of the Uniform Building Code.



With the interior noise mitigation measures provided in this study, the proposed Rancho Diamante (TTM No. 36841) Project is expected to meet the City of Hemet 45 dBA CNEL interior noise level standards for residential development.

ON-SITE RAIL VIBRATION LEVEL ANALYSIS

Reference vibration levels provided by the FTA are used in this analysis to represent the potential vibration levels from the BNSF and Metrolink rail line extension activities. At 50 feet from the rail centerline, the reference vibration level will approach a peak particle velocity (PPV) of 0.018 in/sec, or 0.013 in/sec root-mean-square (RMS) velocity. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS) or the average of the squared amplitude of the signal, typically calculated over a one-second period.

Based on the distance to the nearest residential receiver of roughly 279 feet, the RMS vibration levels would approach 0.001 in/sec RMS and will not exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS. Therefore, the on-site vibration impacts due to the BNSF and potential Metrolink rail line extension would be *less than significant* at the residential lots within the Project site. Further, the vibration levels at the closest sensitive receiver locations would only occur during rail pass-by events, which will be infrequent in nature and unlikely to be sustained for long periods of time.

OPERATIONAL NOISE AND VIBRATION ANALYSIS

Using reference noise levels to represent the expected noise sources from the Rancho Diamante (TTM No. 36841) site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Rancho Diamante (TTM No. 36841) are anticipated to include roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones. The operational noise analysis shows that the unmitigated Project-related stationary-source noise levels will satisfy the City of Hemet daytime and nighttime exterior noise level standards at the nearby sensitive receiver locations.

Further, this analysis demonstrates that the Project will contribute a *less than significant* long-term operational noise level impact to the existing ambient noise environment at any of the sensitive receiver locations during the daytime and nighttime hours. Therefore, the operational noise level impacts associated with the proposed 24-hour seven days per week Project activities, such as the roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, are considered *less than significant*.

CONSTRUCTION NOISE ANALYSIS

Construction noise represents a short-term increase on the ambient noise levels. Based on the five phases of Project construction, the temporary construction-related noise impacts are expected to create temporary and intermittent high-level noise at receivers surrounding the Project site when certain activities occur near the property line. With the recommended construction noise mitigation measures, including temporary noise barriers, the construction



noise levels will satisfy the City of Hemet 75 dBA Lmax construction noise level threshold at the nearby sensitive receiver locations. Therefore, the construction of the Project will result in a *less than significant impact* with the construction noise mitigation measures provided below.

CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. For the purposes of this analysis, and consistent with criteria employed in the City of Hemet *General Plan Program Environmental Impact Report*, construction-source vibration impacts would be considered potentially significant if received vibration levels exceed FTA 80 VdB thresholds for human annoyance (4) and the Caltrans guidelines of 0.2 in/sec PPV (5) to prevent building damage.

At distances ranging from 125 to 3,536 feet from Project construction activity, construction vibration velocity levels are expected to range from 22.5 to 66.0 VdB and would remain below the FTA 80 VdB threshold for human annoyance at all receiver locations. The Project construction-source vibration levels would approach to 0.01 in/sec PPV at potentially affected sensitive receiver locations and will not exceed the Caltrans 0.2 in/sec PPV building damage threshold. Project construction activities will not include or require equipment, facilities, or activities that would result in an exceedance of the vibration threshold, and therefore, impacts due to vibration are considered *less than significant*.

CONSTRUCTION NOISE & VIBRATION MITIGATION MEASURES

Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive residential land uses:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the permitted hours on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- If receiver location R6 is an inhabited noise-sensitive residential home at the time of Project construction, the installation of a minimum 6-foot high temporary noise control barrier, as shown on Exhibit 11-A, at the Project site boundaries when construction activities occur within 140 feet is required. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be a minimum height of 6-feet.
 - The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier may be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.



- The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
- The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction
 equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with
 manufacturers' standards. The construction contractor shall place all stationary construction
 equipment so that emitted noise is directed away from the noise sensitive receptors nearest
 the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., at the center) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays). The Project Applicant shall prepare a haul route exhibit to design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.



EXHIBIT ES-A: SUMMARY OF RECOMMENDATIONS



LEGEND:

6' Planned Barrier Height (in feet) Planned 6-Foot High Noise Barrier



SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Rancho Diamante (TTM No. 36841) Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

Analusia	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Less Than Significant	n/a		
On-Site Traffic Noise	8	Potentially Significant	Less Than Significant		
Operational Noise	10	Less Than Significant	n/a		
Construction Noise	11	Potentially Significant	Less Than Significant		
Construction Vibration	11	Less Than Significant	n/a		

[&]quot;n/a" = No mitigation is required since the unmitigated impact will be less than significant.



1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Rancho Diamante (TTM No. 36841) ("Project"). This noise study describes the proposed Project, provides information regarding noise fundamentals, outlines the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed Rancho Diamante (TTM No. 36841) Project is located on the southwest corner of Warren Road and the new Stetson Avenue extension in the City of Hemet, as shown on Exhibit 1-A. State Route 79 (SR-79) is located approximately 1.75 miles west of the Project site, and State Route 74 (SR-74) is located roughly 1.5 miles to the north of the Project site. Existing residential land uses in the Project study area are located north on Stetson Avenue, east of Warren Road, and west on California Avenue. Agriculture land uses are located south of the Project site on Warren Road. The Hemet-Ryan Airport is located approximately 0.5 miles northeast of the Project site on Stetson Avenue. An existing Burlington Northern Santa Fe (BNSF) railroad line is located north of the Project site adjacent to the future Stetson Avenue extension.

1.2 PROJECT DESCRIPTION

The Project is proposed to include the development of up to 588 single-family detached residential dwelling units and approximately 100,000 square feet of neighborhood commercial retail use, as shown on Exhibit 1-B. For the purposes of this analysis, potential impacts have been assessed for two development phases. The two phases and their anticipated opening years are as follows:

- Phase 1 (2024) 588 single-family residential dwelling units;
- Phase 2 (2026) 100,000 square feet of neighborhood retail.



N SANDERSON AVE

W FLORIDA AVE

Hemet-Ryan Aliport STETSON AVE

STETSON AV.

BNSF Rail

SITE

DOMENIGONI PKY

W ESPLANADE AVE

W MENLO AVE

W STETSON AVE

FLORIDA AVE W

JUNIPER

EXHIBIT 1-A: LOCATION MAP

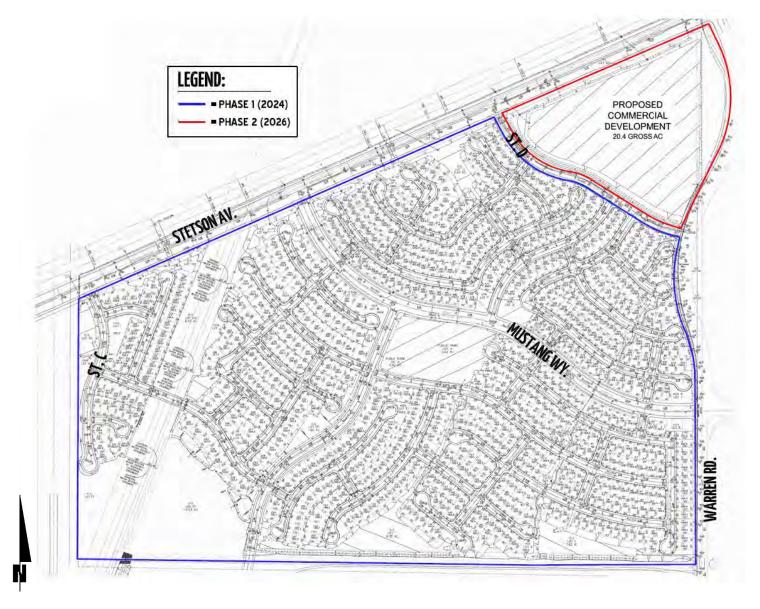


N

MPSON RD

Diamond Valley Lake

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.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140	INTOLERABLE OR		
NEAR JET ENGINE		130			
		120	DEAFENING	HEARING LOSS	
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		1,2,1,1,1,2,2,2,2	
LOUD AUTO HORN		100			
GAS LAWN MOWER AT 1m (3 ft)		90	VERY NOISY		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80	VENT MOIS	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	1000		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	ciera	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)			SLEEP 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 PAIN!		

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. (6) 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. (7) 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 (Leq). 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 (Leq) 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 Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Hemet 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 manner in which noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

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

2.3.2 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.

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.

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.

2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for a particular 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 any and all of 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. (8)



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. (9)

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 each individual'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. (10) 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. (10)

Despite this variability in behavior on an individual level, the population as a whole 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*. (8)



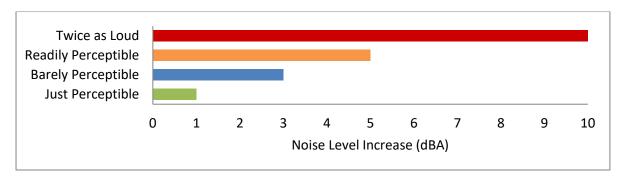


EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 VIBRATION

According to the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (4), 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.

Velocity Typical Sources Level* (50 ft from source) Human/Structural Response 100 Threshold, minor cosmetic damage Blasting from construction projects fragile buildings Bulldozers and other heavy tracked construction equipment Difficulty with tasks such as 90 reading a VDT screen Commuter rail, upper range 80 Residential annoyance, infrequent Rapid transit, upper range events (e.g. commuter rail) Commuter rail, typical Residential annoyance, frequent Bus or truck over bump events (e.g. rapid transit) Rapid transit, typical Limit for vibration sensitive equipment. Approx. threshold for Bus or truck, typical human perception of vibration 60 Typical background vibration 50

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.



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 fairly 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 according to guidelines adopted by the Governor's Office of Planning and Research. (11) 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 the potential environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING CODE

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



3.3 CITY OF HEMET GENERAL PLAN PUBLIC SAFETY ELEMENT

The City of Hemet General Plan Public Safety Element, Section 6.10 *Noise*, sets goals, policies, and implementation programs to address existing and future noise conditions. (12) To protect City of Hemet residents from excessive noise levels, the Public Safety Element contains the following goals:

- PS-4 Protect lives and property from the potential dangers associated with the use of Hemet-Ryan Airport while recognizing and maintaining its function as a part of Hemet's transportation system.
- PS-11 Manage noise levels through land use planning and development review.
- *PS-12 Minimize noise conflicts from transportation sources and airports.*
- *PS-13 Minimize noise conflicts with stationary noise generators.*

The noise policies specified in the City of Hemet Public Safety Element provide the guidelines necessary to satisfy these goals. To ensure that residents are not exposed to excessive noise levels from the Hemet-Ryan Airport (Goal PS-4), Policies 4.1, 4.6, and 4.10 new developments must demonstrate a reduction of the noise levels due to aircraft activity. Goal PS-11 and Policies 11.1 to 11.4 require new developments to satisfy the noise standards of the Public Safety Element and incorporate design techniques as a means to minimize noise. Table 6.4 includes the *Land Use Compatibility Standards for Exterior and Interior Noise* to satisfy Goal PS-12 and Policies 12.1 to 12.4 for transportation-related noise sources. To prevent noise conflicts with stationary noise generators (Goal PS-13), Policies 13.1 to 13.3 restrict the locations of sensitive land uses in relation to major noise sources in the City of Hemet. (12)

3.3.1 LAND USE COMPATIBILITY

The noise criteria identified in the City of Hemet Public Safety Element (Table 6.3) are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The Land Use Compatibility for Community Noise Environments (Table 6.3) matrix indicates that noise-sensitive land uses such as single-family residences are considered normally acceptable with exterior noise levels below 60 dBA CNEL and conditionally acceptable with noise levels below 70 dBA CNEL. Commercial uses within the Project site are considered normally acceptable with exterior noise levels of up to 70 dBA CNEL and conditionally acceptable with exterior noise levels of up to 75 dBA CNEL. For conditionally acceptable land uses, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. (12)

3.3.2 Transportation Noise Standards

To encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations and railroad movements (Goal PS-12), Table 6.4 of the City of Hemet General Plan Public Safety Element, shown on Exhibit 3-B, identifies a maximum allowable



exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments, and an exterior noise level of 70 dBA CNEL for commercial uses.

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

Land Use Category	Community Noise Exposure CNEL, dBA						
		55	60	65	70	75	80
Residential							
Transient lodging: hotels, motels							
Schools, libraries, churches, hospitals, nursing homes							
Auditoriums, concert halls, amphitheaters							
Sports arena, outdoor spectator sports							
Playgrounds, neighborhood parks							
Golf courses, riding stables, Water Recreation, Cemeteries							
Office buildings, business commercial and professional							
Industrial, manufacturing, utilities, agriculture			ished doils				

Notes: CNEL = community noise equivalent level; dBA = A-weighted decibel.

Normally Acceptable—Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise requirements

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

Normally Unacceptable—New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

Clearly Unacceptable—New construction or development clearly should not be undertaken.

Source: City of Hemet General Plan Public Safety Element, Table 6.3.



EXHIBIT 3-B: LAND USE COMPATIBILITY STANDARDS FOR EXTERIOR AND INTERIOR NOISE

	Maximum Allowable Noise (CNEL)		
Land Use	Exterior (dBA)	Interior (dBA)	
Residential and mixed use with residential component	65	45	
School classrooms	65	45	
School playgrounds	70		
Libraries	_	50	
Hospitals, convalescent homes—sleeping areas	_	40	
Hospitals, convalescent homes—living areas	_	50	
Passive recreation areas	65	_	
Active recreation areas	70	_	
Commercial and industrial areas	70	_	
Office areas	_	50	

Notes: CNEL = community noise equivalent level; dBA = A-weighted decibel; – = not applicable/not available.

The acceptable interior noise level for other uses depends upon the specific nature of the indoor activity.

Source: City of Hemet General Plan Public Safety Element, Table 6.4.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Rancho Diamante (TTM No. 36841) Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

The City of Hemet has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, etc.). Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element, identifies exterior noise level limits of 60 dBA Leq and 75 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq and 65 dBA Lmax during the nighttime hours (10:00 p.m. to 7:00 p.m.) (12)



EXHIBIT 3-C: PERFORMANCE STANDARDS FOR NON-TRANSPORTATION NOISE SOURCES

Noise Level Descriptor	Daytime (7 a.m.–10 p.m.)	Nighttime (10 p.m7 a.m.)
Hourly average level (L _{eq})	60 dBA	45 dBA
Maximum equivalent levels (L _{max})	75 dBA	65 dBA

Notes: Each of the noise levels specified shall be lowered by 5 decibels for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The noise standard is to be applied at the property lines of the affected land use.

Source: City of Hemet General Plan Public Safety Element, Table 6.5.

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Rancho Diamante (TTM No. 36841) site, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. The Municipal Code noise standards for construction are described below for the City of Hemet to determine the potential noise impacts at nearby receiver locations. The construction-related noise standards are summarized on Table 3-1.

The City of Hemet has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 67-10 of the City's Municipal Code states: Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. year-round. Grading on Sundays is prohibited. (13) For the purposes of this analysis, Project construction activities shall be limited to the hours specified for grading on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels. Therefore, an acceptable construction noise level threshold is used based on the Table 6.5 Noise Level Performance Standards for Non-Transportation Noise Sources, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA Lmax during the daytime hours of 7:00 a.m. to 10:00 p.m. (12) The Lmax noise level threshold is used to evaluate the maximum noise levels due to construction activity at the Project site. Table 3-2 shows the construction noise standards used in this analysis.



TABLE 3-1: CONSTRUCTION NOISE STANDARDS

Jurisdiction	Permitted Hours of Construction Activity ¹	Acceptable Construction Noise Level Threshold ²	
City of Hemet	Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturdays between 7:00 a.m. to 6:00 p.m.; no activity allowed on Sundays.	75 dBA Lmax	

¹ Source: City of Hemet Municipal Code, Chapter 67, Section 67-10 (Appendix 3.1).

3.6 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. (14) Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (14) Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity.

For the purposes of this analysis, and consistent with criteria employed in the City of Hemet General Plan Program Environmental Impact Report, construction-source vibration impacts would be considered potentially significant if received vibration levels exceed FTA 80 VdB thresholds for human annoyance (4) and the Caltrans guidelines of 0.2 in/sec PPV (5) to prevent building damage.



² Threshold based on the City of Hemet General Plan Public Safety Element, Table 6.5, maximum noise level standard for non-transportation noise sources.

3.7 HEMET-RYAN AIRPORT LAND USE COMPATIBILITY

The Hemet-Ryan Airport is located approximately 0.5 miles northeast of the Project site on Stetson Avenue. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project since it is located within 2 miles of the Hemet-Ryan Airport runway. Chapter 2 *Countywide Policies* of the RC ALUCP establishes Policy 4.1.4 which identifies the maximum CNEL considered *normally acceptable* for new residential land uses in the vicinity of an airport as 60 dBA CNEL. Future 2031 Airport Noise Contours are provided in Figure 4.6.2 of the *Hemet-Ryan Airport Master Plan Environmental Impact Report* (EIR) and shown on Exhibit 3-D.

As shown on Exhibit 3-D, the Project site is located outside of the Hemet-Ryan Airport 60 dBA CNEL noise level contour boundary, and therefore, is considered *normally acceptable* residential land use. (15) Further, Policy 4.1.6 of the RC ALUCP identifies an interior noise level limit of 45 dBA CNEL with windows closed for residential homes affected by aircraft-related noise. Based on Policy 4.1.4 and Table 2B of the RC ALUCP, the Project is considered *normally acceptable*, and *slight interference with outdoor activities may occur*, but *conventional construction methods will eliminate most noise intrusions upon indoor activities*. (15) Standard building construction typically provides up to 25 dBA CNEL of attenuation which would reduce the interior noise levels due to aircraft activity at residential homes within the Project site to less than the Policy 4.1.6 interior noise level standard of 45 dBA CNEL.



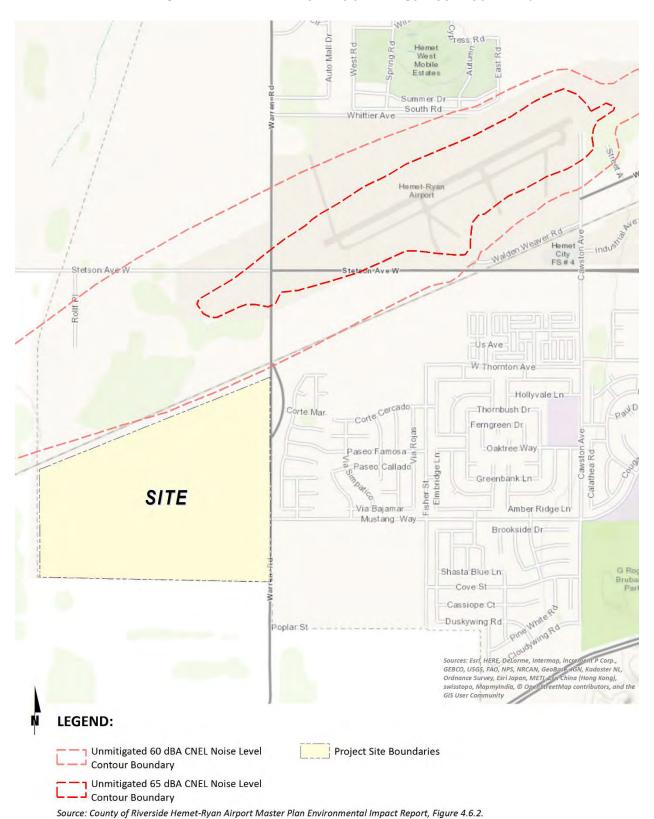


EXHIBIT 3-D: HEMET-RYAN AIRPORT NOISE LEVEL CONTOUR BOUNDARIES



4 SIGNIFICANCE CRITERIA

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

- A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.
- E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.
- F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

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

As previously shown on Exhibit 3-D, the Project site is located outside of the Hemet-Ryan Airport 60 dBA CNEL noise level contour boundary, and therefore, is considered *normally acceptable* residential land use. (15) Further, Policy 4.1.6 identifies an interior noise level limit of 45 dBA CNEL with windows closed for residential homes affected by aircraft-related noise. Based on Policy 4.1.4 and Table 2B of the RC ALUCP, the Project is considered *normally acceptable*, and *slight interference with outdoor activities may occur*, but *conventional construction methods will eliminate most noise intrusions upon indoor activities*. (15) Standard building construction typically provides up to 25 dBA CNEL of attenuation which would reduce the interior noise levels due to aircraft activity at residential homes within the Project site to less than the Policy 4.1.6 45 dBA CNEL interior noise level standard. With standard building construction, the Project is expected to satisfy the City of Hemet 45 dBA CNEL interior noise level standard, and therefore, the potential impacts under CEQA guidelines E and F are considered to be *less than significant*, and are not further analyzed in this noise study.



4.1 Noise-Sensitive Receivers

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (16)

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

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (17) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL).

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

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

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

Federal Interagency Committee on Noise (FICON), 1992.



4.2 Non-Noise-Sensitive Receivers

The City of Hemet General Plan Public Safety Element, Table 6.4, is used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area, such as commercial, business park, and industrial land uses. As previously shown on Exhibit 3-C, the exterior noise level standard for non-noise-sensitive land uses is 70 dBA CNEL. (12)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria were used. When the without Project noise levels at the non-noise-sensitive land uses are below the 70 dBA CNEL standard, a *readily perceptible* 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the 70 dBA CNEL standard, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds s for noise-sensitive land uses but instead rely on the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA CNEL exterior noise level standard. Table 4.2 provides a summary of the noise impact significance criteria.

4.3 SIGNIFICANCE CRITERIA

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.

OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential):
 - are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA
 CNEL or greater Project noise level increase; or
 - o already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. commercial):
 - are less than the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA
 CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - are greater than the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase.

ON-SITE TRANSPORTATION NOISE AND VIBRATION

• If the on-site exterior noise levels exceed 65 dBA CNEL and the interior noise levels exceed 45 dBA CNEL at the residential uses located within the Project site (City of Hemet General Plan Public Safety Element, Table 6.4).



• If the on-site vibration levels due to nearby rail activity exceed the County of Riverside acceptable vibration standard of 0.01 in/sec (RMS) at sensitive receiver locations (County of Riverside General Plan, Policy N 16.3).

OPERATIONAL NOISE

- If Project-related operational (stationary-source) noise levels exceed the exterior 60 dBA Leq and 75 dBA Lmax daytime or 45 dBA Leq and 65 dBA Lmax nighttime noise level standards at sensitive residential land uses in the City of Hemet (City of Hemet General Plan Public Safety Element, Table 6.5); or
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
 - are less than 60 dBA Leq and the Project creates a readily perceptible 5 dBA Leq or greater Project-related noise level increase; or
 - o range from 60 to 65 dBA Leq and the Project creates a barely perceptible 3 dBA Leq or greater Project-related noise level increase; or
 - o already exceed 65 dBA, Leq and the Project creates a community noise level impact of greater than 1.5 dBA Leq (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
 - o occur anytime other than between the permitted hours of Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturdays between 7:00 a.m. to 6:00 p.m.; no activity allowed on Sundays (City of Hemet Municipal Code, Section 67-10); or
 - o generate noise levels which exceed the maximum noise level threshold for non-transportation noise sources of 75 dBA Lmax at the nearby sensitive receiver locations (City of Hemet General Plan Public Safety Element, Table 6.5).
- If short-term Project generated construction vibration levels exceed:
 - the FTA human annoyance threshold of 80 VdB (FTA Transit Noise and Vibration Impact Assessment); or
 - o the Caltrans building damage threshold of 0.2 in/sec PPV at sensitive residential structures (Caltrans Transportation and Construction Vibration Guidance Manual).



TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Amalusia	Landillas	Condition(s)	Significan	ce Criteria	
Analysis	Land Use	Condition(s)	Daytime	Nighttime	
		if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL P	roject increase	
	Noise- Sensitive	if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL P	roject increase	
Off-Site ¹	Schistive	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	Project increase	
	Non-Noise-	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL P	roject increase	
	Sensitive ²	if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL P	roject increase	
		Exterior Noise Level	65 dB <i>A</i>	A CNEL	
On-Site ²	Residential	Interior Noise Level	45 dBA CNEL		
On-site-		Exterior Vibration Level ⁵	0.01 in/sec (RMS)		
	Commercial	Exterior Noise Level	70 dBA CNEL		
		Exterior Noise Level ²	60 dBA Leq or 75 dBA Lmax	45 dBA Leq or 65 dBA Lmax	
Operational	Noise- Sensitive	if ambient is < 60 dBA Leq ¹	≥ 5 dBA Leq Project increase		
	Sensitive	if ambient is 60 - 65 dBA Leq ¹	≥ 3 dBA Leq Project increase		
		if ambient is > 65 dBA Leq ¹	≥ 1.5 dBA Leq Project increase		
	September 3	Permitted hours Monday through Friday between 6:0 September 30th, and 7:00 a.m. to 6:00 p.m. fro Saturdays between 7:00 a.m. to 6:00 p.m.; r		gh May 31st;	
Construction		Noise Level Threshold ⁴	75 dBA Lmax	n/a	
	Noise- Sensitive	Vibration Lovel Throok -1-156	80 VdB	n/a	
	Sensitive	Vibration Level Threshold ^{5,6}	0.2 in/sec PPV	n/a	

¹ Source: FICON, 1992.



² Source: City of Hemet General Plan Public Safety Element.

 $^{^{\}rm 3}$ Source: City of Hemet Municipal Code, Chapter 67, Section 67-10 (Appendix 3.1).

⁴ Maximum stationary noise level standard is used as an acceptable threshold for construction noise based on the City of Hemet General Plan Public Safety Element, Table 6.5, Noise Level Performance Standards for Non-Transportation Noise Sources.

⁵ Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment.

⁶ Source: Caltrans Transportation and Construction Vibration Guidance Manual.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, five 24-hour noise level measurements were taken at sensitive 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 Wednesday, September 27th, 2017. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

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

5.2 Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (19) 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. (4)

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. (4) 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.



EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



5.3 Noise Measurement Results

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The equivalent sound level (Leq) 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 northwest of the Project site at the intersection of Stetson Avenue and California Avenue, south of existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 61.3 dBA CNEL. The hourly noise levels measured at location L1 ranged from 50.5 to 61.6 dBA Leq during the daytime hours and from 45.2 to 57.6 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 58.5 dBA Leq with an average nighttime noise level of 53.4 dBA Leq.
- Location L2 represents the noise levels north of the Project site on Stetson Avenue, west of
 the Hemet-Ryan Airport runway and east of existing residential homes. The noise level
 measurements collected show an overall 24-hour exterior noise level of 64.3 dBA CNEL. The
 hourly noise levels measured at location L2 ranged from 55.1 to 63.4 dBA Leq during the
 daytime hours and from 51.6 to 61.2 dBA Leq during the nighttime hours. The energy
 (logarithmic) average daytime noise level was calculated at 60.6 dBA Leq with an average
 nighttime noise level of 56.8 dBA Leq.
- Location L3 represents the noise levels east of the Project site across Warren Road adjacent
 to the existing 6-foot high barrier for residential homes. The 24-hour CNEL indicates that the
 overall exterior noise level is 64.1 dBA CNEL. At location L3 the background ambient noise
 levels ranged from 56.1 to 61.5 dBA Leq during the daytime hours to levels of 50.7 to 61.4
 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level
 was calculated at 59.3 dBA Leq with an average nighttime noise level of 57.0 dBA Leq.
- Located east of the Project site across Warren Road, location L4 represents the noise levels
 north of existing agricultural land uses. The noise level measurements collected show an
 overall 24-hour exterior noise level of 73.2 dBA CNEL. The hourly noise levels measured at
 location L4 ranged from 65.3 to 70.8 dBA Leq during the daytime hours and from 57.6 to 70.7
 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level
 was calculated at 68.7 dBA Leq with an average nighttime noise level of 66.0 dBA Leq.
- Location L5 represents the noise levels southwest of the Project site near existing residential
 homes on California Avenue. The noise level measurements collected show an overall 24hour exterior noise level of 57.6 dBA CNEL. The hourly noise levels measured at location L5
 ranged from 49.5 to 58.0 dBA Leq during the daytime hours and from 44.2 to 55.4 dBA Leq
 during the nighttime hours. The energy (logarithmic) average daytime noise level was
 calculated at 53.6 dBA Leq with an average nighttime noise level of 50.2 dBA Leq.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as



the minimum, maximum, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network and Hemet-Ryan Airport. This includes the auto, heavy truck, and aircraft activities near the noise level measurement locations. The 24-hour existing noise level measurements shown on Table 5-1 present the worst-case existing unmitigated ambient noise conditions.

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

Location ¹	Distance To Project Boundary	Description	Energy Average Hourly Noise Level (dBA Leq) ²		CNEL
	(Feet)		Daytime	Nighttime	
L1	3,630'	Located northwest of the Project site at the intersection of Stetson Avenue and California Avenue, south of existing residential homes.	58.5	53.4	61.3
L2	2,215'	Located north of the Project site on Stetson Avenue, west of the Hemet- Ryan Airport runway and east of existing residential homes.	60.6	56.8	64.3
L3	285'	Located east of the Project site across Warren Road adjacent to an existing 6-foot high barrier for residential homes.	59.3	57.0	64.1
L4	60'	Located east of the Project site across Warren Road, north of existing agricultural land uses.	68.7	66.0	73.2
L5	1,120'	Located southwest of the Project site near existing residential homes on California Avenue.	53.6	50.2	57.6

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



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

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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. (20) 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. (21) 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 37 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications according to the City of Hemet and County of Riverside General Plan Circulation Elements, and the posted vehicle speeds. For the purpose of this analysis, soft site conditions were 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. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (22)

The Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 average daily traffic volumes used for this study are presented on Tables 6-2 and 6-3, and were provided by the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (1) 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.



TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Land Use ¹	Distance From Centerline To Nearest Adjacent Land Use (Feet) ²	Vehicle Speed (mph) ³
1	Winchester Rd.	s/o Florida Av.	Residential	47'	45
2	Winchester Rd.	n/o 9th St.	Residential	47'	45
3	Patterson Av.	s/o Grand Av.	Business Park	22'	40
4	California Av.	n/o Stowe Rd.	Residential	47'	40
5	California Av.	s/o Stowe Rd.	Residential	47'	40
6	California Av.	n/o Simpson Rd.	Residential	47'	25
7	California Av.	s/o Simpson Rd.	Residential	47'	25
8	Warren Rd.	s/o Esplanade Av.	Residential	70'	55
9	Warren Rd.	n/o Devonshire Av.	Residential	70'	55
10	Warren Rd.	n/o Florida Av.	Mixed Use	70'	55
11	Warren Rd.	s/o Florida Av.	Mixed Use	70'	55
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70'	55
13	Warren Rd.	s/o Whittier Av.	Industrial	70'	55
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70'	55
15	Warren Rd.	s/o Mustang Wy.	Residential	70'	45
16	Warren Rd.	s/o Simpson Rd.	Residential	70'	45
17	Sanderson Av.	s/o Florida Av.	Commercial	54'	30
18	Sanderson Av.	n/o Stetson Av.	Commercial	54'	45
19	Florida Av.	w/o Winchester Rd.	Residential	76'	50
20	Florida Av.	e/o Warren Rd.	Mixed Use	70'	45
21	Stowe Rd.	w/o California Av.	Residential	47'	40
22	Grand Av.	e/o Patterson Av.	Residential	70'	40
23	Grand Av.	w/o Calvert Av.	Residential	70'	40
24	Grand Av.	e/o Calvert Av.	Business Park	70'	40
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	70'	50
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	70'	50
27	Stetson Av. (S.)	w/o California Av.	Residential	70'	50
28	Stetson Av. (S.)	e/o California Av.	Residential	70'	50
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	70'	50
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	70'	50
31	Stetson Av. (S.)	e/o Fisher St.	Residential	70'	50
32	Stetson Av.	e/o New Stetson Av.	Business Park	70'	50
33	Stetson Av.	e/o Cawston Av.	Airport	70'	50
34	Stetson Av.	e/o Sanderson Av.	Residential	70'	45
35	9th St.	w/o Winchester Rd.	Residential	70'	25
36	9th St.	e/o Winchester Rd.	Residential	70'	25
37	Simpson Rd.	e/o Warren Rd.	Residential	70'	45

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Posted speed limits.

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

				Average D	Daily Traffic	(1,000's) ¹		
ID	Roadway	Segment	Existing (2017)			Year 2024 (Phase 1)		
			Without Project	With Phase 1	With Buildout	Without Project	With Phase 1	
1	Winchester Rd.	s/o Florida Av.	12.4	12.5	12.7	18.5	18.7	
2	Winchester Rd.	n/o 9th St.	14.2	14.3	14.3	18.2	18.4	
3	Patterson Av.	s/o Grand Av.	0.1	0.1	0.1	0.1	0.1	
4	California Av.	n/o Stowe Rd.	2.9	2.9	2.9	2.9	3.9	
5	California Av.	s/o Stowe Rd.	0.3	0.3	0.3	0.3	0.4	
6	California Av.	n/o Simpson Rd.	0.1	0.1	0.1	0.1	0.1	
7	California Av.	s/o Simpson Rd.	0.1	0.1	0.1	0.2	0.2	
8	Warren Rd.	s/o Esplanade Av.	13.7	14.5	14.7	23.7	24.4	
9	Warren Rd.	n/o Devonshire Av.	13.7	14.5	14.7	22.9	23.7	
10	Warren Rd.	n/o Florida Av.	10.4	11.2	11.7	19.6	20.5	
11	Warren Rd.	s/o Florida Av.	16.2	18.5	20.4	27.0	29.3	
12	Warren Rd.	n/o Whittier Av.	14.4	16.8	18.6	23.9	26.3	
13	Warren Rd.	s/o Whittier Av.	14.3	16.8	18.5	16.9	19.3	
14	Warren Rd.	s/o Stetson Av. (N.)	10.2	13.7	16.0	19.0	22.6	
15	Warren Rd.	s/o Mustang Wy.	12.5	14.2	14.4	20.4	22.1	
16	Warren Rd.	s/o Simpson Rd.	9.4	10.6	10.5	15.7	16.9	
17	Sanderson Av.	s/o Florida Av.	26.5	26.7	26.7	38.7	38.9	
18	Sanderson Av.	n/o Stetson Av.	26.1	26.5	26.5	42.6	43.0	
19	Florida Av.	w/o Winchester Rd.	24.8	25.2	25.3	37.8	38.2	
20	Florida Av.	e/o Warren Rd.	23.7	24.9	25.6	44.5	45.7	
21	Stowe Rd.	w/o California Av.	2.8	2.8	2.8	2.8	3.7	
22	Grand Av.	e/o Patterson Av.	n/a	n/a	n/a	n/a	n/a	
23	Grand Av.	w/o Calvert Av.	n/a	n/a	n/a	n/a	n/a	
24	Grand Av.	e/o Calvert Av.	n/a	n/a	n/a	n/a	n/a	
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	n/a	n/a	n/a	n/a	n/a	
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	n/a	n/a	n/a	n/a	n/a	
27	Stetson Av. (S.)	w/o California Av.	n/a	n/a	n/a	n/a	n/a	
28	Stetson Av. (S.)	e/o California Av.	n/a	n/a	n/a	n/a	n/a	
29	Stetson Av. (S.)	w/o Warren Rd.	n/a	n/a	n/a	n/a	n/a	
30	Stetson Av. (S.)	e/o Warren Rd.	n/a	n/a	n/a	n/a	n/a	
31	Stetson Av. (S.)	e/o Fisher St.	n/a	n/a	n/a	n/a	n/a	
32	Stetson Av.	e/o New Stetson Av.	n/a	n/a	n/a	n/a	n/a	
33	Stetson Av.	e/o Cawston Av.	11.1	12.2	12.4	13.2	14.3	
34	Stetson Av.	e/o Sanderson Av.	26.7	27.1	27.2	35.2	35.6	
35	9th St.	w/o Winchester Rd.	1.6	1.6	1.6	2.4	2.4	
36	9th St.	e/o Winchester Rd.	0.1	0.1	0.2	0.2	0.2	
37	Simpson Rd.	e/o Warren Rd.	12.5	14.2	14.4	20.4	22.1	

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018.



[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 6-3: AVERAGE DAILY TRAFFIC VOLUMES (2 OF 2)

			Average Daily Traffic (1,000's) ¹				
ID	Roadway	Segment		Year 2026 (Buildout)		zon 2040	
			Without Project	With Buildout	Without Project	With Project	
1	Winchester Rd.	s/o Florida Av.	22.0	22.3	24.4	25.0	
2	Winchester Rd.	n/o 9th St.	21.6	21.8	29.0	29.1	
3	Patterson Av.	s/o Grand Av.	0.1	0.1	13.6	13.6	
4	California Av.	n/o Stowe Rd.	4.7	4.7	12.3	12.8	
5	California Av.	s/o Stowe Rd.	0.4	0.4	16.9	17.7	
6	California Av.	n/o Simpson Rd.	0.1	0.1	18.1	18.6	
7	California Av.	s/o Simpson Rd.	0.2	0.2	4.9	5.4	
8	Warren Rd.	s/o Esplanade Av.	27.8	28.8	34.4	34.9	
9	Warren Rd.	n/o Devonshire Av.	27.8	28.8	35.2	35.9	
10	Warren Rd.	n/o Florida Av.	23.6	24.9	26.2	27.1	
11	Warren Rd.	s/o Florida Av.	31.3	35.4	36.1	38.5	
12	Warren Rd.	n/o Whittier Av.	18.3	22.5	28.2	30.9	
13	Warren Rd.	s/o Whittier Av.	18.2	22.5	25.9	28.6	
14	Warren Rd.	s/o Stetson Av. (N.)	22.7	28.5	20.7	23.4	
15	Warren Rd.	s/o Mustang Wy.	23.4	25.3	19.5	20.0	
16	Warren Rd.	s/o Simpson Rd.	17.8	18.9	16.4	16.7	
17	Sanderson Av.	s/o Florida Av.	45.1	45.3	33.9	34.1	
18	Sanderson Av.	n/o Stetson Av.	50.8	51.1	33.9	34.1	
19	Florida Av.	w/o Winchester Rd.	43.3	43.8	69.3	69.6	
20	Florida Av.	e/o Warren Rd.	51.3	53.2	86.1	86.9	
21	Stowe Rd.	w/o California Av.	4.5	4.5	8.6	9.0	
22	Grand Av.	e/o Patterson Av.	n/a	n/a	33.1	34.3	
23	Grand Av.	w/o Calvert Av.	n/a	n/a	33.7	34.9	
24	Grand Av.	e/o Calvert Av.	n/a	n/a	23.7	25.2	
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	n/a	n/a	29.5	31.2	
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	n/a	n/a	29.9	31.9	
27	Stetson Av. (S.)	w/o California Av.	n/a	n/a	29.9	31.9	
28	Stetson Av. (S.)	e/o California Av.	n/a	n/a	37.7	41.1	
29	Stetson Av. (S.)	w/o Warren Rd.	n/a	n/a	33.6	35.6	
30	Stetson Av. (S.)	e/o Warren Rd.	n/a	n/a	30.1	31.2	
31	Stetson Av. (S.)	e/o Fisher St.	n/a	n/a	30.2	31.2	
32	Stetson Av.	e/o New Stetson Av.	n/a	n/a	35.8	36.8	
33	Stetson Av.	e/o Cawston Av.	14.3	15.5	32.9	33.6	
34	Stetson Av.	e/o Sanderson Av.	38.4	38.9	30.9	31.3	
35	9th St.	w/o Winchester Rd.	3.2	3.3	20.5	21.0	
36	9th St.	e/o Winchester Rd.	0.2	0.3	11.5	12.4	
37	Simpson Rd.	e/o Warren Rd.	23.4	25.3	14.6	15.0	

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018.



[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 6-4: TIME OF DAY VEHICLE SPLITS

Time Basis d	Vehicle Type					
Time Period	Autos Medium Tru		Heavy Trucks			
Daytime (7:00 a.m 7:00 p.m.)	77.5%	84.8%	86.5%			
Evening (7:00 p.m 10:00 p.m.)	12.9%	4.9%	2.7%			
Nighttime (10:00 p.m 7:00 a.m.)	9.6%	10.3%	10.8%			
Total:	100.0%	100.0%	100.0%			

Source: Typical Southern California vehicle mix.

TABLE 6-5: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Dooduus	1	Total % Traffic Flow	ı	Total
Roadway	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	97.42%	1.84%	0.74%	100.00%

Source: County of Riverside Office of Industrial Hygiene.

6.3 On-Site Traffic Noise Prediction Model Inputs

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-6. Based on the City of Hemet General Plan Circulation Element, Figure 4.1, Stetson Avenue and Warren Road are classified as 6-lane Arterials. Mustang Way is classified as a 4-lane Secondary. To predict the future on-site noise environment at the Project site, the Horizon Year 2040 with Project average daily traffic volumes were obtained from the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis*, prepared by Urban Crossroads, Inc. (1) The traffic volumes shown on Table 6-6 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures that address the worst-case future noise conditions. For the purposes of this analysis, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation.

Table 6-4 presents the time of day vehicle splits by vehicle type, and Table 6-5 presents the total traffic flow distributions (vehicle mixes) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Model based on roadway types.

To predict the future noise environment at each lot within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan showing the plotting of each lot in relationship to Stetson Avenue, Warrant Road, and Mustang Way, as shown in Appendix 6.1.



TABLE 6-6: ON-SITE ROADWAY PARAMETERS

Roadway Segment	Lanes	Classification	Average Daily Traffic Volume ¹	Speed Limit (mph)²	Site Conditions
Stetson Av. e/o "C Street"	6	Arterial	40,200	50	Soft
Stetson Av. e/o Mustang Wy.	6	Arterial	35,300	50	Soft
Warren Rd. s/o Stetson Av.	6	Arterial	21,100	45	Soft
Warren Rd. s/o Mustang Wy.	6	Arterial	20,000	40	Soft
Mustang Wy. s/o Stetson Av.	4	Secondary	14,200	40	Soft
Mustang Wy. w/o Warren rd.	4	Secondary	5,000	40	Soft

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018, Year 2040 with Project ADT volumes.

The site plan is used to identify the relationship between the roadway centerline elevation, the pad elevation and the centerline distance to the noise barrier, and the building façade. The exterior noise level impacts at the backyard receivers were placed five feet above the pad elevation and ten feet from the proposed barrier location or at the proposed building façade, whichever is greater. All second-floor receivers were located fourteen feet above the proposed finished floor elevation.

6.4 FTA RAIL NOISE PREDICTION MODEL

The estimated railroad noise impacts from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site are calculated using the Federal Transit Administration (FTA) General Transit Noise Assessment Model. The FTA Model calculates the predicted noise level based on the type of train, distance to receiver, number of trains per hour, speed, number of cars per train, and type of railroad tracks. The rail activities at the BNSF rail lines north of the Project site currently include up to 2 freight trains per day based on the U.S. Department of Transportation Crossing Inventory Form number 027366S at Warren Road. An extension of the Metrolink 91 Line in the City of Perris is proposed to extend to the rail lines north of the Project site.

The future rail volumes are based on a doubling of the existing freight train volumes from the U.S. Department of Transportation Crossing Inventory and observations made during the noise level measurements. The Metrolink extension volumes are estimated based on the similar Riverside Line commuter train volume of 12 trains per day, and the speed of each train is based on the Southern California Regional Rail Authority *Metrolink Fact Sheet* for Quarter 3 of 2015. The future noise conditions at the residential land use within the Project site are based on the estimated future rail volumes for the freight and Metrolink rail activities. The FTA Model inputs are shown on Table 6-7.



² Posted speed limits. Future Stetson Avenue speed limit is based on closest existing posted speed limit on Stetson Avenue.

TABLE 6-7: ON-SITE RAILROAD PARAMETERS

BNSF Railroad Activities	Train/Engine Type ¹	Speed (mph) ²	Trains P	er Hour	Trains Per Day ³
Activities	Туре	(IIIpII)	Daytime	Nighttime	Pel Day
Diesel Locomotives (Freight) ¹	Diesel	15	2	2	4
Commuter Rail Cars (Future Metrolink Extension) ²	Commuter	40	6	6	12

¹ Based on observations made during the noise level measurements taken in the Project study area and the U.S. Department of Transportation Crossing Inventory Form for crossing number 027366S at Warren Road.

6.5 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.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 8. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) and potential for building damage using the following vibration assessment methods defined by the FTA: (4)

- To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) 30 \log(D/25)$
- To describe the potential vibration levels capable of causing building damage the FTA provides the following equation: $PPV_{equip} = PPV_{ref} x (25/D)^{1.5}$



² Proposed Metrolink 91 Line extension from the City of Perris.

³ Future rail volumes are based on a doubling of the existing freight train volumes from the U.S. Department of Transportation Crossing Inventory and observations made during the noise level measurements. The Metrolink extension volumes are estimated based on the similar Riverside Line commuter train volume of 12 trains per day.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet	Vibration Decibel (VdB) at 25 feet
Small bulldozer	0.003	58
Jackhammer	0.035	79
Loaded Trucks	0.076	86
Large bulldozer	0.089	87

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



7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis*. (1) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

Existing Conditions:

- Without Project: This scenario refers to the existing present-day noise conditions without the proposed Project.
- With Phase 1 of the Project: This scenario refers to the existing present-day noise conditions with Phase 1 of the proposed Project.
- With Project Buildout: This scenario refers to the existing present-day noise conditions with Buildout of the proposed Project.
- <u>Year 2024 Without / With Phase 1 of the Project</u>: This scenario refers to Year 2024 noise conditions without and with Phase 1 of the proposed Project.
- <u>Year 2026 Without / With Buildout of the Project</u>: This scenario refers to Year 2026 noise conditions without and with Buildout of the proposed Project.
- Horizon Year 2040 Without / With Project: This scenario refers to the background noise conditions at future Year 2040 without and with the proposed Project. This scenario corresponds to 2040 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 TRAFFIC NOISE CONTOURS

To quantify the Project's operational traffic noise impacts on the surrounding areas, the changes in traffic noise levels on roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. Based on the noise impact significance criteria described in Section 4 and shown on Table 4-2, a significant off-site traffic noise level impact occurs:

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
 - are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA
 CNEL or greater Project noise level increase; or
 - o already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. commercial):
 - are less than the City of Hemet General Plan Noise Element, Table N-1, normally acceptable 70 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or



 are greater than the City of Hemet General Plan Noise Element, Table N-1, normally acceptable 70 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase.

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 take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contribution from any surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-9 present a summary of the unmitigated exterior traffic noise levels for the 37 study area roadway segments analyzed from the without Project to the with Project conditions in each of the timeframes: Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the nine traffic scenarios.



TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

					dBA CN	NEL	
ID	Road	Sogmont	Adjacent	@ Adj.	70	65	60
שו	NOdu	Segment	Planned Land Use ¹	Land	CL 1	to Cont	our
				Use	Dista	ance (Fo	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	RW	78	168
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	85	184
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	RW	135	291
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	RW	135	291
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	RW	112	242
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	70	151	325
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	RW	140	301
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	RW	139	299
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	RW	111	239
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	RW	91	195
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	RW	75	161
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	150
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	62	133	287
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	RW	159	343
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	RW	139	299
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	RW	100	215
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70	150	324
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	39.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	RW	91	195

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-2: EXISTING WITH PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

				dBA CNEL				
ID	Road	Segment	Adjacent	@ Adj.	70	65	60	
	Nodu	Jeginent	Planned Land Use ¹	Land	nd CL to Co		ontour	
				Use	Dista	ance (Fo	eet)²	
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	RW	78	169	
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	86	185	
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW	
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52	
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW	
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW	
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW	
8	Warren Rd.	s/o Esplanade Av.	Residential	69.5	RW	140	302	
9	Warren Rd.	n/o Devonshire Av.	Residential	69.5	RW	140	302	
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.4	RW	118	254	
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.6	77	165	355	
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.2	72	155	333	
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	72	155	333	
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	69.3	RW	135	291	
15	Warren Rd.	s/o Mustang Wy.	Residential	67.2	RW	99	213	
16	Warren Rd.	s/o Simpson Rd.	Residential	66.0	RW	81	175	
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	151	
18	Sanderson Av.	n/o Stetson Av.	Commercial	71.0	63	135	290	
19	Florida Av.	w/o Winchester Rd.	Residential	69.9	RW	161	347	
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.7	RW	143	309	
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51	
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW	
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW	
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW	
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW	
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW	
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW	
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW	
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW	
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW	
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW	
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW	
33	Stetson Av.	e/o Cawston Av.	Airport	67.7	RW	106	229	
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70	152	327	
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW	
36	9th St.	e/o Winchester Rd.	Residential	39.6	RW	RW	RW	
37	Simpson Rd.	e/o Warren Rd.	Residential	67.2	RW	99	213	

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-3: EXISTING WITH PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

					dBA CI	NEL	
ID	Road	Sogmont	Adjacent	@ Adj.	70	65	60
שו	NOdu	Segment	Planned Land Use ¹	Land	CL	to Cont	our
				Use	Dist	ance (Fo	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	68.4	RW	79	170
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	86	185
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	69.6	RW	142	305
9	Warren Rd.	n/o Devonshire Av.	Residential	69.6	RW	142	305
10	.0 Warren Rd. n/o Florida Av.		Mixed Use	68.6	RW	122	262
11			Mixed Use	71.0	82	176	379
12	2 Warren Rd. n/o Whittier Av.		Mixed Use	70.6	77	166	357
13	3 Warren Rd. s/o Whittier Av.		Industrial	70.6	77	165	355
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.0	RW	150	323
15	Warren Rd.			67.3	RW	100	214
16	Warren Rd.	s/o Simpson Rd.	Residential	65.9	RW	81	174
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	151
18	Sanderson Av.	n/o Stetson Av.	Commercial	71.0	63	135	290
19	Florida Av.	w/o Winchester Rd.	Residential	69.9	RW	161	348
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.8	RW	146	315
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	67.8	RW	108	232
34	Stetson Av.	e/o Sanderson Av.	Residential	70.1	71	152	328
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	37 Simpson Rd. e/o Warren Rd.		Residential	67.3	RW	100	214

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-4: YEAR 2024 WITHOUT PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

					dBA CN	NEL	
ID	Road	Cogmont	Adjacent	@ Adj.	70	65	60
שו	Rodu	Segment	Planned Land Use ¹	Land	CL 1	to Cont	our
				Use	Dista	ance (Fe	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	70.0	47	102	219
2	Winchester Rd.	n/o 9th St.	Residential	70.0	47	101	217
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	71.7	90	195	419
9	Warren Rd. n/o Devonshire Av.		Residential	71.5	88	190	410
10	Warren Rd. n/o Florida Av.		Mixed Use	70.8	80	171	369
11	Warren Rd. s/o Florida Av. I		Mixed Use	72.2	99	212	457
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.7	91	196	422
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	72	155	335
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.7	78	168	362
15	Warren Rd.	s/o Mustang Wy.	Residential	68.8	RW	126	271
16	Warren Rd.	s/o Simpson Rd.	Residential	67.7	RW	105	227
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	RW	90	193
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.0	86	185	399
19	Florida Av.	w/o Winchester Rd.	Residential	71.6	98	211	454
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.2	98	211	455
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.			68.1	RW	112	241
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	84	181	389
35	9th St.	w/o Winchester Rd.	Residential	53.4	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	37 Simpson Rd. e/o Warren Rd.		Residential	68.8	RW	126	271

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-5: YEAR 2024 WITH PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

					dBA CI	NEL	
ID	Road	Sogmont	Adjacent	@ Adj.	70	65	60
שו	NOdu	Segment	Planned Land Use ¹	Land	CL	to Cont	our
				Use	Dist	ance (Fo	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	70.1	48	102	221
2	Winchester Rd.	n/o 9th St.	Residential	70.0	47	101	218
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.0	RW	RW	64
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	71.8	92	198	427
9	Warren Rd.	n/o Devonshire Av.	Residential	71.7	90	195	419
10	0 Warren Rd. n/o Florida Av.		Mixed Use	71.0	82	177	381
11	1 Warren Rd. s/o Florida Av.		Mixed Use	72.6	104	224	483
12	·		Mixed Use	72.1	97	209	449
13	3 Warren Rd. s/o Whittier Av. I		Industrial	70.8	79	170	366
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	87	188	406
15	Warren Rd.			69.2	RW	132	285
16	Warren Rd.	s/o Simpson Rd.	Residential	68.0	RW	111	239
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	RW	90	194
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.1	86	186	401
19	Florida Av.	w/o Winchester Rd.	Residential	71.7	99	212	457
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.3	100	215	463
21	Stowe Rd.	w/o California Av.	Residential	61.8	RW	RW	62
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	RW	118	255
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	84	182	392
35	9th St.	w/o Winchester Rd.	Residential	53.4	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	37 Simpson Rd. e/o Warren Rd.		Residential	69.2	RW	132	285

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-6: YEAR 2026 WITHOUT PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

					dBA CI	NEL	
ID	Road	Sogmont	Adjacent	@ Adj.	70	65	60
שו	NOdu	Segment	Planned Land Use ¹	Land	CL	to Cont	our
				Use	Dist	ance (Fo	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	53	114	246
2	Winchester Rd.	n/o 9th St.	Residential	70.7	52	113	243
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.8	RW	RW	72
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	72.4	100	216	466
9	Warren Rd.	n/o Devonshire Av.	Residential	72.4	100	216	466
10	.0 Warren Rd. n/o Florida Av.		Mixed Use	71.6	90	194	418
11	·		Mixed Use	72.9	109	234	505
12			Mixed Use	70.5	76	164	353
13	3 Warren Rd. s/o Whittier Av.		Industrial 70.5		76	163	352
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	88	189	407
15	Warren Rd.			69.4	RW	138	296
16	Warren Rd.	s/o Simpson Rd.	Residential	68.2	RW	115	247
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	RW	99	214
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	97	208	448
19	Florida Av.	w/o Winchester Rd.	Residential	72.2	107	231	497
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.8	108	232	500
21	Stowe Rd.	w/o California Av.	Residential	62.6	RW	RW	70
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	RW	118	255
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	89	191	412
35	9th St.	w/o Winchester Rd.	Residential	54.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37			Residential	69.4	RW	138	296

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-7: YEAR 2026 WITH PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

					dBA CI	NEL	
ID	Road	Segment	Adjacent	@ Adj.	70	65	60
"	Nouu	Jeginent	Planned Land Use ¹	Land	CL	to Cont	our
				Use	Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	53	115	248
2	Winchester Rd.	n/o 9th St.	Residential	70.7	53	113	244
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.8	RW	RW	72
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	72.5	103	222	477
9	Warren Rd. n/o Devonshire Av. R		Residential	72.5	103	222	477
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.9	93	201	433
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.4	118	254	548
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.4	87	188	405
13	Warren Rd.	s/o Whittier Av.	Industrial	71.4	87	188	405
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	72.5	102	220	474
15	Warren Rd.			69.7	RW	145	312
16	Warren Rd.	s/o Simpson Rd.	Residential	68.5	RW	119	257
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	RW	100	215
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	97	209	450
19	Florida Av.	w/o Winchester Rd.	Residential	72.3	108	233	501
20	Florida Av.	e/o Warren Rd.	Mixed Use	73.0	110	238	513
21	Stowe Rd.	w/o California Av.	Residential	62.6	RW	RW	70
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	, ,		46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.8	RW	125	269
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	90	193	416
35	9th St.	w/o Winchester Rd.	Residential	54.7	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	44.3	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	69.7	RW	145	312

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-8: HORIZON YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

					dBA CN	NEL	
ID	Road	Segment	Adjacent	@ Adj.	70	65	60
10	Noau	Jeginent	Planned Land Use ¹	Land	CL 1	to Cont	our
				Use	Dista	ance (F	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	71.2	57	122	263
2	Winchester Rd.	n/o 9th St.	Residential	72.0	64	137	296
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	30	64	139
4	California Av.	n/o Stowe Rd.	Residential	67.0	RW	64	137
5	California Av.	s/o Stowe Rd.	Residential	68.4	RW	79	170
6	California Av.	n/o Simpson Rd.	Residential	63.8	RW	RW	84
7	California Av.	s/o Simpson Rd.	Residential	58.1	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	116	249	537
9	9 Warren Rd. n/o Devonshire Av.		Residential	73.4	118	253	546
10	0 Warren Rd. n/o Florida Av.		Mixed Use	72.1	97	208	448
11			Mixed Use	73.5	120	258	555
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.4	101	218	471
13	Warren Rd.	s/o Whittier Av.	Industrial	72.0	96	206	445
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.1	83	178	383
15	Warren Rd.	s/o Mustang Wy.	Residential	68.6	RW	122	263
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	RW	109	234
17	Sanderson Av.	s/o Florida Av.	Commercial	67.7	RW	82	177
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.0	74	159	342
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	147	316	680
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	152	328	707
21	Stowe Rd.	w/o California Av.	Residential	65.4	RW	50	108
22	Grand Av.	e/o Patterson Av.	Residential	69.6	RW	143	307
23	Grand Av.	w/o Calvert Av.	Residential	69.7	RW	144	311
24	Grand Av.	e/o Calvert Av.	Business Park	68.2	RW	114	246
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.6	89	192	413
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.6	90	193	417
27	Stetson Av. (S.)	w/o California Av.	Residential	71.6	90	193	417
28	Stetson Av. (S.)	e/o California Av.	Residential	72.6	105	226	486
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.1	97	209	450
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.6	90	194	418
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.7	90	195	419
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.4	101	218	470
33	Stetson Av.	e/o Cawston Av.	Airport	72.0	96	206	444
34	Stetson Av.	e/o Sanderson Av.	Residential	70.6	77	166	357
35	9th St.	w/o Winchester Rd.	Residential	62.7	RW	RW	105
36	9th St.	e/o Winchester Rd.	Residential	60.2	RW	RW	72
37	Simpson Rd.	e/o Warren Rd.	Residential	67.4	RW	100	216

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-9: HORIZON YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

					dBA CI	NEL	
ID	Road	Sagmont	Adjacent	@ Adj.	70	65	60
שו	NOdu	Segment	Planned Land Use ¹	Land	CL	to Cont	our
				Use	Dist	ance (Fo	eet)²
1	Winchester Rd.	s/o Florida Av.	Residential	71.3	58	124	268
2	Winchester Rd.	n/o 9th St.	Residential	72.0	64	138	296
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	30	64	139
4	California Av.	n/o Stowe Rd.	Residential	67.2	RW	65	141
5	California Av.	s/o Stowe Rd.	Residential	68.6	RW	81	175
6	California Av.	n/o Simpson Rd.	Residential	63.9	RW	RW	85
7	California Av.	s/o Simpson Rd.	Residential	58.5	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	117	252	543
9	Warren Rd.	n/o Devonshire Av.	Residential	73.5	119	257	553
10	.0 Warren Rd. n/o Florida Av.		Mixed Use	72.2	99	213	458
11	1 Warren Rd. s/o Florida Av.		Mixed Use	73.8	125	269	579
12	2 Warren Rd. n/o Whittier Av.		Mixed Use	72.8	108	232	500
13	3 Warren Rd. s/o Whittier Av. I		Industrial	72.5	102	221	475
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.6	90	193	416
15	Warren Rd.			68.7	RW	124	267
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	RW	110	237
17	Sanderson Av.	s/o Florida Av.	Commercial	67.8	RW	82	178
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.1	74	159	344
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	147	317	682
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	153	330	711
21	Stowe Rd.	w/o California Av.	Residential	65.6	RW	52	112
22	Grand Av.	e/o Patterson Av.	Residential	69.8	RW	146	315
23	Grand Av.	w/o Calvert Av.	Residential	69.9	RW	148	318
24	Grand Av.	e/o Calvert Av.	Business Park	68.5	RW	119	256
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.8	92	199	429
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.9	94	202	435
27	Stetson Av. (S.)	w/o California Av.	Residential	71.9	94	202	435
28	Stetson Av. (S.)	e/o California Av.	Residential	73.0	111	239	515
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.4	101	217	468
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.8	92	199	429
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.8	92	199	429
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.5	103	222	478
33	Stetson Av.	e/o Cawston Av.	Airport	72.1	97	209	450
34	Stetson Av.	e/o Sanderson Av.	Residential	70.7	78	167	360
35	9th St.	w/o Winchester Rd.	Residential	62.8	RW	RW	107
36	9th St.	e/o Winchester Rd.	Residential	60.5	RW	RW	75
37	37 Simpson Rd. e/o Warren Rd.		Residential	67.5	RW	102	220

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.



² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVELS

Tables 7-10 and 7-11 show the Existing without and with Phase 1 and Project Buildout conditions, respectively.

7.2.1 WITH PHASE 1 PROJECT CONDITIONS

Table 7-10 presents a comparison of the Existing without and with Phase 1 Project conditions CNEL noise levels. Table 7-1 shows that the unmitigated exterior noise levels are expected to range from 39.6 to 70.9 dBA CNEL for Existing without Project conditions. Table 7-2 presents the Existing with Phase 1 Project conditions noise level contours that are expected to range from 39.6 to 71.0 dBA CNEL. As shown on Table 7-10 the Project is expected to generate an exterior noise level increase of up to 1.3 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Phase 1 Project-related off-site traffic noise level increases are considered *less than significant* for Existing with Project Phase 1 conditions.

7.2.2 WITH PROJECT BUILDOUT CONDITIONS

Table 7-11 presents a comparison of the Existing without and with Project Buildout conditions CNEL noise levels. Table 7-3 presents the Existing with Project Buildout conditions noise level contours that are expected to range from 41.6 to 71.0 dBA CNEL. As shown on Table 7-11 the Project is expected to generate an exterior noise level increase of up to 3.0 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project Buildout-related off-site traffic noise level increases are considered *less than significant* for Existing with Project Buildout conditions.

7.3 YEAR 2024 PHASE 1 PROJECT TRAFFIC NOISE LEVELS

Table 7-12 presents a comparison of the Year 2024 without and with Phase 1 Project conditions CNEL noise levels. Table 7-4 shows that the unmitigated exterior noise levels are expected to range from 41.2 to 73.0 dBA CNEL for Year 2024 without Project conditions. Table 7-5 presents the Year 2019 with Phase 1 Project conditions noise level contours that are expected to range from 41.2 to 73.1 dBA CNEL. As shown on Table 7-12 the Project is expected to generate an exterior noise level increase of up to 1.3 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Phase 1 Project-related off-site traffic noise level increases are considered *less than significant* for Year 2024 conditions.



7.4 YEAR 2026 PROJECT BUILDOUT TRAFFIC NOISE LEVELS

Table 7-13 presents a comparison of the Year 2026 without and with Project Buildout conditions CNEL noise levels. Table 7-6 shows that the unmitigated exterior noise levels are expected to range from 41.2 to 73.8 dBA CNEL for Year 2026 without Project conditions. Table 7-7 presents the Year 2026 with Project Buildout conditions noise level contours that are expected to range from 41.2 to 73.8 dBA CNEL. As shown on Table 7-13 the Project is expected to generate an exterior noise level increase of up to 1.7 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project-related off-site traffic noise level increases are considered *less than significant* for Year 2026 conditions.

7.5 YEAR 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-14 presents a comparison of the Year 2040 without and with Project conditions CNEL noise levels. Table 7-8 shows that the unmitigated exterior noise levels are expected to range from 58.1 to 75.1 dBA CNEL for Year 2040 without Project conditions. Table 7-9 presents the Year 2040 with Project conditions noise level contours that are expected to range from 58.5 to 75.1 dBA CNEL. As shown on Table 7-14 the Project is expected to generate an exterior noise level increase of up to 0.5 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project-related off-site traffic noise level increases are considered *less than significant* for Year 2040 conditions.



TABLE 7-10: EXISTING OFF-SITE PHASE 1 PROJECT-RELATED TRAFFIC NOISE IMPACTS

j	D I	Communit	Adjacent Planned		EL at Adjac nd Use (dB		Noise-	Threshold
ID	Road	Segment	Land Use ¹	No Project	With Project	Project Addition	Sensitive?	Exceeded? ³
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	68.3	0.0	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	68.9	68.9	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	60.7	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	50.9	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	69.5	0.2	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	69.5	0.2	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	68.4	0.3	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	70.6	0.6	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	70.2	0.7	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	70.2	0.7	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	69.3	1.3	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	67.2	0.5	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	66.0	0.6	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	66.7	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	71.0	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	69.9	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	69.7	0.2	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	60.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	67.7	0.4	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70.0	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	51.6	51.6	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	39.6	39.6	0.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	67.2	0.5	Yes	No

 $^{^{\}rm 1}\,{\rm Source}\colon{\rm City}$ of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Significance Criteria (Section 4).

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-11: EXISTING OFF-SITE PROJECT BUILDOUT-RELATED TRAFFIC NOISE IMPACTS

i	Dood	Communit	Adjacent Planned		EL at Adjac nd Use (dB		Noise-	Threshold
ID	Road	Segment	Land Use ¹	No Project	With Project	Project Addition	Sensitive?	Exceeded? ³
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	68.4	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	68.9	68.9	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	60.7	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	50.9	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	69.6	0.3	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	69.6	0.3	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	68.6	0.5	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	71.0	1.0	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	70.6	1.1	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	70.6	1.1	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	70.0	2.0	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	67.3	0.6	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	65.9	0.5	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	66.7	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	71.0	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	69.9	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	69.8	0.3	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	60.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	67.8	0.5	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70.1	0.1	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	51.6	51.6	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	39.6	42.6	3.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	67.3	0.6	Yes	No

 $^{^{\}rm 1}\,{\rm Source}\colon{\rm City}$ of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Significance Criteria (Section 4).

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-12: YEAR 2024 PHASE 1 PROJECT RELATED TRAFFIC NOISE IMPACTS

2	Dood	Commont	Adjacent		EL at Adjac nd Use (dB		Noise-	Threshold
ID	Road	Segment	Planned Land Use ¹	No Project	With Project	Project Addition	Sensitive?	Exceeded? ³
1	Winchester Rd.	s/o Florida Av.	Residential	70.0	70.1	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	70.0	70.0	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	62.0	1.3	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	52.1	1.2	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	44.2	44.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	71.7	71.8	0.1	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	71.5	71.7	0.2	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	70.8	71.0	0.2	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.2	72.6	0.4	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.7	72.1	0.4	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	70.8	0.6	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.7	71.5	0.8	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	68.8	69.2	0.4	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	67.7	68.0	0.3	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	68.3	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.0	73.1	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	71.6	71.7	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.2	72.3	0.1	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	61.8	1.2	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	68.1	68.4	0.3	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	71.2	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	53.4	53.4	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	42.6	42.6	0.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	68.8	69.2	0.4	Yes	No

 $^{^{\}rm 1}\,{\rm Source}\colon{\rm City}$ of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Significance Criteria (Section 4).

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-13: YEAR 2026 PROJECT BUILDOUT RELATED TRAFFIC NOISE IMPACTS

j			Adjacent		EL at Adjac		Noise-	Threshold
ID	Road	Segment	Planned Land Use ¹	No Project	With Project	Project Addition	Sensitive?	Exceeded? ³
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	70.8	0.0	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	70.7	70.7	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	62.8	62.8	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	52.1	52.1	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	44.2	44.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	72.4	72.5	0.1	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	72.4	72.5	0.1	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.6	71.9	0.3	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.9	73.4	0.5	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.5	71.4	0.9	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	70.5	71.4	0.9	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	72.5	1.0	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	69.4	69.7	0.3	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	68.2	68.5	0.3	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	69.0	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	73.8	0.0	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	72.2	72.3	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.8	73.0	0.2	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	62.6	62.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	68.8	0.4	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	71.6	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	54.6	54.7	0.1	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	42.6	44.3	1.7	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	69.4	69.7	0.3	Yes	No

 $^{^{\}rm 1}\,{\rm Source}\colon{\rm City}$ of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Significance Criteria (Section 4).

[&]quot;n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-14: HORIZON YEAR 2040 PROJECT RELATED TRAFFIC NOISE IMPACTS

i	Dood	Communit	Adjacent		EL at Adjac nd Use (dB		Noise-	Threshold
ID	Road	Segment	Planned Land Use ¹	No Project	With Project	Project Addition	Sensitive?	Exceeded? ³
1	Winchester Rd.	s/o Florida Av.	Residential	71.2	71.3	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	72.0	72.0	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	72.0	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	67.0	67.2	0.2	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	68.4	68.6	0.2	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	63.8	63.9	0.1	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	58.1	58.5	0.4	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	73.3	0.0	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	73.4	73.5	0.1	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	72.1	72.2	0.1	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.5	73.8	0.3	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.4	72.8	0.4	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	72.0	72.5	0.5	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.1	71.6	0.5	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	68.6	68.7	0.1	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	67.9	0.0	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	67.7	67.8	0.1	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.0	72.1	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	74.3	0.0	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	75.1	0.0	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	65.4	65.6	0.2	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	69.6	69.8	0.2	Yes	No
23	Grand Av.	w/o Calvert Av.	Residential	69.7	69.9	0.2	Yes	No
24	Grand Av.	e/o Calvert Av.	Business Park	68.2	68.5	0.3	No	No
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.6	71.8	0.2	Yes	No
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.6	71.9	0.3	Yes	No
27	Stetson Av. (S.)	w/o California Av.	Residential	71.6	71.9	0.3	Yes	No
28	Stetson Av. (S.)	e/o California Av.	Residential	72.6	73.0	0.4	Yes	No
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.1	72.4	0.3	Yes	No
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.6	71.8	0.2	Yes	No
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.7	71.8	0.1	Yes	No
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.4	72.5	0.1	No	No
33	Stetson Av.	e/o Cawston Av.	Airport	72.0	72.1	0.1	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.6	70.7	0.1	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	62.7	62.8	0.1	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	60.2	60.5	0.3	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	67.4	67.5	0.1	Yes	No

 $^{^{\}rm 1}\,{\rm Source}\colon{\rm City}$ of Hemet General Plan Land Use Element, Figure 2.1.



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

³ Significance Criteria (Section 4).

8 ON-SITE TRANSPORTATION NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the transportation noise exposure and to identify potential necessary noise mitigation measures for the proposed Rancho Diamante (TTM No. 36841) Project. It is expected that the primary source of traffic noise impacts to the Project site will be traffic noise from Stetson Avenue, Warren Road, and Mustang Way. The Project will also experience some background traffic noise impacts from the Project's internal streets, however, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a significant contribution to the noise environment. Additional potential on-site noise impacts are expected from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site. The BNSF rail lines are currently used for freight transportation, however, an extension of the Metrolink 91 Line in the City of Perris is proposed to extend to the rail lines north of the Project site.

8.1 ON-SITE EXTERIOR TRAFFIC NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-4 to 6-6, the expected future exterior noise levels for the single-family residential lots and commercial uses were calculated. Table 8-1 presents a summary of future exterior noise level impacts in the outdoor living areas (backyards) of lots facing Stetson Avenue, Warren Road, and Mustang Way. The on-site traffic noise level impacts indicate that the lots facing Stetson Avenue, Warren Road, and Mustang Way will experience unmitigated exterior noise levels ranging from 59.9 to 68.5 dBA CNEL. The on-site traffic noise analysis calculations are provided in Appendix 8.1.

To satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential land use, the planned 6-foot high noise barriers are required for the outdoor living areas (backyards) of lots 303 to 305, 306, 315, 316, 322, 362, 363, 371 to 379, 393, 394, 398 to 402, 412, 414 to 422 adjacent to Stetson Avenue, and lots 1 to 17, 512, 519, 520, 522, 540, 541, 574, 585, 586 adjacent to Warren Road. With the planned noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 58.0 to 64.8 dBA CNEL. This noise analysis shows that the planned noise barriers will satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential development. The planned noise barriers used in this analysis are consistent with the October 16th, 2015 fence and wall plans for the Project prepared by Gillespie Moody Patterson, Inc. In addition, the future unmitigated exterior noise levels approaching 68.5 dBA CNEL will satisfy the 70 dBA CNEL exterior noise level standard for commercial uses.



TABLE 8-1: EXTERIOR TRAFFIC NOISE LEVELS (CNEL)

Lot Number	Roadway	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Planned Barrier Height (Feet)	Top Of Barrier Elevation (Feet)
374	Stetson Av. e/o "C Street"	68.5	62.5	6.0'	1,505.9'
363	Stetson Av. e/o "C Street"	68.2	61.9	6.0'	1,507.9'
306	Stetson Av. e/o "C Street"	64.8	_1	_1	_1
379	Stetson Av. e/o Mustang Wy.	66.3	60.5	6.0'	1,508.4'
399	Stetson Av. e/o Mustang Wy.	65.9	60.1	6.0'	1,509.8'
418	Stetson Av. e/o Mustang Wy.	66.3	60.4	6.0'	1,510.3'
520	Warren Rd. s/o Stetson Av.	68.4	60.5	6.0'	1,518.7'
541	Warren Rd. s/o Stetson Av.	68.2	58.0	6.0'	1,516.2'
3	Warren Rd. s/o Mustang Wy.	67.4	61.4	6.0'	1,513.3'
376	Mustang Wy. s/o Stetson Av.	64.4	_1	_1	_1
299	Mustang Wy. s/o Stetson Av.	64.4	_1	_1	_1
584	Mustang Wy. w/o Warren rd.	60.4	_1	_1	_1
87	Mustang Wy. w/o Warren rd.	59.9	_1	_1	_1

¹ Unmitigated exterior noise level satisfies the exterior noise level standard. No exterior noise mitigation is required.

8.2 ON-SITE INTERIOR TRAFFIC NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of Hemet 45 dBA CNEL interior noise standards, future noise levels were calculated at the first and second floor building façades.

8.2.1 Noise Reduction Methodology

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



8.2.2 Interior Noise Level Assessment

Tables 8-2 and 8-3 show the exterior noise levels at the first and second floor building façades, respectively, of the residential homes adjacent to Stetson Avenue, Warren Road, and Mustang Way. Based on the interior noise analysis, all lots adjacent to Stetson Avenue, Warren Road, and Mustang Way will require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning).

Table 8-2 shows that the future unmitigated noise levels at the first-floor building façade are expected to range from 58.4 to 64.4 dBA CNEL. The first-floor interior noise level analysis shows that the City of Hemet 45 dBA CNEL interior noise level standards can be satisfied using standard first floor windows with a minimum STC rating of 27. Table 8-3 shows that the future noise levels at the second-floor building façade are expected to range from 59.0 to 67.9 dBA CNEL. The second-floor interior noise level analysis shows that the City of Hemet 45 dBA CNEL interior noise level standards can be satisfied using standard second floor windows with a minimum STC rating of 27. The interior noise analysis shows that with the recommended interior noise mitigation measures described in the Executive Summary the Project will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. While a minimum STC rating of 27 will satisfy the City of Hemet requirements, upgraded windows with STC ratings of 30 to 32 for all lots are recommended to further reduce the interior noise levels and to minimize the potential noise impacts associated with peak pass-by events.



TABLE 8-2: FIRST FLOOR INTERIOR NOISE IMPACTS (CNEL)

Lot Number	Noise Level at Façade¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows⁴	Interior Noise Level ⁵
374	62.1	17.1	25.0	No	37.1
363	61.5	16.5	25.0	No	36.5
306	64.4	19.4	25.0	No	39.4
379	60.2	15.2	25.0	No	35.2
399	59.9	14.9	25.0	No	34.9
418	60.1	15.1	25.0	No	35.1
520	60.2	15.2	25.0	No	35.2
541	58.4	13.4	25.0	No	33.4
3	60.4	15.4	25.0	No	35.4
376	63.5	18.5	25.0	No	38.5
299	63.5	18.5	25.0	No	38.5
584	59.5	14.5	25.0	No	34.5
87	59.1	14.1	25.0	No	34.1

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).



² Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.

 $^{^{\}rm 3}$ A minimum of 25 dBA noise reduction is assumed with standard building construction.

⁴ Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?

⁵ Estimated interior noise level with minimum STC rating for all windows.

TABLE 8-3: SECOND FLOOR INTERIOR NOISE IMPACTS (CNEL)

Lot Number	Noise Level at Façade ¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows ⁴	Interior Noise Level ⁵
374	67.9	22.9	25.0	No	42.9
363	67.6	22.6	25.0	No	42.6
306	64.4	19.4	25.0	No	39.4
379	65.8	20.8	25.0	No	40.8
399	65.4	20.4	25.0	No	40.4
418	65.8	20.8	25.0	No	40.8
520	67.3	22.3	25.0	No	42.3
541	67.1	22.1	25.0	No	42.1
3	66.1	21.1	25.0	No	41.1
376	63.4	18.4	25.0	No	38.4
299	63.4	18.4	25.0	No	38.4
584	59.4	14.4	25.0	No	34.4
87	59.0	14.0	25.0	No	34.0

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

8.3 ON-SITE EXTERIOR RAIL NOISE ANALYSIS

The FTA model, previously discussed in Section 6.4, is used to calculate the noise levels at the closest single-family residential lot due to rail activity on the BNSF rail lines north of the Project site. Table 8-4 shows the results of the FTA model for railroad noise which indicates that the single-family residential homes closest to the BNSF rail lines will experience unmitigated average daily noise levels approaching 51.7 dBA CNEL due to freight and future Metrolink commuter rail activities. The average daily railroad noise analysis indicates that no exterior rail noise mitigation is required to satisfy the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. The rail activity noise levels shown on Table 8-4 do not include the additional attenuation provided by the 6-foot high planned barriers, shown on Exhibit ES-A, for single-family residential lots facing the BNSF rail lines. In addition, since the exterior noise levels due to rail activity will result in interior noise levels which are lower than the on-site traffic-related interior noise levels, previously discussed in Section 8.2, the recommended interior traffic noise mitigation measures will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. The on-site rail noise level calculations are provided in Appendix 8.2.



² Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.

³ A minimum of 25 dBA noise reduction is assumed with standard building construction.

⁴ Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?

⁵ Estimated interior noise level with minimum STC rating for all windows.

It is important to note that this analysis represents the average of all rail activity over a 24-hour period using future rail volumes to evaluate the potential impacts at the Project site based on the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. While the average daily railroad noise activities are not expected to exceed the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards, peak rail pass-by events may negatively impact the nearby residential homes. The City of Hemet General Plan Final Environmental Impact Report indicates that the noise sources associated with the BNSF rail line pass-by events include warning horns/wayside horns, at-grade crossing bells, and locomotive engine and rail car noise. (2) However, due to the planned 6-foot high barriers, residential lots with higher pad elevations than the rail centerline, and setback distances to the residential lots, the infrequent peak rail pass-by event noise levels will be further reduced at the outdoor living areas (backyards). To ensure that residents within the Rancho Diamante (TTM No. 36841) community understand the potential for short-term noise events, occupancy disclosure notices shall be required for all future homeowners. The occupancy disclosures shall indicate that rail pass-by and aircraft flyover noise will be clearly noticeable due to the location of the Project site in relation to the BNSF/Metrolink extension rail lines, and the Hemet-Ryan Airport. The on-site rail noise mitigation measures are outlined on Exhibit ES-A.

While this analysis considers the potential future noise activity associated with the planned Metrolink rail line extension, any planned extension will require additional CEQA analysis and approval by the lead agency.

Lot Number

Railroad

Railroad

Unmitigated Noise Level (dBA CNEL)

Individual Combined

BNSF Diesel Locomotives 51.4

Future Metrolink Extension 40.2

TABLE 8-4: EXTERIOR RAIL NOISE LEVELS (CNEL)

8.4 On-Site Exterior Rail Vibration Levels

The FTA Transit Noise and Vibration Impact Assessment contains reference vibration levels for rapid transit and light rail systems which can approach 85 VdB at a distance of 50 feet. (4) At the distance to the closest residential lot from the BNSF rail line of approximately 279 feet, the FTA, Figure 10-1 Generalized Ground Surface Vibration Curves, reference vibration level is shown to range from 60 VdB for rapid transit or light rail to 72 VdB for locomotive powered passenger or freight rail. Since the City of Hemet does not identify specific vibration level standards, the threshold used in this analysis is obtained from the County of Riverside General Plan. The County of Riverside General Plan, Policy 16.3, motion velocity perception threshold for vibration due to passing trains is 0.01 in/sec (RMS) over the range of one to 100 Hz. (23) Therefore, in order to



assess the potential vibration impacts using the County of Riverside threshold, the FTA reference vibration levels in VdB must be converted to RMS vibration levels.

Using the Caltrans *Transportation and Construction Vibration Guidance Manual* guidelines for converting vibration levels from VdB to PPV, the 85 VdB reference vibration level at 50 feet results in a PPV vibration level of roughly 0.018 in/sec at 50 feet from the source. (5) As previously discussed in Section 3.5, for vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS) or the average of the squared amplitude of the signal, typically calculated over a one-second period. For the reference 0.018 in/sec PPV level, the RMS vibration level would approach 0.013 in/sec RMS at 50 feet from the source. Based on the distance to the nearest residential receiver of roughly 279 feet, the RMS vibration levels would approach 0.001 in/sec and will not exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS. Therefore, the on-site vibration impacts due to the BNSF and potential Metrolink rail line extension would be *less than significant* at the residential lots within the Project site. Further, the vibration levels at the closest sensitive receiver locations would only occur during rail pass-by events, which will be infrequent in nature and unlikely to be sustained for long periods of time.



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9 RECEIVER LOCATIONS

To assess the potential for short-term construction noise impacts, the following eight receiver locations as shown on Exhibit 9-A were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers in the vicinity of the Project site include the single-family residential dwellings located at receiver locations R1 to R8. The closest sensitive receiver is represented by location R6 at a distance of approximately 55 feet south of the Project site. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

- R1: Located approximately 3,542 feet northwest of the Project site, R1 represents the existing residential homes north of Stetson Avenue. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents existing single-family residential homes located approximately 1,968 feet north of the Project site on Stetson Avenue.
- R3: Location R3 represents the existing single-family residential home located roughly 2,126 feet north of the Project Site on Stetson Avenue. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R4: Location R4 represents the single-family residential homes located approximately 292 feet east of the Project site on Camino Sueno. A 24-hour noise level measurement was taken at this location, L3, to describe the existing ambient noise environment.
- R5: Location R5 represents existing single-family residential homes situated approximately 81 feet east of the Project site boundary on Camino Sueno.
- R6: At the time of this analysis, receiver location R6 represents an existing noise-sensitive residential home and agricultural land use at a distance of approximately 55 feet south of the Project site. However, this location may represent a vacant structure which is not considered to be a noise-sensitive land use.
- R7: At a distance of 413 feet from the Project site boundary, R7 represents single-family residential homes located west of the Project site on California Avenue.
- R8: Location R8 represents the residential home located approximately 1,447 feet west of the Project site across California Avenue.



STETSON AVE ⊕R3 **⊕** R2 STOWE RD PASEO FAMOSA 1.447 SITE MUSTANG WAY R6 Cin LEGEND: Receiver Locations Existing Barrier **Project Site Boundaries** Distance from receiver to Project site boundary (in feet)

EXHIBIT 9-A: RECEIVER LOCATIONS



6' Existing Barrier Height (in feet)

10 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 9, with a line-of-sight to the Project noise sources, and analyzes the resulting noise levels from operation of the proposed Rancho Diamante (TTM No. 36841) Project. Exhibit 10-A identifies the representative receiver locations and noise source locations used to assess the operational noise levels.

10.1 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Rancho Diamante (TTM No. 36841) Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

The City of Hemet has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, etc.). Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element, identifies exterior noise level limits of 60 dBA Leq and 75 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq and 65 dBA Lmax during the nighttime hours (10:00 p.m. to 7:00 p.m.) (12)

10.2 OPERATIONAL NOISE SOURCES

At the time this noise analysis was prepared the future tenants of the proposed Project were unknown. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones.

10.3 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts associated with roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones.

10.3.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements



describe a single mechanical roof-top air conditioning unit on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA Leq. 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. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour.

10.3.2 PARKING LOT VEHICLE MOVEMENTS (AUTOS)

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 30th, 2012. The 15-minute noise level measurement indicates that the parking lot vehicle movements generates noise levels of 45.1 dBA Leq at a normalized distance of 50 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car alarms sounding, and customers moving shopping carts. Noise associated with parking lot vehicle movements is expected during the typical daytime, and nighttime conditions for the entire hour (60 minutes).

10.3.3 DRIVE-THRU 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 Leq 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.



TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

	5	Ref.	Noise	Hourly	Noise Level (dBA Leq)	
Noise Source	Duration (hh:mm:ss)	Dist. (Feet)	Source Height (Feet)	Activity (Min.) ⁴	@ Ref. Distance	@ 50 Feet
Roof-Top Air Conditioning Units ¹	96:00:00	5'	25'	39	77.2	57.2
Parking Lot Vehicle Movements ²	01:00:00	5'	5'	60	60.1	45.1
Drive-Thru Speakerphone ⁴	02:00:00	15'	3'	60	62.0	51.5

¹ As 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 5/30/2012 at the Laguna Niguel Walmart located at 27470 Alicia Parkway.

³ As measured by Urban Crossroads, Inc. on 12/19/2014 at a Panera Bread in Brea located at 423 South Associated Road.

 $^{^{\}rm 4}$ Duration (minutes within the hour) of noise activity during peak hourly conditions.

PROPOSED COMMERCIAL DEVELOPMENT Source: Esri, Digital Color Gooses Earthstar Geographies, CNES/Aurbus DS, USDA, USGS, Aero GRID, IGN, and the GIS User Community **LEGEND:** Receiver Locations Roof-Top Air Conditioning Unit — Distance from receiver to center of noise source (in feet) 6' Barrier Height (in feet) 🄀 Drive-Thru Speakerphone Existing Barrier Parking Lot Vehicle Movements

EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS



10.4 Project Operational Noise Levels

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 10-2 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 10-2 shows the individual operational noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 10-2, the Project-only operational noise levels will range from 9.8 to 34.8 dBA Leq and 25.2 to 47.1 dBA Lmax at the sensitive receiver locations closest to the Project commercial use. The noise levels calculated in this analysis include the barrier attenuation provided by the existing barriers in the Project study area, as shown on Exhibit 10-A. Appendix 10.1 shows the operational noise level calculations for each receiver location by noise source.



TABLE 10-2: PROJECT-ONLY OPERATIONAL NOISE LEVELS

Receiver	Noise		perational els (dBA)³
Location ¹	Source ²	Leq (Energy Avg.)	L _{max} (Anytime)
	Roof-Top Air Conditioning Units	6.1	7.1
R1	Parking Lot Vehicle Movements	5.7	25.1
KI	Drive-Through Speakerphone	2.4	6.8
	Combined Noise Level:	9.8	25.2
	Roof-Top Air Conditioning Units	12.4	13.4
D2	Parking Lot Vehicle Movements	10.4	29.8
R2	Drive-Through Speakerphone	8.7	13.1
	Combined Noise Level:	15.5	30.0
	Roof-Top Air Conditioning Units	12.3	13.3
no.	Parking Lot Vehicle Movements	10.3	29.7
R3	Drive-Through Speakerphone	8.5	12.9
	Combined Noise Level:	15.4	29.9
	Roof-Top Air Conditioning Units	32.5	33.5
D.4	Parking Lot Vehicle Movements	27.3	46.7
R4	Drive-Through Speakerphone	28.3	32.7
	Combined Noise Level:	34.8	47.1
	Roof-Top Air Conditioning Units	29.5	30.5
	Parking Lot Vehicle Movements	24.1	43.5
R5	Drive-Through Speakerphone	25.4	29.8
	Combined Noise Level:	31.7	43.9

¹ See Exhibit 10-A for the receiver and noise source locations.

Table 10-3 presents a summary of the combined total Project-only operational noise level projections at the nearby sensitive receiver locations for a comparison with City of Hemet exterior noise level standards. The Project operational noise levels at the nearby sensitive receiver locations are shown to range from 9.8 to 34.8 dBA Leq and 25.2 to 47.1 dBA Lmax. Based on the results of this analysis, the Project operational noise levels associated with the Rancho Diamante (TTM No. 36841) will satisfy City of Hemet daytime 60 dBA Leq and 75 dBA Lmax, and nighttime 45 dBA Leq and 65 dBA Lmax exterior noise level standards, previously shown on Exhibit 3-C.



² Reference noise sources as shown on Table 10-1.

 $^{^{\}rm 3}$ Operational noise level calculations are provided in Appendix 10.1.

TABLE 10-3: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver	cation ¹ (dBA) ² Leq L _{max}		Thresholds Daytime Nighttime				Threshold Exceeded? ³	
Location ¹			Leq (E. Avg.)	L _{max} (Anytime)	Leq (E. Avg.)	L _{max} (Anytime)	Daytime	Nighttime
	(E. Avg.)	, , ,	, ,,	, , ,		, , ,		
R1	9.8	25.2	60	75	45	65	No	No
R2	15.5	30.0	60	75	45	65	No	No
R3	15.4	29.9	60	75	45	65	No	No
R4	34.8	47.1	60	75	45	65	No	No
R4	31.7	43.9	60	75	45	65	No	No

¹ See Exhibit 10-A for the receiver and noise source locations.

10.5 PROJECT OPERATIONAL NOISE LEVEL CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (19) Instead, they must be logarithmically added using the following base equation:

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

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 to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient conditions are presented on Tables 10-4 and 10-5 for the daytime and nighttime hours, respectively.

As indicated on Tables 10-4 and 10-5, the Project will not generate a daytime or nighttime operational noise level increase at any of the nearby receiver locations. Since the Project-related operational noise level contributions will satisfy the significance criteria discussed in Section 4, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts in these regards will be *less than significant*.



² Estimated Project operational noise levels as shown on Table 10-2.

³ Do the estimated Project operational noise levels meet the operational noise level standards?

[&]quot;E. Avg." = logarithmic (energy) average;

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 10-4: PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	9.8	L1	58.5	58.5	0.0	No
R2	15.5	L2	60.6	60.6	0.0	No
R3	15.4	L2	60.6	60.6	0.0	No
R4	34.8	L3	59.3	59.3	0.0	No
R5	31.7	L3	59.3	59.3	0.0	No

¹ See Exhibit 10-A for the sensitive receiver locations.

TABLE 10-5: PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	9.8	L1	53.4	53.4	0.0	No
R2	15.5	L2	56.8	56.8	0.0	No
R3	15.4	L2	56.8	56.8	0.0	No
R4	34.8	L3	57.0	57.0	0.0	No
R5	31.7	L3	57.0	57.0	0.0	No

¹ See Exhibit 10-A for the sensitive receiver locations.



² Total Project operational noise levels as shown on Table 10-3.

³ Ambient noise level measurement locations as shown on Exhibit 5-A as measured by Urban Crossroads, Inc.

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

 $^{^{\}rm 5}$ Represents the combined ambient conditions plus the Project activities.

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

⁷ FICON criteria described in Section 4.

² Total Project operational noise levels as shown on Table 10-3.

³ Ambient noise level measurement locations as shown on Exhibit 5-A as measured by Urban Crossroads, Inc.

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 FICON criteria described in Section 4.

11 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project.

11.1 CONSTRUCTION NOISE STANDARDS

The City of Hemet has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 67-10 of the City's Municipal Code states: Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. year-round. Grading on Sundays is prohibited. (13) For the purposes of this analysis, Project construction activities shall be limited to the hours specified for grading on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels. Therefore an acceptable construction noise level threshold is used based on the Table 6.5 Noise Level Performance Standards for Non-Transportation Noise Sources, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA Lmax during the daytime hours of 7:00 a.m. to 10:00 p.m. (12) The Lmax noise level threshold is used to evaluate the maximum noise levels due to construction activity at the Project site.

11.2 CONSTRUCTION NOISE LEVELS

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

- Grading
- Building Construction
- Architectural Coating
- Paving
- Off-Site Improvements

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, provided in Appendix 11.1, represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 72 dBA to in excess of 86 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receiver would be reduced to 80 dBA at 100 feet from the source to the receiver, and would be further reduced to 74 dBA at 200 feet from



the source to the receiver. The construction phases used in this analysis are consistent with the data used to support the construction emissions in the *Rancho Diamante (TTM No. 36841) Air Quality Impact Analysis* prepared by Urban Crossroads Inc. (24) It is important to note that the stages used in this analysis for Project construction represent worst-case construction activities for each stage, based on equipment assumptions in the *Air Quality Impact Analysis* for both Phases 1 and 2 of Project construction. Therefore, the noise levels shown in this report for Project construction represent worst-case construction noise levels, by stage, during both Phases 1 and 2. Exhibit 11-A shows the receiver locations and the construction activity boundaries of the Project site. The construction activity boundaries are based on the limits of grading activity as shown on the Tentative Tract Map (TTM) for the Project, TTM Number 36841, prepared by Pangaea Land Consultants, Inc.

11.3 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 11-1 provides a summary of the 16-construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 11-1 have been adjusted to describe a common reference distance of 50 feet. Appendix 11.1 includes a detailed construction reference noise level memo and reference noise source photos for each type of construction activity.

11.4 CONSTRUCTION NOISE ANALYSIS

Tables 11-2 to 11-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 11-7 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-related construction noise levels when the peak reference noise level is operating at a single point nearest the sensitive receiver location will range from 48.5 to 76.5 dBA Lmax.



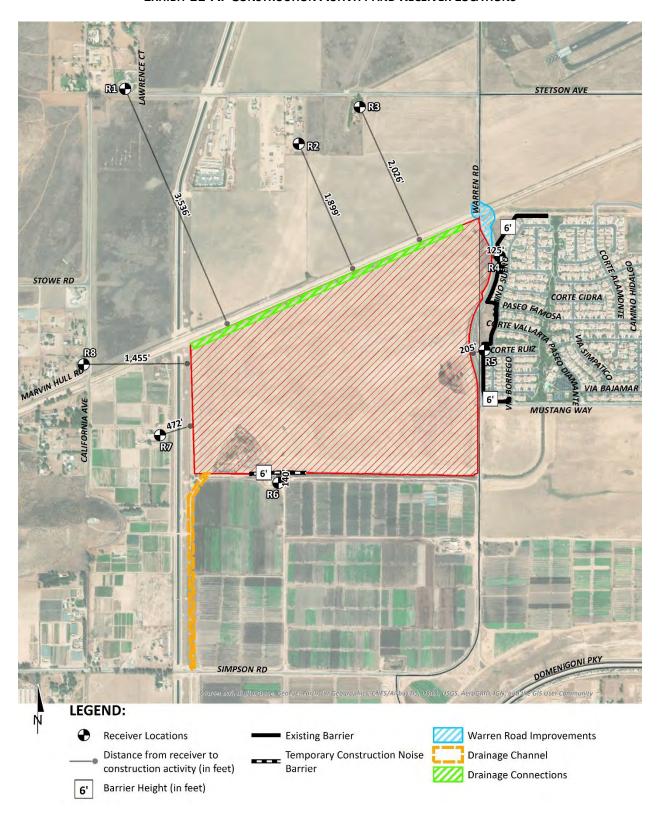


EXHIBIT 11-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



TABLE 11-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Reference Distance From Source	Reference Noise Levels @ Reference Distance		Reference Noise Levels @ 50 Feet ⁶	
		(Feet)	dBA Leq	dBA Lmax	dBA Leq	dBA Lmax
1	Truck Pass-Bys & Dozer Activity ¹	30'	63.6	68.1	59.2	63.7
2	Dozer Activity ¹	30'	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities ²	30'	71.9	74.8	67.5	70.4
4	Foundation Trenching ²	30'	72.6	74.9	68.2	70.5
5	Rough Grading Activities ²	30'	77.9	84.8	73.5	80.4
6	Residential Framing ³	30'	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm⁴	30'	76.3	82.3	71.9	77.9
8	Dozer Pass-By ⁴	30'	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By ⁴	30'	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By ⁴	30'	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity ⁴	30'	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements ⁵	50'	71.2	73.1	71.2	73.1
13	Concrete Paver Activities ⁵	30'	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities ⁵	30'	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities ⁵	50'	67.7	79.2	67.7	79.2

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.

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

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

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

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

TABLE 11-2: GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Truck Pass-Bys & Dozer Activity	63.7
Dozer Activity	72.0
Rough Grading Activities	80.4
Dozer Pass-By	85.5
Peak Reference Noise Level at 50 Fee	et: 85.5

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	48.5
R2	1,899'	-31.6	0.0	53.9
R3	2,026'	-32.2	0.0	53.3
R4	125'	-8.0	-5.0	72.5
R5	205'	-12.3	-5.0	68.2
R6	140'	-8.9	0.0	76.5
R7	472'	-19.5	0.0	66.0
R8	1,455'	-29.3	0.0	56.2

 $^{^{1}}$ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).



 $^{^{\}rm 2}$ 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.

 $^{^{\}rm 4}$ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-3: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Truck Pass-Bys & Dozer Activity	63.7
Construction Vehicle Maintenance Activities	70.4
Foundation Trenching	70.5
Residential Framing	72.3
Peak Reference Noise Level at 50 Feet:	72.3

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	35.3
R2	1,899'	-31.6	0.0	40.7
R3	2,026'	-32.2	0.0	40.1
R4	125'	-8.0	-5.0	59.3
R5	205'	-12.3	-5.0	55.0
R6	140'	-8.9	0.0	63.3
R7	472'	-19.5	0.0	52.8
R8	1,455'	-29.3	0.0	43.0

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).



 $^{^{\}rm 2}$ 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.

 $^{^{\}rm 4}$ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-4: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Residential Framing	72.3
Peak Reference Noise Level at 50 Feet:	72.3

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³ Estimated Noise Barrier Attenuation (dBA) ⁴		Construction Noise Level (dBA Lmax)	
R1	3,536'	-37.0	0.0	35.3	
R2	1,899'	9' -31.6 0.0		40.7	
R3	2,026'	2,026' -32.2		40.1	
R4	125'	-8.0	-5.0	59.3	
R5	205'	-12.3	-5.0	55.0	
R6	140'	-8.9	0.0	63.3	
R7	472'	-19.5	0.0	52.8	
R8	1,455'	-29.3	0.0	43.0	

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).



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 attenuation from existing barriers in the Project study area.

TABLE 11-5: PAVING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Concrete Mixer Truck Movements	73.1
Concrete Paver Activities	71.3
Concrete Mixer Pour & Paving Activities	71.9
Concrete Mixer Backup Alarms & Air Brakes	78.8
Concrete Mixer Pour Activities	79.2
Peak Reference Noise Level at 50 Feet:	79.2

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³ Estimated Noise Barrier Attenuation (dBA) ⁴		Construction Noise Level (dBA Lmax)	
R1	3,536'	-37.0	0.0	42.2	
R2	R2 1,899' -31.6		0.0	47.6	
R3	R3 2,026' -32.2		0.0	47.0	
R4	125'	-8.0	-5.0	66.2	
R5	205'	-12.3	-5.0	61.9	
R6	140'	-8.9	0.0	70.3	
R7	472'	-19.5	0.0	59.7	
R8	1,455'	-29.3	0.0	49.9	

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).



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 attenuation from existing barriers in the Project study area.

TABLE 11-6: OFF-SITE IMPROVEMENT EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Foundation Trenching	70.5
Concrete Mixer Pour & Paving Activities	71.9
Peak Reference Noise Level at 50 Feet:	71.9

Receiver Location	Construction Activity Distance Noise Ba		Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	34.9
R2	1,899'	-31.6	0.0	40.3
R3	2,026'	-32.2	0.0	39.7
R4	125'	-8.0	-5.0	58.9

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

11.5 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities occur at the edge of the Project site. As shown on Table 11-7, the unmitigated peak construction noise levels are expected to range from 48.5 to 76.5 dBA Lmax. To control noise impacts associated with the construction of the proposed Project, the City of Hemet has established limits to the hours of operation. The City's Municipal Code indicates that construction activities are limited to Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. Since the City does not identify specific noise level limits for construction noise levels, an acceptable construction noise level threshold is used based on the Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA Lmax during the daytime hours of 7:00 a.m. to 10:00 p.m. (12)



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 attenuation from existing barriers in the Project study area.

TABLE 11-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

	Construction Phase Hourly Noise Level (dBA Lmax)						
Receiver Location ¹	Grading	Building Construction	Architectural Coating	Paving	Off-Site Improvements	Peak Activity ²	
R1	48.5	35.3	35.3	42.2	34.9	48.5	
R2	53.9	40.7	40.7	47.6	40.3	53.9	
R3	53.3	40.1	40.1	47.0	39.7	53.3	
R4	72.5	59.3	59.3	66.2	58.9	72.5	
R5	68.2	55.0	55.0	61.9	_3	68.2	
R6	76.5	63.3	63.3	70.3	_3	76.5	
R7	66.0	52.8	52.8	59.7	_3	66.0	
R8	56.2	43.0	43.0	49.9	_3	56.2	

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

Based on the construction noise standards described in Section 3.5, the potential short-term unmitigated construction noise level impacts are expected to exceed the acceptable construction noise level threshold of 75 dBA Lmax at one of the sensitive residential receiver locations, R6, as shown on Table 11-8. Therefore, a 6-foot high temporary construction noise barrier is required at the construction boundaries near receiver location R6 where Project construction noise levels could potentially exceed the noise level thresholds, as shown on Exhibit 11-A. With the installation of temporary exterior noise control barriers with a minimum height of 6-feet, construction noise levels at the nearby residential receivers would be reduced. However, it is important to note that this receiver location may represent a vacant structure which is not considered to be a noise-sensitive land use, and therefore, would not require the noise mitigation measures identified in this analysis during construction activities.

This analysis does not evaluate the feasibility of temporary noise barrier installation. If it is not feasible to install temporary barriers, construction noise levels would not be reduced, because no other measures exist to reasonably reduce construction noise levels. The noise attenuation provided through temporary noise barriers depends on many factors including cost, wind loading, the location of the receiver, and the ability to place barriers such that the line-of-sight of the receiver is blocked to the noise source, among others. This analysis assumes a temporary noise barrier constructed using frame-mounted materials such as vinyl acoustic curtains or quilted blankets.

Table 11-8 shows the peak construction noise levels are expected to range from 48.5 to 71.6 dBA Lmax with the attenuation provided by the 6-foot high temporary construction noise barrier for receiver location R6. With the 6-foot high temporary noise control barrier shown on Exhibit 11-A, the construction noise levels will satisfy the construction noise level thresholds for each land use category at the nearby sensitive receiver locations. Therefore, the construction of the Project will result in a *less than significant* noise impact at the nearby sensitive receiver locations during peak construction activity. The temporary noise barrier attenuation calculations are provided in



² Estimated construction noise levels during peak operating conditions.

³ Project construction is closer to the given receiver location and represents more intensive activity than off-site improvements.

Appendix 11.2. Should receiver location R6 be uninhabited at the time of Project construction, the temporary noise barrier mitigation measures identified in this analysis during construction activities would no longer be required.

TABLE 11-8: MITIGATED CONSTRUCTION NOISE LEVELS WITH TEMPORARY BARRIERS

	Construction	on Noise Levels (dBA Lmax)	With Temporary Noise Barriers (dBA Lmax)		
Receiver Location ¹	Peak Activity ²	Threshold ³	Threshold Exceeded? ⁴	Attenuation		Threshold Exceeded? ⁴
R1	48.5	75	No	-	-	No
R2	53.9	75	No	-	-	No
R3	53.3	75	No	-	-	No
R4	72.5	75	No	-	-	No
R5	68.2	75	No	-	-	No
R6	76.5	75	Yes	-4.9	71.6	No
R7	66.0	75	No	-	-	No
R8	56.2	75	No	-	-	No

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

11.6 CONSTRUCTION NOISE MITIGATION MEASURES

Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive residential land uses:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the permitted hours on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- If receiver location R6 is an inhabited noise-sensitive residential home at the time of Project construction, the installation of a minimum 6-foot high temporary noise control barrier, as shown on Exhibit 11-A, at the Project site boundaries when construction activities occur within 140 feet is required. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be a minimum height of 6-feet.
 - The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier may be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted



² Estimated construction noise levels during peak operating conditions, as shown on Table 11-7.

³ Construction noise standards as shown on Table 3-1.

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

⁵ Peak construction noise levels with the minimum 6-foot high temporary construction noise barrier as shown on Exhibit 11-A.

Temporary barrier attenuation calculations are provided in Appendix 11.2.

- blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.
- The noise barriers must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
- The noise control barriers and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction
 equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with
 manufacturers' standards. The construction contractor shall place all stationary construction
 equipment so that emitted noise is directed away from the noise sensitive receptors nearest
 the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., at the center) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays). The Project Applicant shall prepare a haul route exhibit to design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

11.7 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 building, the
 vibration is usually short-term and is not of sufficient magnitude to cause building damage. It
 is not expected that heavy equipment such as large bulldozers would operate close enough
 to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts.



Table 11-9 presents the expected Project related vibration levels at each of the sensitive receiver locations based on the FTA 80 VdB threshold for human annoyance. At distances ranging from 125 to 3,536 feet from Project construction activity, construction vibration velocity levels are expected to range from 22.5 to 66.0 VdB, as shown on Table 11-9. Project construction-source vibration levels would remain below the FTA 80 VdB threshold for human annoyance at all receiver locations.

Table 11-10 shows the vibration levels in relation to the Caltrans building damage threshold of 0.2 in/sec PPV. The Project construction-source vibration levels would approach to 0.01 in/sec PPV at potentially affected sensitive receiver locations, and will not exceed the Caltrans 0.2 in/sec PPV building damage threshold.

The proposed Project construction activities will not include or require equipment, facilities, or activities that would exceed the vibration threshold, and therefore, the construction-related vibration impacts are considered *less than significant*. Further, vibration levels at the site of the closest sensitive 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 along the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City of Hemet requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

TABLE 11-9: CONSTRUCTION EQUIPMENT VIBRATION LEVELS (HUMAN ANNOYANCE)

	Distance to		Receiver Vibration Levels (VdB) ²					
Receiver Location ¹	Construction Activity (Feet)	Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	Threshold Exceeded? ³	
R1	3,536'	0.0	14.5	21.5	22.5	22.5	No	
R2	1,899'	1.6	22.6	29.6	30.6	30.6	No	
R3	2,026'	0.7	21.7	28.7	29.7	29.7	No	
R4	125'	37.0	58.0	65.0	66.0	66.0	No	
R5	205'	30.6	51.6	58.6	59.6	59.6	No	
R6	140'	35.6	56.6	63.6	64.6	64.6	No	
R7	472'	19.7	40.7	47.7	48.7	48.7	No	
R8	1,455'	5.1	26.1	33.1	34.1	34.1	No	

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



² Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

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

TABLE 11-10: CONSTRUCTION EQUIPMENT VIBRATION LEVELS (BUILDING DAMAGE)

	Distance						
Receiver Location ¹	To Const. Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Highest PPV Levels	Threshold Exceeded? ⁴
R1	3,536'	0.00	0.00	0.00	0.00	0.00	No
R2	1,899'	0.00	0.00	0.00	0.00	0.00	No
R3	2,026'	0.00	0.00	0.00	0.00	0.00	No
R4	125'	0.00	0.00	0.01	0.01	0.01	No
R5	205'	0.00	0.00	0.00	0.00	0.00	No
R6	140'	0.00	0.00	0.01	0.01	0.01	No
R7	472'	0.00	0.00	0.00	0.00	0.00	No
R8	1,455'	0.00	0.00	0.00	0.00	0.00	No

¹ Receiver locations are shown on Exhibit 11-A.



 $^{^{\}rm 2}$ Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

 $^{^{\}rm 3}\,\text{Does}$ the peak vibration exceed the building damage threshold of 0.2 in/sec PPV?

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- 18. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 19. **California Department of Transportation Environmental Program.** *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA: s.n., September 2013.
- 20. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
- 21. 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.



- 22. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 23. **County of Riverside.** *General Plan Noise Element.* December 2015.
- 24. **Urban Crossroads, Inc.** Rancho Diamante (TTM No. 36841) Air Quality Impact Analysis. May 2018.



13 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Rancho Diamante (TTM No. 36841) 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 HEMET MUNICIPAL CODE



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Sec. 67-10. - Time of grading operations.

Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. yearround. Grading on Sundays is prohibited.

The city engineer may extend the hours allowed for grading if he or she determines that such operations are not detrimental to the health, safety or welfare of the occupants of nearby structures, or the quiet enjoyment of nearby residential property.

(Ord. No. 1862, § 1(Exh. A), 6-25-13)



APPENDIX 5.1:

STUDY AREA PHOTOS







L1 33, 43' 43.617500", 117, 3' 1.082100"

L1_E 33, 43' 43.617500", 117, 3' 1.082100"



L1_N 33, 43' 43.617500", 117, 3' 1.082100"



L1_NE 33, 43' 43.617500", 117, 3' 1.082100"



L1_S 33, 43' 43.617500", 117, 3' 1.082100"



L1_W 33, 43' 43.617500", 117, 3' 1.082100"



L2 33, 43' 22.688500", 117, 1' 52.060500"



L2_N 33, 43' 45.498900", 117, 2' 13.209200"



L2_NE 33, 43' 50.099400", 117, 1' 55.026800"



L2_NW 33, 43' 45.498900", 117, 2' 13.209200"



L2_S 33, 43' 45.498900", 117, 2' 13.209200"



L2_SW 33, 43' 45.498900", 117, 2' 13.209200"



L3 33, 43' 23.677300", 117, 1' 54.422600"



L3_N 33, 43' 23.677300", 117, 1' 54.422600"



L3_N2 33, 43' 23.677300", 117, 1' 54.422600"



L3_NW 33, 43' 23.677300", 117, 1' 54.422600"



L3_SE 33, 43' 23.677300", 117, 1' 54.422600"



L3_W 33, 43' 23.677300", 117, 1' 54.422600"



L3_W2 33, 43' 23.677300", 117, 1' 54.422600"



L4 33, 42' 54.275200", 117, 1' 57.031800"



L4_E 33, 42' 54.275200", 117, 1' 57.031800"



L4_N 33, 42' 54.275200", 117, 1' 57.031800"



L4_NW 33, 42' 54.275200", 117, 1' 57.031800"



L4_SE 33, 42' 54.275200", 117, 1' 57.031800"





L4_SW 33, 42' 54.275200", 117, 1' 57.031800"

L4_W 33, 42' 54.275200", 117, 1' 57.031800"



APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS





Project Name: Rancho Diamante

L1 - Located northwest of the Project site at the intersection of Stetson Avenue

and California Avenue, south of existing residential homes.

JN: 9792 Analyst: A. Wolfe

Date: 9/27/2017

Energy Average Leq
Day Night

 Day
 Night

 58.5
 53.4

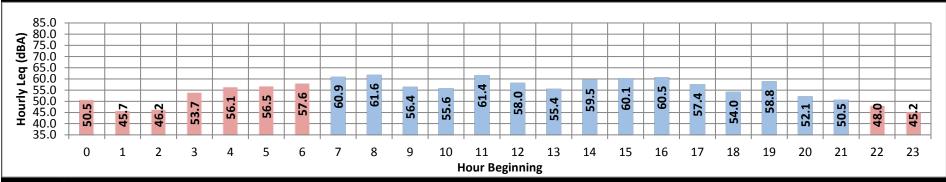
61.3

24-Hour

CNEL

Hourly Leq dBA Readings (unadjusted)

Location:



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	50.5	75.9	36.6	61.0	58.0	53.0	50.0	43.0	39.0	36.0	36.0	36.0
Day	Max	61.6	91.9	40.8	73.0	69.0	64.0	61.0	55.0	49.0	43.0	42.0	41.0
Energy A	Average:	58.5	Ave	rage:	68.3	64.5	60.0	57.5	51.1	44.7	37.5	36.7	36.5
Night	Min	45.2	67.2	36.6	57.0	52.0	46.0	44.0	40.0	36.0	36.0	36.0	36.0
Mignic	Max	57.6	82.9	42.7	69.0	65.0	60.0	59.0	53.0	49.0	45.0	44.0	43.0
Energy A	Average:	53.4	Ave	rage:	61.8	57.8	52.4	49.8	43.8	40.4	38.6	38.2	37.7
						Hourly S	ummary						
	0	50.5	79.4	36.6	61.0	55.0	51.0	49.0	41.0	37.0	36.0	36.0	36.0
	1	45.7	68.4	36.6	58.0	55.0	48.0	46.0	40.0	36.0	36.0	36.0	36.0
	2	46.2	72.9	36.6	57.0	52.0	46.0	44.0	40.0	39.0	36.0	36.0	36.0
Night	3	53.7	82.3	36.6	60.0	56.0	49.0	46.0	42.0	39.0	39.0	39.0	36.0
	4	56.1	82.0	39.5	68.0	62.0	57.0	54.0	47.0	44.0	41.0	40.0	39.0
	5	56.5	80.7	39.6	69.0	65.0	60.0	56.0	48.0	45.0	42.0	41.0	41.0
	6	57.6	82.9	42.7	66.0	63.0	60.0	59.0	53.0	49.0	45.0	44.0	43.0
	7	60.9	88.5	40.8	71.0	67.0	62.0	59.0	54.0	48.0	43.0	42.0	41.0
	8	61.6	88.1	36.6	71.0	67.0	62.0	59.0	52.0	45.0	39.0	36.0	36.0
	9	56.4	78.9	36.6	68.0	64.0	61.0	59.0	52.0	44.0	36.0	36.0	36.0
	10	55.6	78.7	36.6	66.0	63.0	60.0	58.0	51.0	45.0	36.0	36.0	36.0
	11	61.4	91.9	36.6	70.0	66.0	60.0	58.0	52.0	45.0	36.0	36.0	36.0
	12	58.0	81.3	36.6	70.0	65.0	60.0	57.0	52.0	44.0	36.0	36.0	36.0
	13	55.4	76.4	36.6	66.0	64.0	60.0	58.0	52.0	45.0	36.0	36.0	36.0
Day	14	59.5	82.4	36.6	73.0	67.0	60.0	58.0	51.0	43.0	36.0	36.0	36.0
	15	60.1	85.3	36.6	71.0	66.0	61.0	59.0	54.0	47.0	38.0	36.0	36.0
	16	60.5	86.3	38.9	72.0	69.0	64.0	61.0	55.0	49.0	42.0	41.0	39.0
	17	57.4	81.8	36.6	69.0	65.0	61.0	59.0	53.0	46.0	39.0	36.0	36.0
	18	54.0	76.3	36.6	65.0	63.0	59.0	57.0	50.0	44.0	36.0	36.0	36.0
	19	58.8	84.1	36.6	69.0	63.0	59.0	56.0	50.0	45.0	38.0	36.0	36.0
	20	52.1	75.9	36.6	63.0	61.0	58.0	55.0	45.0	41.0	36.0	36.0	36.0
	21	50.5	76.8	36.6	61.0	58.0	53.0	50.0	43.0	39.0	36.0	36.0	36.0
Night	22	48.0	70.0	36.6	60.0	58.0	53.0	48.0	42.0	39.0	36.0	36.0	36.0
INIGIIC	23	45.2	67.2	36.6	57.0	54.0	48.0	46.0	41.0	36.0	36.0	36.0	36.0



Project Name: Rancho Diamante

 $\ensuremath{\mathsf{L2}}$ - Located north of the Project site on Stetson Avenue, west of the Hemet-Ryan

Airport runway and east of existing residential homes.

JN: 9792 Analyst: A. Wolfe

Date: 9/27/2017

Energy Average Leq
Day Night

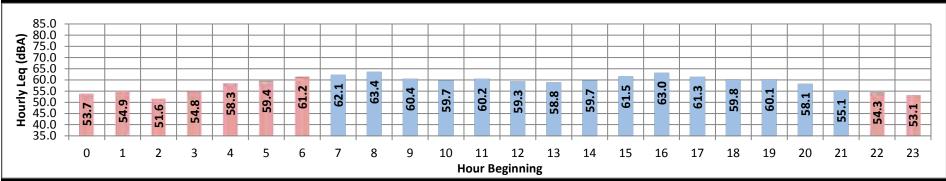
60.6 56.8

64.3

24-Hour

Hourly Leq dBA Readings (unadjusted)

Location:



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	55.1	76.7	34.9	69.0	66.0	58.0	54.0	45.0	41.0	37.0	36.0	35.0
Day	Max	63.4	89.6	41.8	74.0	72.0	69.0	67.0	59.0	49.0	44.0	44.0	42.0
Energy A	Average:	60.6	Ave	rage:	71.4	69.3	65.9	63.7	53.7	45.1	38.6	38.0	37.3
Night	Min	51.6	77.1	34.9	64.0	58.0	49.0	46.0	41.0	39.0	37.0	37.0	36.0
Migrit	Max	61.2	84.7	44.6	72.0	71.0	68.0	66.0	55.0	50.0	47.0	46.0	45.0
Energy A	Average:	56.8	Ave	rage:	67.9	63.9	57.0	53.4	45.1	42.1	39.7	39.6	38.9
						Hourly S	ummary						
	0	53.7	79.2	34.9	66.0	60.0	54.0	52.0	42.0	39.0	37.0	37.0	36.0
	1	54.9	81.8	34.9	67.0	60.0	50.0	47.0	41.0	39.0	37.0	37.0	37.0
	2	51.6	77.9	37.8	64.0	58.0	49.0	46.0	41.0	39.0	37.0	37.0	37.0
Night	3	54.8	84.7	37.9	65.0	60.0	52.0	48.0	43.0	41.0	39.0	39.0	38.0
	4	58.3	84.0	40.7	71.0	69.0	63.0	58.0	49.0	46.0	42.0	42.0	41.0
	5	59.4	81.5	42.6	71.0	70.0	66.0	62.0	51.0	47.0	44.0	44.0	43.0
	6	61.2	81.0	44.6	72.0	71.0	68.0	66.0	55.0	50.0	47.0	46.0	45.0
	7	62.1	83.7	41.8	73.0	71.0	68.0	67.0	56.0	49.0	44.0	44.0	42.0
	8	63.4	89.6	37.8	72.0	70.0	67.0	65.0	54.0	45.0	38.0	37.0	37.0
	9	60.4	80.7	34.9	72.0	70.0	67.0	65.0	54.0	44.0	37.0	36.0	35.0
	10	59.7	81.6	37.1	71.0	69.0	66.0	64.0	55.0	47.0	39.0	37.0	37.0
	11	60.2	84.3	37.8	71.0	69.0	66.0	64.0	54.0	44.0	38.0	37.0	37.0
	12	59.3	81.3	37.8	71.0	68.0	66.0	64.0	53.0	43.0	37.0	37.0	37.0
	13	58.8	76.7	37.8	70.0	68.0	66.0	64.0	54.0	44.0	38.0	37.0	37.0
Day	14	59.7	81.2	37.8	71.0	69.0	66.0	64.0	54.0	43.0	37.0	37.0	37.0
	15	61.5	86.0	37.8	72.0	70.0	67.0	66.0	58.0	47.0	38.0	37.0	37.0
	16	63.0	87.8	37.9	74.0	72.0	69.0	67.0	59.0	49.0	40.0	39.0	38.0
	17	61.3	80.4	37.8	72.0	70.0	68.0	66.0	56.0	46.0	39.0	39.0	37.0
	18	59.8	80.1	37.9	71.0	69.0	66.0	64.0	54.0	46.0	39.0	39.0	37.0
	19	60.1	84.1	37.8	71.0	69.0	65.0	62.0	52.0	46.0	39.0	39.0	37.0
	20	58.1	80.5	37.4	71.0	69.0	64.0	60.0	48.0	42.0	37.0	37.0	37.0
	21	55.1	78.5	37.8	69.0	66.0	58.0	54.0	45.0	41.0	39.0	38.0	37.0
Night	22	54.3	77.1	34.9	68.0	65.0	58.0	53.0	42.0	39.0	37.0	37.0	36.0
8.14	23	53.1	78.2	37.5	67.0	62.0	53.0	49.0	42.0	39.0	37.0	37.0	37.0

Project Name: Rancho Diamante

Location: L3 - Located east of the Project site across Warren Road adjacent to the existing 6-foot high barrier for residential homes.

JN: 9792 Analyst: A. Wolfe

Date: 9/27/2017

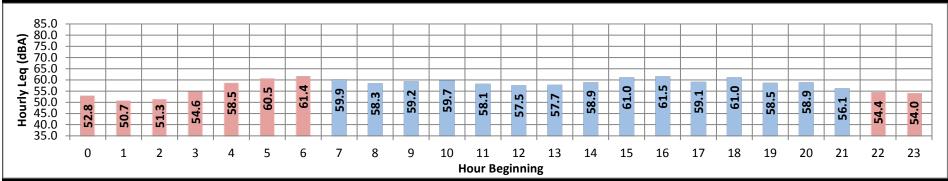
Energy Average Leq
Day Night

59.3 57.0 64.1

24-Hour

CNEL

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.1	73.7	37.7	66.0	63.0	61.0	60.0	56.0	50.0	41.0	39.0	37.0
Day	Max	61.5	89.1	45.2	70.0	68.0	65.0	64.0	61.0	58.0	51.0	49.0	47.0
Energy A	Average:	59.3	Avei	age:	68.4	66.1	63.1	61.7	58.3	54.4	45.5	43.7	41.4
Night	Min	50.7	69.5	34.8	62.0	59.0	56.0	54.0	45.0	40.0	37.0	37.0	35.0
INIGIIL	Max	61.4	82.9	47.6	70.0	69.0	66.0	64.0	62.0	59.0	50.0	49.0	48.0
Energy A	Average:	57.0	Avei	age:	65.4	63.4	60.9	59.2	53.1	47.2	41.1	40.4	39.4
						Hourly S	ummary						
	0	52.8	70.0	34.8	64.0	62.0	60.0	58.0	47.0	40.0	37.0	37.0	35.0
	1	50.7	74.5	37.6	62.0	59.0	56.0	54.0	45.0	40.0	37.0	37.0	37.0
	2	51.3	71.8	37.4	63.0	61.0	58.0	55.0	45.0	40.0	37.0	37.0	37.0
Night	3	54.6	70.0	37.8	64.0	63.0	60.0	59.0	54.0	48.0	41.0	39.0	37.0
	4	58.5	78.5	41.8	68.0	66.0	63.0	62.0	58.0	52.0	44.0	43.0	42.0
	5	60.5	82.9	41.7	69.0	67.0	65.0	64.0	61.0	57.0	47.0	46.0	44.0
	6	61.4	75.7	47.6	70.0	69.0	66.0	64.0	62.0	59.0	50.0	49.0	48.0
	7	59.9	75.7	43.4	69.0	67.0	65.0	64.0	60.0	57.0	49.0	48.0	45.0
	8	58.3	76.1	39.2	67.0	66.0	63.0	62.0	58.0	54.0	45.0	42.0	40.0
	9	59.2	77.6	37.7	68.0	66.0	64.0	63.0	59.0	55.0	44.0	42.0	38.0
	10	59.7	77.4	37.7	70.0	68.0	65.0	63.0	59.0	55.0	44.0	41.0	38.0
	11	58.1	75.7	37.8	69.0	67.0	63.0	62.0	57.0	53.0	41.0	39.0	37.0
	12	57.5	78.6	37.8	68.0	66.0	62.0	60.0	56.0	51.0	41.0	39.0	38.0
	13	57.7	74.6	37.8	68.0	66.0	63.0	61.0	57.0	53.0	42.0	40.0	39.0
Day	14	58.9	83.9	39.3	68.0	65.0	62.0	60.0	57.0	54.0	44.0	42.0	40.0
	15	61.0	84.3	37.7	70.0	66.0	63.0	62.0	60.0	57.0	46.0	42.0	38.0
	16	61.5	89.1	43.7	69.0	66.0	64.0	63.0	61.0	58.0	50.0	49.0	45.0
	17	59.1	76.2	42.4	67.0	65.0	63.0	62.0	60.0	57.0	47.0	46.0	44.0
	18	61.0	86.5	44.7	70.0	68.0	64.0	63.0	60.0	57.0	51.0	49.0	47.0
	19	58.5	77.3	45.2	69.0	67.0	63.0	61.0	58.0	53.0	48.0	47.0	46.0
	20	58.9	84.9	44.5	68.0	65.0	62.0	60.0	57.0	52.0	47.0	46.0	45.0
	21	56.1	73.7	40.2	66.0	63.0	61.0	60.0	56.0	50.0	44.0	43.0	41.0
Night	22	54.4	69.5	37.8	65.0	62.0	60.0	59.0	54.0	46.0	40.0	39.0	38.0
	23	54.0	73.8	37.5	64.0	62.0	60.0	58.0	52.0	43.0	37.0	37.0	37.0

Project Name: Rancho Diamante

L4 - Located east of the Project site across Warren Road, north of existing

agricultural land uses.

JN: 9792 Analyst: A. Wolfe

Date: 9/27/2017

Energy Average Leq
Day Night

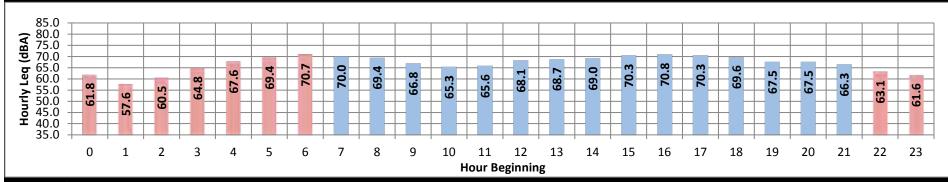
 Day
 Night
 CNEL

 68.7
 66.0
 73.2

24-Hour

Hourly Leq dBA Readings (unadjusted)

Location:



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	65.3	82.5	36.2	76.0	74.0	70.0	68.0	63.0	53.0	44.0	42.0	39.0
Day	Max	70.8	93.3	46.5	79.0	77.0	75.0	74.0	72.0	69.0	55.0	52.0	49.0
Energy A	Average:	68.7	Avei	rage:	76.9	75.3	73.3	72.1	68.3	62.3	48.3	46.0	42.8
Night	Min	57.6	82.3	36.2	70.0	66.0	57.0	53.0	45.0	40.0	36.0	36.0	36.0
Nigit	Max	70.7	91.2	49.3	79.0	77.0	76.0	75.0	71.0	67.0	53.0	52.0	50.0
Energy A	Average:	66.0	Avei	rage:	74.9	73.1	69.7	67.3	57.2	50.1	42.9	42.1	40.9
						Hourly S	ummary						
	0	61.8	82.3	36.2	74.0	72.0	69.0	66.0	51.0	42.0	39.0	39.0	36.0
	1	57.6	86.1	36.2	70.0	66.0	57.0	53.0	45.0	40.0	36.0	36.0	36.0
	2	60.5	83.8	36.2	73.0	71.0	66.0	62.0	48.0	43.0	38.0	36.0	36.0
Night	3	64.8	87.3	40.6	75.0	74.0	71.0	70.0	60.0	51.0	43.0	42.0	41.0
	4	67.6	91.2	42.5	77.0	76.0	73.0	72.0	66.0	56.0	46.0	45.0	43.0
	5	69.4	86.8	45.9	78.0	77.0	75.0	74.0	70.0	63.0	52.0	51.0	48.0
	6	70.7	87.0	49.3	79.0	77.0	76.0	75.0	71.0	67.0	53.0	52.0	50.0
	7	70.0	84.3	46.5	78.0	77.0	75.0	74.0	71.0	67.0	52.0	50.0	47.0
	8	69.4	91.1	39.1	79.0	76.0	74.0	73.0	70.0	64.0	47.0	44.0	41.0
	9	66.8	86.3	40.7	77.0	75.0	72.0	71.0	66.0	60.0	48.0	46.0	42.0
	10	65.3	87.9	41.6	76.0	74.0	70.0	68.0	63.0	59.0	49.0	47.0	44.0
	11	65.6	86.9	42.5	76.0	74.0	70.0	68.0	64.0	60.0	52.0	50.0	46.0
	12	68.1	88.5	36.2	78.0	75.0	73.0	72.0	68.0	61.0	45.0	42.0	39.0
	13	68.7	88.6	36.2	77.0	75.0	74.0	73.0	69.0	63.0	46.0	42.0	39.0
Day	14	69.0	88.0	39.2	76.0	75.0	74.0	73.0	70.0	65.0	47.0	44.0	41.0
	15	70.3	93.3	36.2	77.0	76.0	74.0	74.0	71.0	67.0	49.0	46.0	40.0
	16	70.8	84.6	46.5	77.0	76.0	75.0	74.0	72.0	69.0	55.0	52.0	49.0
	17	70.3	82.5	42.9	77.0	76.0	75.0	74.0	72.0	67.0	53.0	51.0	47.0
	18	69.6	93.3	40.4	77.0	76.0	74.0	73.0	70.0	64.0	49.0	46.0	43.0
	19	67.5	87.3	39.2	76.0	75.0	73.0	72.0	68.0	58.0	45.0	44.0	41.0
	20	67.5	86.5	39.2	77.0	75.0	73.0	72.0	67.0	57.0	44.0	43.0	41.0
	21	66.3	87.1	40.7	76.0	75.0	73.0	71.0	63.0	53.0	44.0	43.0	42.0
Night	22	63.1	84.0	38.9	74.0	73.0	71.0	68.0	54.0	46.0	40.0	39.0	39.0
8110	23	61.6	82.8	38.4	74.0	72.0	69.0	66.0	50.0	43.0	39.0	39.0	39.0

24-Hour Noise Level Measurement Summary Energy Average Leq JN: 9792 Project Name: Rancho Diamante 24-Hour Analyst: A. Wolfe CNEL Day Night L5 - Located southwest of the Project site near existing residential homes on Location: California Avenue. Date: 9/27/2017 53.6 50.2 57.6

Hourly Leg dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 (dBA) 65.0 60.0 Led 55.0 50.0 Hourly 48.9 2 45.0 40.0 35.0 5 6 8 12 22 23 0 1 2 3 4 9 10 11 13 14 15 16 17 18 19 20 21 **Hour Beginning** Time Period Hour Leg Lmax Lmin L1% L2% L5% L8% L25% L50% L90% L95% L99% Min 49.5 69.9 35.3 58.0 52.0 48.0 46.0 41.0 38.0 35.0 35.0 35.0 Day Max 58.0 82.0 43.1 69.0 66.0 61.0 56.0 52.0 50.0 47.0 45.0 44.0 53.6 Average: 61.0 55.4 39.3 38.5 Energy Average: 64.3 52.4 46.0 42.7 37.9 Min 44.2 62.7 35.3 50.0 48.0 46.0 44.0 41.0 38.0 35.0 35.0 35.0 Night 55.4 86.1 47.1 62.0 57.0 55.0 54.0 53.0 51.0 49.0 48.0 47.0 Max Energy Average: 50.2 Average: 57.2 53.8 50.2 48.4 45.2 43.0 40.7 40.1 39.3 **Hourly Summary** 48.8 69.4 35.3 60.0 56.0 53.0 49.0 42.0 40.0 38.0 38.0 37.0 0 46.3 67.8 35.3 57.0 53.0 48.0 46.0 41.0 38.0 36.0 35.0 35.0 1 2 44.2 71.6 35.3 50.0 48.0 46.0 44.0 41.0 38.0 35.0 35.0 35.0 Night 51.0 3 46.2 62.7 40.1 54.0 49.0 48.0 46.0 44.0 42.0 41.0 41.0 67.9 4 48.7 41.3 56.0 54.0 52.0 51.0 48.0 46.0 43.0 43.0 42.0 5 86.1 44.1 57.0 55.0 53.0 50.0 47.0 45.0 55.4 58.0 54.0 46.0 6 52.5 69.3 47.1 59.0 57.0 55.0 54.0 52.0 51.0 49.0 48.0 47.0 50.0 47.0 44.0 53.3 71.8 43.1 63.0 60.0 56.0 55.0 52.0 45.0 8 50.7 70.1 38.3 63.0 60.0 55.0 52.0 45.0 43.0 40.0 38.0 38.0 54.0 35.0 9 52.8 76.8 35.3 65.0 63.0 57.0 44.0 39.0 35.0 35.0 10 54.1 81.5 35.3 66.0 63.0 59.0 55.0 46.0 41.0 37.0 35.0 35.0 53.5 76.5 35.3 65.0 63.0 59.0 55.0 46.0 40.0 37.0 35.0 35.0 11 12 50.3 76.3 35.3 62.0 59.0 54.0 51.0 43.0 39.0 35.0 35.0 35.0 13 49.9 69.9 35.3 63.0 59.0 52.0 50.0 44.0 40.0 38.0 38.0 35.0 58.0 Day 14 51.2 76.2 35.3 63.0 50.0 46.0 41.0 38.0 35.0 35.0 35.0 15 55.7 80.6 35.3 67.0 64.0 60.0 56.0 46.0 42.0 36.0 35.0 35.0 43.0 49.0 47.0 16 58.0 81.9 69.0 66.0 61.0 56.0 45.0 45.0 44.0 44.0 42.0 17 54.3 79.6 41.3 64.0 60.0 54.0 51.0 48.0 47.0 43.0 55.3 82.0 58.0 42.0 41.0 18 40.4 68.0 64.0 55.0 49.0 46.0 43.0 19 53.4 72.7 38.3 67.0 64.0 55.0 53.0 47.0 43.0 40.0 40.0 38.0 20 52.1 75.4 35.3 62.0 60.0 53.0 50.0 46.0 43.0 40.0 39.0 38.0

38.0

37.0

35.0

38.0

38.0

37.0

48.0

47.0

47.0

52.0

57.0

51.0

21

22

23

Night

49.5

49.1

48.9

78.5

71.9

72.7

37.7

35.3

35.3

58.0

62.0

59.0

47.0

45.0

45.0

44.0

43.0

41.0

42.0

41.0

39.0

38.0

38.0

38.0

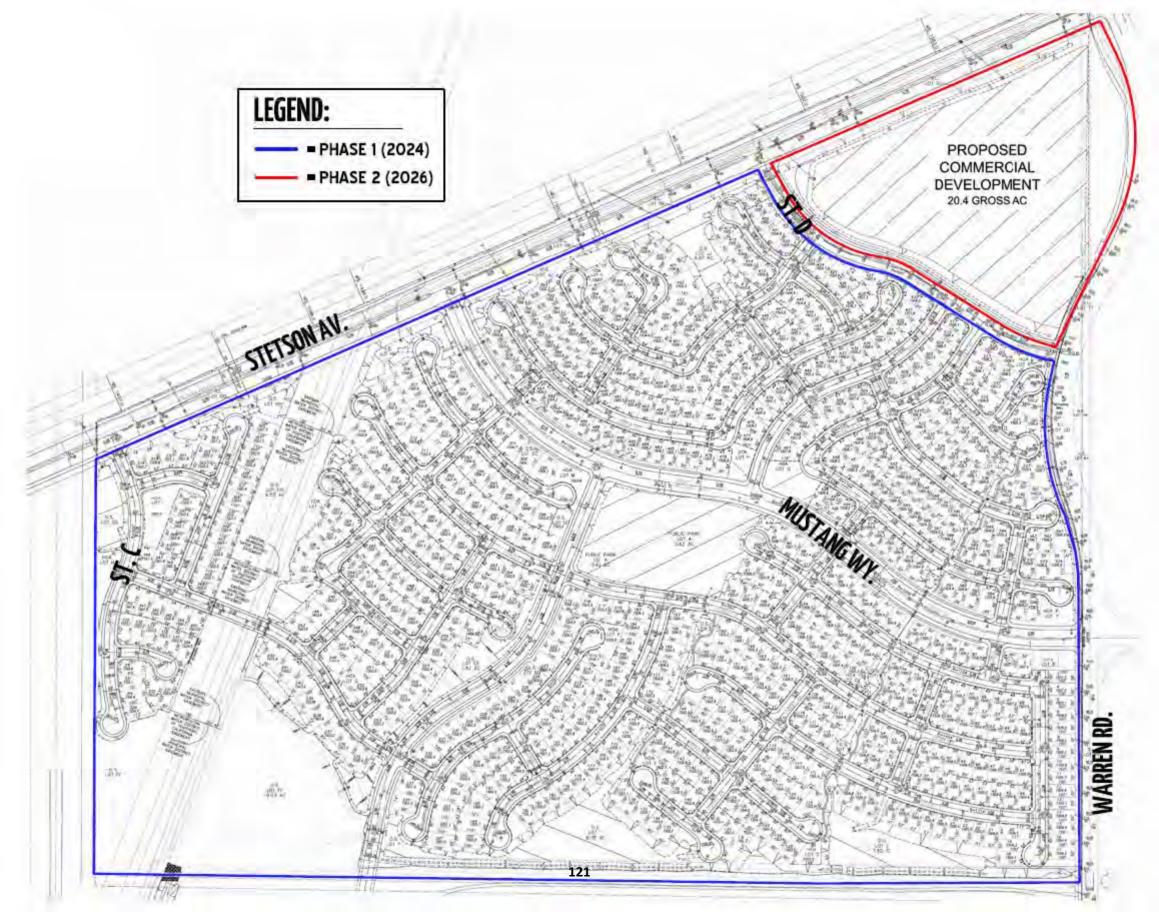


APPENDIX 6.1:

SITE PLAN









APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS





	FHW	/A-RD-77-108	HIGH	WAY N	IOISE P	REDICTION	ON MO	DEL			
Road Nam	io: Existing Wit ie: Winchester int: s/o Florida /	Rd.					Name: ımber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions (Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	0,600 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 i	Axles):	15		
Peak H	lour Volume:	1,060 vehicle	S		He	avy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	55 mph		F	Vehicle	Miv					
Near/Far La	ne Distance:	36 feet		F		icleType		Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%		9.6%	
Po-	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	47.0 feet		i.	Noise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	47.0 feet		f		Autos		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2	297			
Observer Height ((Above Pad):	5.0 feet			Hear	vy Trucks	. 8.	006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		704			
	Left View:	-90.0 degree	es			m Trucks		501			
	Right View:	90.0 degre	es		Hear	y Trucks	: 43.	521			
FHWA Noise Mod	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-2.57		0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	82.40	-19.81		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	86.40	-23.76		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	r atten	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	68.	8	66.9		65.1		59.	1	67.7	7	68.3
Medium Trucks:	62.	_	60.7		54.3		52.8	3	61.2	2	61.5
Heavy Trucks:	62.	2	60.8		51.8		53.0)	61.4	1	61.5
Vehicle Noise:	70.	4	68.6		65.6		60.8	3	69.3	3	69.8
Centerline Distant	ce to Noise Co	ntour (in feet)	70	-/D.4	05	10.4		20 -104		/D.4
			L -1		dBA	65 0		6	60 dBA		5 dBA
			Ldn: NFI:	4	2	9:			197 212		424 456
		Ci	VEL:	4	ъ	91	5		212		450

	FHV	VA-RD-77-108	HIGH	WAY N	DISE PI	REDICT	ION M	DDEL			
Road Nan	rio: Existing Wine: Patterson Ant: s/o Grand A	NV.					Name: lumber:		o Diamant	В	
SITE Highway Data	SPECIFIC IN	IPUT DATA			ito Cor				L INPUT:	S	
Average Daily Peak Hour Peak H Ve Near/Far La	Percentage: Hour Volume: Phicle Speed: In Pistance: Prier Height: Vall, 1-Berm): Ist. to Barrier: to Observer:	100 vehicle: 10% 10 vehicle: 40 mph 12 feet 0.0 feet 0.0 22.0 feet 22.0 feet 0.0 feet		v	Me He'ehicle Veh M	dium Tru avy Tru Mix icleType edium T Heavy T Durce E	Autos: rucks: rucks: levatios	Autos: Axles): Axles): Day 77.5% 84.8% 86.5%	Evening 6 12.9% 4.9% 2.7%	Night 9.6% 10.3% 10.8%	1.84%
Observer Height P Ro		5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Heav ane Eq Mediu	m Truck ry Truck uivalen Auto m Truck ry Truck	s: 8 t Distai s: 21 s: 21	.297 .006 .nce (in .749 .338 .378	Grade Adj	iustment	0.0
FHWA Noise Mod		-									
VehicleType Autos: Medium Trucks: Heavy Trucks:	77.72	-21.44 -38.68 -42.63	Disi	5.32 5.44 5.43		-1.20 -1.20 -1.20	Fres	-4.34 -4.85 -6.07	0.0	en Ber 000 000 000	0.000 0.000 0.000
Unmitigated Nois											
VehicleType Autos:	Leq Peak Hou	.,.,	47.3	Leq Ev	ening 45.5	Leq	Night 39	6	Ldn 48.1		NEL 48.7
Medium Trucks: Heavy Trucks: Vehicle Noise:	43 44	.3	41.8 43.2 49.5		35.4 34.1 46.2		33 35 41	.9	42.3 43.7 50.2	3	42.6 43.9 50.7
Centerline Distan					70.2		41	.,	30.2	-	30.7
				70 d	DΛ	e e	AD A		en ada	EE	AD A

Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Autos: 0.000 Medium Trucks: 8.65% 2.7% 10.8% 0.74		FHV	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MODEL	-	
Average Daily Traffic (Adi): 12,200 vehicles Autos: 15 Autos: 17 Autos	Road Name	: Winchester								е
Average Daily Traffic (Adt): 12,200 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3 Axles): 1	SITE S	PECIFIC IN	IPUT DATA				- 1	NOISE MOI	DEL INPUT	S
Peak Hour Percentage:	Highway Data				S	ite Cor	ditions	(Hard = 10,	Soft = 15)	
Peak Hour Volume: Vehicle Speed: 45 mph Vehicle Mix	Average Daily 7	raffic (Adt):	12,200 vehicle	S				Auto	os: 15	
Vehicle Speed: Near/Far Lane Distance: 45 mph 36 feet Vehicle Mix Vehicle Type Day Evening Night Daily Site Data Autos: 77.5% 12.9% 9.6% 97.4% 10.5% 1.84 Autos: 77.5% 12.9% 9.6% 97.4% 10.5% 10.5% 1.84 Autos: 77.5% 12.9% 9.6% 97.4% 10.5% 1	Peak Hour F	Percentage:	10%			Me	dium Tr	ucks (2 Axle	s): 15	
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Daily Daily	Peak Ho	our Volume:	1,220 vehicle	s		He	avy Tru	cks (3+ Axle	s): 15	
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Daily	Veh	icle Speed:	45 mph		v	/ehicle	Mix			
Autos: 77.5% 12.9% 9.6% 97.42	Near/Far Lan	e Distance:	36 feet		F.			e Day	/ Evenina	Night Daily
Heavy Trucks: 86.5% 2.7% 10.8% 0.74	Site Data									,
Barrier Type (0-Wall, 1-Berm):	Rari	ior Hoiaht	0.0 feet			М	edium T	rucks: 84.	8% 4.9%	10.3% 1.849
Centerline Dist. to Observer:		-				1	Heavy T	rucks: 86.	5% 2.7%	10.8% 0.749
Autos: 0.000 Autos: 0.000 Barrier Alten Barrier Alten Barrier Alten Barrier Tucks: 0.000 Column Trucks: 0.000 Column Truc	Centerline Dis	t. to Barrier:	47.0 feet		۸	loise S	ource E	levations (ii	n feet)	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	Centerline Dist. to	Observer:	47.0 feet		-	.0.00			77001)	
Pad Elevation: 0.0 feet	Barrier Distance to	Observer:	0.0 feet			Mediu				
Pad Elevation: 0.0 feet		,	5.0 feet			Heav	v Truck	s: 8.006	Grade Ad	iustment: 0.0
Road Grade: 0.0%					_					
Left View: 90.0 degrees Medium Trucks: 43.501					L	ane Eq				
Right View: 90.0 degrees Heavy Trucks: 43.521	R									
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atter										
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 68.46 -1.09 0.77 -1.20 -4.63 0.00 0.00 Medium Trucks: 79.45 -18.33 0.80 -1.20 -4.87 0.00 0.00		Right View:	90.0 degre	es		Heav	ry Truck	s: 43.521		
Autos: 68.46 -1.09 0.77 -1.20 -4.63 0.000 0.01 Medium Trucks: 79.45 -18.33 0.80 -1.20 -4.87 0.000 0.01	FHWA Noise Mode	l Calculation								
Medium Trucks: 79.45 -18.33 0.80 -1.20 -4.87 0.000 0.00				Dis						
Heavy Trucks: 84.25 -22.28 0.80 -1.20 -5.46 0.000 0.00										
							-1.20	-5.4	16 0.0	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL		-		_	Leq Ev		Leq			
	· · · · · -									
						63.9		59.2	67.8	3 68.
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Centerline Distance	e to Noise Co	ontour (in feet	!)	70 d	'RA	65	dBA	60 dBA	55 dBA
Ldn: 33 72 155 333				Ldn:						
CNEL: 36 77 166 358								-		

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	IWAY N	IOISE PE	REDICTIO	ON MC	DDEL			
Road Nam	io: Existing Wine: California Ant: n/o Stowe F	v.				Project N Job Nu			no Diamant	te	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (i	Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	2,800 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2	Axles):	15		
Peak H	lour Volume:	280 vehicles	;		He	avy Truck	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		- h	Vehicle I	Miv					
Near/Far La	ne Distance:	36 feet		-		icleType		Day	Evening	Night	Daily
Site Data							ıtos:	77.5%		9.6%	
	rrier Heiaht:	0.0 feet			Me	edium Tru		84.8%			
Barrier Type (0-W		0.0			F	leavy Tru	icks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet		L							
Centerline Dist.		47.0 feet		1	Voise So	ource Ele			eet)		
Barrier Distance	to Observer:	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 Ad	ijustmen	t: 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent l	Distar	ice (in	feet)		
	Road Grade:	0.0%				Autos:	43	.704			
	Left View:	-90.0 degree	s		Mediui	n Trucks:	43	.501			
	Right View:	90.0 degree	es.		Heav	y Trucks:	43	.521			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos:	66.51	-6.97		0.77		-1.20		-4.63		000	0.000
Medium Trucks:	77.72	-24.21		0.80)	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	82.99	-28.16		0.80)	-1.20		-5.46	0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	/ening	Leq N	light		Ldn		NEL
Autos:	59	.1 .5	57.2		55.5		49.	4	58.	0	58.6
Medium Trucks:	53		51.6		45.2		43.		52.		52.4
Heavy Trucks:	54		53.0		44.0		45.		53.		53.7
Vehicle Noise:	61	.1 .	59.4		56.1		51.	6	60.	1	60.6
Centerline Distan	ce to Noise Co	ontour (in feet)									
			L	70 c		65 d		- (60 dBA		5 dBA
		-	Ldn:	1	-	22			48		103
		C/\	IEL:	1	1	24			51		110

	FHW	A-RD-77-108	HIGH	HWAY I	NOISE P	REDICT	ION M	ODEL			
Road Na	rio: Existing With me: California Avent: s/o Stowe R	<i>'</i> .					Name: lumber:		o Diamant	Э	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	/ Traffic (Adt):	400 vehicle	S					Autos:	15		
Peak Hou	r Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	40 vehicle	S		He	eavy True	cks (3+	Axles):	15		
V	ehicle Speed:	40 mph		ŀ	Vehicle	Mix					
Near/Far L	ane Distance:	36 feet		ŀ		icleType	. 1	Day	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	. ,
D.	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-1		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
., .	ist, to Barrier:	47.0 feet		-							
Centerline Dist		47.0 feet		-	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		2.297	0		
	Pad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.006	Grade Ad	ustment	: 0.0
Ro	oad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	3.704			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	3.501			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 43	3.521			
FHWA Noise Mod	del Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Bei	rm Atten
Autos	: 66.51	-15.42		0.7	•	-1.20		-4.63	0.0	000	0.000
Medium Trucks	: 77.72	-32.66		8.0	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks		-36.61		0.8		-1.20		-5.46	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hour			Leq E	vening		Night		Ldn		NEL
Autos			48.8		47.0		40		49.6		50.2
Medium Trucks			43.2		36.8		35		43.7		43.9
Heavy Trucks Vehicle Noise		-	44.6 51.0		35.5 47.7		36 43		45.1 51.1		45.3 52.1
Centerline Distar	nce to Noise Co	ntour (in feet)								
Contonine Distai		mour (m reet	_	70	dBA	65	dBA	(60 dBA	55	dBA
			Ldn:		3		6		13		28
		Ci	NEL:		3		6		14		30

	FHV	VA-RD-77-108	HIGH	HWAY N	DISE PI	REDICT	ION M	ODEL			
Road Nan	rio: Existing Wi ne: California A nt: n/o Simpso	iV.					Name lumber		o Diamant	е	
	SPECIFIC IN	IPUT DATA			ito Cor				L INPUT	S	
Peak I Ve Near/Far La Site Data Barrier Type (0-W	Percentage: dour Volume: whicle Speed: une Distance: rrier Height: Vall, 1-Berm): ist. to Barrier: to Observer: to Observer:	100 vehicle: 10% 10 vehicle: 25 mph 36 feet 0.0 feet 0.0 feet 47.0 feet 47.0 feet 5.0 feet		ν	Me He Veh M I Ioise So Mediu.	dium Tr avy Tru Mix icleType	Autos: rucks: rucks: rucks: rucks:	Autos. Axles). Axles). Day 77.59 84.89 86.59	Evening 6 12.9% 4.9% 2.7%	Night 9.6% 10.3% 10.8%	1.84% 0.74%
Ro	ad Elevation: ad Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	Mediu	uivalen Auto m Truck ry Truck	s: 4:	nce (in 3.704 3.501 3.521	feet)		
FHWA Noise Mod	lel Calculation										
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.80	-19.40 -36.64 -40.59	Dis	0.77 0.80 0.80		-1.20 -1.20 -1.20	Fre	-4.63 -4.87 -5.46	0.0	en Be 000 000 000	0.000 0.000 0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou	.,.,		Leq Ev		Leq	Night		Ldn		NEL
Autos: Medium Trucks: Heavy Trucks:	33 37	.8	37.0 32.3 35.6		35.2 25.9 26.5		29 24 27	.3	37.8 32.8 36.1	- } !	38.4 33.0 36.3
Vehicle Noise: Centerline Distan			40.1		36.2		32	1.3	40.8	3	41.2
Centernine Distan	ce to Noise Co	anour (in reet	_	70 d	D.A	ee.	dD1		en ana		- ADA

	FHW	/A-RD-77-108	HIGHW	AY N	OISE PR	EDICTION	ON MODE	_		
Scenario:	Existing Wit	hout Project				Project I	Name: Rar	cho Diama	ante	
Road Name:						Job Nu	ımber: 979	2		
Road Segment:	s/o Stetson	Av. (S.)								
	ECIFIC IN	PUT DATA					OISE MO			
Highway Data				S	Site Cond	ditions (Hard = 10,	Soft = 15)	
Average Daily Tra	affic (Adt):	100 vehicles	s				Auto			
Peak Hour Pe	ercentage:	10%			Med	lium Tru	cks (2 Axle	s): 15		
Peak Hou	r Volume:	10 vehicles	S		Hea	vy Truci	ks (3+ Axle	s): 15		
Vehic	le Speed:	40 mph		ν	/ehicle N	lix				
Near/Far Lane	Distance:	36 feet		F		cleType	Day	y Evenir	ng Nigh	nt Daily
Site Data						A	utos: 77.	5% 12.9	% 9.0	6% 97.42%
Barrie	er Heiaht:	0.0 feet			Me	dium Tru	ucks: 84.	8% 4.9	% 10.3	3% 1.84%
Barrier Type (0-Wall		0.0			Н	leavy Tru	ucks: 86.	5% 2.7	% 10.8	8% 0.74%
Centerline Dist.		47.0 feet		۸	loise So	urce Ele	evations (in	n feet)		
Centerline Dist. to		47.0 feet				Autos	: 0.000			
Barrier Distance to	Observer:	0.0 feet			Mediun	Trucks.	: 2.297			
Observer Height (Ab	,	5.0 feet			Heav	/ Trucks	: 8.006	Grade	Adjustm	ent: 0.0
	Elevation:	0.0 feet		L					-	
	Elevation:	0.0 feet		L	ane Equ		Distance (,		
	ad Grade:	0.0%				Autos				
	Left View:	-90.0 degree				1 Trucks				
R	right View:	90.0 degree	es		Heav	/ Trucks	: 43.521			
FHWA Noise Model	Calculations	3								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite I	Road	Fresnel	Barrier	Atten	Berm Atten
Autos:	66.51	-21.44		0.77	,	-1.20	-4.6	63	0.000	0.000
Medium Trucks:	77.72	-38.68		0.80)	-1.20	-4.8	37	0.000	0.000
Heavy Trucks:	82.99	-42.63		0.80)	-1.20	-5.4	16	0.000	0.000
Unmitigated Noise L	evels (witho	out Topo and	barrier	attenı	uation)					
VehicleType Le	eq Peak Hou	r Leq Day	′ L	.eq Ev	rening	Leq N	light	Ldn		CNEL
Autos:	44.	6 .	42.7		41.0		34.9	4	13.5	44.2
Medium Trucks:	38.	-	37.1		30.8		29.2		37.7	37.9
Heavy Trucks:	40.	0 :	38.5		29.5		30.8	3	39.1	39.2
Vehicle Noise:	46.	7	44.9		41.6		37.1	4	15.6	46.1
Centerline Distance	to Noise Co	ntour (in feet)							

Monday, January 25, 2016

Site Data Autos: 77.5% 12.9% 9.6% 9 Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3%	Daily 97.42% 1.84% 0.74%
Highway Data Site Conditions (Hard = 10, Soft = 15)	97.42%
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15	97.42%
Peak Hour Percentage:	97.42%
Peak Hour Volume: Vehicle Speed: 25 mph Vehicle Mix Vehicle Mix	97.42%
Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Type Day Evening Night I	97.42%
Near/Far Lane Distance: 36 feet Vehicle Type Day Evening Night I	97.42%
VehicleType Day Evening Night I	97.42%
Autos: 77.5% 12.9% 9.6% 9	97.42%
Barrier Height:	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 8.6.5% 2.7% 10.8% 0	0.74%
Centerline Dist. to Observer: 47.0 feet Autos: 0.000	
Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0 feet Left View: -90.0 degrees Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0. Lane Equivalent Distance (in feet) Autos: 43.704 Medium Trucks: 43.501	
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade: Left View: -90.0 degrees Medium Trucks: 8.006 Grade Adjustment: 0 Medium Trucks: 8.006 Grade Adjustment: 0 Lane Equivalent Distance (in feet) Autos: 43.501	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 43.704 Left View: -90.0 degrees Medium Trucks: 43.501	
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 43.704 Medium Trucks: 43.501	0.0
Road Grade: 0.0% Autos: 43.704 Left View: -90.0 degrees Medium Trucks: 43.501	
Left View: -90.0 degrees Medium Trucks: 43.501	
25/1 Viol. 30.0 degrees	
Right View: 90.0 degrees Heavy Trucks: 43.521	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm	Atten
Autos: 58.73 -19.40 0.77 -1.20 -4.63 0.000	0.000
Medium Trucks: 70.80 -36.64 0.80 -1.20 -4.87 0.000	0.000
Heavy Trucks: 77.97 -40.59 0.80 -1.20 -5.46 0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNE	
Autos: 38.9 37.0 35.2 29.2 37.8	38.4
Medium Trucks: 33.8 32.3 25.9 24.3 32.8	33.0
Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 Vehicle Noise: 41.8 40.1 36.2 32.3 40.8	
	36.3
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dB	36.3 41.2
Ldn: 1 1 2 5	41.2
CNEL: 1 1 3 6	41.2 BA

	FH	WA-RD-77-108	HIGI	HWAY I	NOISE P	REDICT	ION MO	DEL			
Road Na	ario: Existing W me: Warren Ro ent: s/o Esplan	i.					Name: lumber:		o Diamant	Э	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	13,400 vehicle	:S					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	1,340 vehicle	:S		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	55 mph		-	Vehicle	Mix					
Near/Far L	ane Distance:	84 feet		ŀ		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	
D	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
	Dist. to Barrier:	70.0 feet		-	M-1 0			/! 6	41		
Centerline Dis	t. to Observer:	70.0 feet			Noise S			٠,	eet)		
Barrier Distance	e to Observer:	0.0 feet			11-4	Auto m Truck		.000			
Observer Heigh	t (Above Pad):	5.0 feet						.006	Grade Ad	i i otmont	
	Pad Elevation:	0.0 feet			Hea	vy Truck	s: 8	.006	Grade Ad	usuneni	0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ice (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mo	del Calculation	18									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Ber	m Atten
Autos				-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	82.40	-18.79		-0.8	15	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	86.40	-22.75		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi	se Levels (with	out Topo and	barri	ier attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	<i>y</i>	Leq E	vening	Leq	Night		Ldn	CI	VEL
Autos			66.3		64.5		58.		67.		67.7
Medium Trucks			60.1		53.7		52.	_	60.6		60.8
Heavy Trucks			60.2		51.1		52.		60.7		60.9
Vehicle Noise		***	68.0		65.0		60.	2	68.7	<u> </u>	69.2
Centerline Dista	nce to Noise C	ontour (in feet	t)	70	dD A	65	dD1		O dDA		dD A
			I dn:		dBA 57		dBA 24		266		dBA 74
		_	NFI:		32		24 33		287	-	174
		C	IVEL:	ť)2	- 1	33		201	ь	117

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICT	TION MOD	EL			
	e: Warren Rd						t Name: R Number: 9		Diamante		
	PECIFIC IN	NPUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard = 1	0, So	ft = 15)		
Average Daily 1 Peak Hour F	. ,	13,400 vehicle 10% 1,340 vehicle					A rucks (2 A) icks (3+ A)		15 15 15		
	nicle Speed:	55 mph	3				icha (OT 717	.103).	10		
Near/Far Lan		84 feet		ν	ehicle !				1		
	ic Distance.	04 1001			Veh	icleTyp		ay		Night	Daily
Site Data								7.5%	12.9%	9.6%	97.42%
Barı	rier Height:	0.0 feet				edium 7		4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			- 1	Heavy 1	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		۸	loise S	ource E	levations	(in fe	et)		
Centerline Dist. to Barrier Distance to		70.0 feet 0.0 feet		ľ		Auto	os: 0.00	00	01/		
Observer Height (A		5.0 feet			Mediu	m Truck	ks: 2.29				
	d Flevation:	0.0 feet			Heav	ry Truck	ks: 8.00)6	Grade Adju	ustment.	0.0
	d Elevation:	0.0 feet		,	ano Fo	uivələn	t Distance	(in f	oot)		
	u Elevation. Road Grade:	0.0 reet 0.0%		-	ane Eq	Auto			<i>cci)</i>		
^	Left View:	-90.0 degre			Madiu	m Truck					
	Right View:	90.0 degree				y Truck					
FHWA Noise Mode	l Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	1	Barrier Atte	n Ber	m Atten
Autos:	71.78	-1.55		-0.87		-1.20	7	1.72	0.00	00	0.000
Medium Trucks:	82.40	-18.79		-0.85		-1.20		1.88	0.00	00	0.000
Heavy Trucks:	86.40	-22.75		-0.85		-1.20	-4	5.28	0.00	00	0.000
Unmitigated Noise	Levels (with	out Topo and									
VehicleType	Leq Peak Ho	ur Leq Day	/ L	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:			66.3		64.5		58.4		67.1		67.7
Medium Trucks:			60.1		53.7		52.2		60.6		60.8
Heavy Trucks:	61	1.6	60.2		51.1		52.4		60.7		60.9
Vehicle Noise:	69	9.7	68.0		65.0		60.2		68.7		69.2
Centerline Distanc	e to Noise C	ontour (in feet)	70 di	DΛ	e E	dBA	_	0 dBA	FE	dBA
			Ldn:	70 di			124		266		74
			Lan: NFI :	62			133		287		74 17
		Ci	VEL:	62		1	133		201	6	17

FI	IWA-RD-77-108	B HIGHWA	Y NOISE F	REDICTIO	N MODEL			
Scenario: Existing V Road Name: Warren R Road Segment: n/o Tres (d.				lame: Ran mber: 9792	cho Diamant 2	te	
SITE SPECIFIC	NPUT DATA			NC	DISE MOD	EL INPUT	s	
Highway Data			Site Co.	nditions (l	Hard = 10,	Soft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	13,400 vehicle 10% 1,340 vehicle				Auto ks (2 Axle: s (3+ Axle:	s): 15		
Vehicle Speed:	55 mph		Vehicle					
Near/Far Lane Distance:	84 feet			hicleType	Dav	Evening	Night	Daily
Site Data			Vei		itos: 77.5		9.6%	
	0.0 feet		Λ.	nedium Tru			10.3%	
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet			Heavy Tru	cks: 86.5	5% 2.7%	10.8%	
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource Ele	vations (in	feet)		
Centerline Dist. to Observer:	70.0 feet			Autos:	0.000			
Barrier Distance to Observer:	0.0 feet		Mediu	ım Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet			vy Trucks:		Grade Ac	fjustmen	t: 0.0
Pad Elevation:	0.0 feet							
Road Elevation:	0.0 feet		Lane E		Distance (i	n feet)		
Road Grade:	0.0%			Autos:				
Left View: Right View:	-90.0 degre			ım Trucks: vy Trucks:				
FHWA Noise Model Calculation	ns							
VehicleType REMEL	Traffic Flow	Distan	ce Finite	e Road	Fresnel	Barrier At	ten Be	rm Atten
Autos: 71.7	8 -1.55		0.87	-1.20	-4.7	2 0.	000	0.000
Medium Trucks: 82.4	0 -18.79		0.85	-1.20	-4.8	8 0.	000	0.000
Heavy Trucks: 86.4	0 -22.75		0.85	-1.20	-5.2	8 0.	000	0.000
Unmitigated Noise Levels (with	hout Topo and	l barrier a	ttenuation)					
VehicleType Leq Peak H	our Leq Da	y Le	q Evening	Leq N	ight	Ldn	С	NEL
	8.2	66.3	64.5		58.4	67.		67.7
	1.6	60.1	53.7		52.2	60.		60.8
	1.6	60.2	51.1		52.4	60.		60.9
	9.7	68.0	65.0)	60.2	68.	7	69.2
Centerline Distance to Noise	Contour (in fee							
CONTORNIO DICTALIDO TO MOICO				65 di		60 dBA		dBA
Contornio Diotance to Noice			70 dBA					
Contonino Distance to noise	_	Ldn:	57 62	124	1	266 287		574 617

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	A YAWI	IOISE PE	REDICTI	ON MO	DEL				
Road Nam	io: Existing W ne: Warren Ro nt: n/o Florida					Project I Job Nu			no Diamar	nte		
	SPECIFIC II	NPUT DATA			o:. o				L INPU	τs		
Highway Data					Site Con	ditions (Hard :					
Average Daily	Traffic (Adt):	10,200 vehicle	S					Autos:				
Peak Hour	Percentage:	10%				dium Tru		,				
Peak H	lour Volume:	1,020 vehicle	S		He	avy Truc	ks (3+	Axles).	15			
Ve	hicle Speed:	55 mph		-	Vehicle I	Wix						
Near/Far La	ne Distance:	84 feet		F		icleType		Day	Evening	Nig	ht L	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.	.6% 9	7.42%
Ra	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9%	10.	.3%	1.84%
Barrier Type (0-W		0.0 1661			F	leavy Tr	ucks:	86.5%	6 2.7%	10.	.8%	0.749
Centerline Di	. ,	70.0 feet		Ļ								
Centerline Dist.		70.0 feet			Noise So	ource Ele			eet)			
Barrier Distance		0.0 feet				Autos		.000				
Observer Height		5.0 feet				m Trucks		.297				_
	ad Flevation:	0.0 feet			Heav	y Trucks	: 8	.006	Grade A	djustn	nent: 0	.0
	ad Elevation:	0.0 feet			Lane Ea	uivalent	Distar	ice (in	feet)			
	Road Grade:	0.0%				Autos		.223				
	Left View:	-90.0 degre	es		Mediui	m Trucks	: 56	.065				
	Right View:	90.0 degre			Heav	y Trucks	: 56	.081				
FHWA Noise Mod	el Calculation	าร										
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier A		Berm ,	
Autos:	71.78			-0.8		-1.20		-4.72	-	.000		0.000
Medium Trucks:	82.40			-0.8	-	-1.20		-4.88		.000		0.000
Heavy Trucks:	86.40	-23.93		-0.8	5	-1.20		-5.28	0	.000		0.000
Unmitigated Nois	e Levels (with	hout Topo and	barri	er atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq I	Vight		Ldn		CNE	L
Autos:	67	7.0	65.1		63.3		57.	3	65	.9		66.
Medium Trucks:			58.9		52.5		51.		59			59.
Heavy Trucks:			59.0		50.0		51.		59			59.
Vehicle Noise:	68	8.6	66.8		63.8		59.	0	67	.5		68.
Centerline Distan	ce to Noise C	ontour (in feet	()									
			L	70 c		65 c			60 dBA		55 dE	Ά
			Ldn:	4	-	10	-		222		479	
		C	NEL:	5	1	11	1		239		515	

	FHW	A-RD-77-108	HIGHV	VAY N	IOISE PI	REDICTION	ON MO	DEL			
Road Nam	io: Existing With ne: Warren Rd. nt: s/o Florida A	,					Name: ımber:		o Diamante	Э	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				5	Site Cor	ditions (Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	5,300 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 i	Axles):	15		
Peak H	lour Volume:	1,530 vehicle	S		He	avy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	55 mph		,	/ehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							utos:	77.5%	- 5	9.6%	. ,
Par	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		1	Voise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		70.0 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	ustmen	t: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		I	Lane Eq	uivalent			feet)		
ı	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degre	es			m Trucks		.065			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56.	.081			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-0.98		-0.87	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-18.21		-0.85	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-22.17		-0.85	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hour	Leq Day	' L	Leq Ev	/ening	Leq I	Vight		Ldn	С	NEL
Autos:	68.	7	66.8		65.1		59.0)	67.6	i	68.2
Medium Trucks:	62.		60.6		54.3		52.	7	61.2	2	61.4
Heavy Trucks:	62.3		60.8		51.7		53.0		61.3		61.4
Vehicle Noise:	70.3	3	68.6		65.6		60.	7	69.3	3	69.8
Centerline Distant	ce to Noise Co.	ntour (in feet)	70 c	ND A	65 0	IDΛ		0 dBA	5.6	i dBA
			I dn:	6:		13			291		327
			VEL:	67	-	14	-		313		675
		-		-			-				-

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION M	DDEL			
	c: Existing W e: Warren Rd t: s/o Whittie	l. ,					Name. lumber.		o Diamant	е	
	PECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily T Peak Hour I Peak Ho	. ,	13,300 vehicle 10% 1,330 vehicle				dium Tr avy Trui			15		
Vet	nicle Speed:	55 mph		h	/ehicle	Mix					
Near/Far Lar	e Distance:	84 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	-	9.6%	97.42%
Ran	rier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		1	Voise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		70.0 feet				Auto	s: (.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (/ Pa	Above Pad): d Elevation:	5.0 feet 0.0 feet			Heav	y Truck	s: 8	3.006	Grade Ad	justment	: 0.0
Roa	d Elevation:	0.0 feet		1	Lane Eq	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 56	6.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	6.081			
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier Att		rm Atten
Autos:	71.78			-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	82.40			-0.85	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40			-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise								_		1	
,,, .	Leq Peak Hou	-, -,		Leg E			Night		Ldn		NEL
Autos:	68		66.2		64.5		58		67.0		67.6
Medium Trucks:			60.0		53.7		52		60.6	-	60.8
Heavy Trucks: Vehicle Noise:			60.1 68.0		51.1 65.0		52 60		60.7		60.8
		•••			00.0		60	. 1	00.	1	09.2
Centerline Distanc	e to Noise C	ontour (in feet)	70 c	IRA	65	dBA	Т.	60 dBA	55	dBA
			I dn:	5			23	<u> </u>	265		571

Coonori	o: Existing W	ithout D	roinet				Droine	4 Mama	Donob	o Diamant		
	o: Existing w e: Warren Ro		roject					i ivame. Iumber		o Diamant	e	
Road Segmen							JOD I	iumber.	9/92			
	SPECIFIC II	NPUT I	DATA							L INPUT	S	
Highway Data						site Coi	naitions	(Hara		oft = 15)		
Average Daily	Traffic (Adt):	13,700	vehicles						Autos:			
Peak Hour	Percentage:	109	6				edium Ti		,			
	our Volume:	,	vehicles			He	eavy Tru	cks (3+	Axles):	15		
	hicle Speed:		mph		1	/ehicle	Mix					
Near/Far Lar	ne Distance:	84	feet			Vel	icleTyp	e	Day	Evening	Night	Daily
Site Data								Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0	feet			M	edium 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%	0.749
Centerline Dis	t. to Barrier:	70.0	feet			Vaina C	ource E	lovetio	no lin f	0041		
Centerline Dist.	to Observer:	70.0	feet		,	voise 3	Auto		0.000	eet)		
Barrier Distance t	to Observer:	0.0	feet			Modiu	m Truck		2.297			
Observer Height (A	Above Pad):	5.0	feet				vy Truck	-	3.006	Grade Ad	liuetmant	- 0.0
Pa	d Elevation:	0.0	feet			1 ICa	vy Truce	.s. c	5.000	Orade Ad	justinoni	. 0.0
Roa	d Elevation:	0.0	feet		ı	ane Ec	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0	%				Auto		5.223			
	Left View:		degree				m Truck		6.065			
	Right View:	90.0	degree	S		Hea	vy Truck	s: 56	6.081			
FHWA Noise Mode	el Calculation	15										
VehicleType	REMEL	Traffic	Flow	Dis	tance	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	71.78		-1.46		-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40		-18.69		-0.85		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40		-22.65		-0.85	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise				oarri							,	
	Leq Peak Ho		eq Day		Leg E			Night		Ldn		NEL
Autos:	-	3.3	_	6.4		64.6		58		67.:	_	67.
Medium Trucks:		1.7	_	0.2		53.8		52	-	60.		60.
Heavy Trucks:		1.7		0.3		51.2		52		60.	_	61.
Vehicle Noise:	69	9.8	6	8.1		65.1		60	.3	68.	8	69.
Centerline Distanc	e to Noise C	ontour	(in feet)		70	10.4		10.4				10.4
					70 c			dBA		60 dBA		dBA
			L	.dn:	58	3	- 1	26		270		83
			- 01	EL:	63			35		291		27

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHW.	AY N	OISE PI	REDICTI	ON M	ODEL			
Road Name	o: Existing Wi e: Warren Rd.					Project Job No			o Diamant	е	
Road Segmen	t: s/o Stetson	Av. (N.)									
SITE S Highway Data	SPECIFIC IN	PUT DATA			Site Con	N ditions			L INPUT	S	
Average Daily Peak Hour	. ,	8,900 vehicles 10% 890 vehicles			Ме	dium Tru	icks (2	Autos: Axles):	15 15		
	nicle Speed:	45 mph					KS (3+	Axies).	15		
Near/Far I ar	,	84 feet		١	/ehicle						
	ic Distance.	04 1001		_	Veh	icleType		Day	Evening	Night	Daily
Site Data				_			utos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet				edium Tr		84.8%		10.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			- 1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	70.0 feet		^	loise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. t		70.0 feet				Autos		0.000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks		.297			
Observer Height (/	Above Pad):	5.0 feet				y Trucks		3.006	Grade Ad	liustment	: 0.0
Pa	d Elevation:	0.0 feet								,	
Roa	d Elevation:	0.0 feet		L	.ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		5.223			
	Left View:	-90.0 degree	S		Mediu	m Trucks	: 56	6.065			
	Right View:	90.0 degree	S		Heav	y Trucks	: 56	3.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distar			Road	Fres		Barrier At		m Atten
Autos:	68.46	-2.46		-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	79.45	-19.70		-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-23.65		-0.85		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise						Logi	liabt		Ldn		NEL
VehicleType Autos:	Leq Peak Hou 63		2.0	ey EV	ening 60.3	Leq I	vignt 54	2	Lan 62.1		NEL 63.
Medium Trucks:	57		i6.2		49.8		54 48	-	56.	-	57.
Heavy Trucks:	58		7.1		48.1		49		57.	-	57.
Vehicle Noise:	65		4.0		60.9		56		64.		65.
Centerline Distanc	e to Noise Co	ontour (in feet)									
				70 a		65 (- (60 dBA	55	dBA
		I I	.dn:	31	1	6	7		145	3	313
		C/\	IFI:	34	1	7	2		156		35

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICTI	ON MC	DEL			
Road Na	rio: Existing Wi me: Warren Rd ent: s/o Stetson						Name: umber:		o Diamante	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	iditions ((Hard =	= 10, Sc	oft = 15)		
Average Daily	/ Traffic (Adt):	9,700 vehicle	S					Autos:	15		
Peak Hou	r Percentage:	10%				dium Tru			15		
Peak	Hour Volume:	970 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
ν	ehicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far L	ane Distance:	84 feet				icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6%	97.42%
В	arrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline E	ist. to Barrier:	70.0 feet			Noise S	ource Ele	evation	ıs (in f	eet)		
Centerline Dist	to Observer:	70.0 feet				Autos	s: 0	.000	,		
Barrier Distance	e to Observer:	0.0 feet			Mediu	m Trucks	: 2	.297			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks		.006	Grade Ad	iustmen	t: 0.0
1	Pad Elevation:	0.0 feet									
R	oad Elevation:	0.0 feet			Lane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degre	es			m Trucks		.065			
	Right View:	90.0 degre	es		Hear	y Trucks	:: 56	.081			
FHWA Noise Mo	del Calculation	s		•							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Be	rm Atten
Autos	: 68.46	-2.08		-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	79.45	-19.32		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	: 84.25	-23.28		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi			barri	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos			62.4		60.6		54.	-	63.2	-	63.8
Medium Trucks	: 58	.1	56.6		50.2		48.	7	57.1	1	57.4
Heavy Trucks			57.5		48.5		49.		58.1		58.2
Vehicle Noise	: 66	i.1	64.4		61.3		56.	6	65.1	1	65.6
Centerline Dista	nce to Noise Co	ontour (in feet)			0-	10.4			_	- 104
			, ,,,,		dBA	65 0		(60 dBA		5 dBA
			Ldn:		33	7			154		331
		Ci	VEL:	;	36	7	/		165		355

	- FH	WA-RD-77-10	B HIG	HWAY N	IOISE P	REDICT	TON MO	DDEL			
	e: Warren Ro						t Name: lumber:		o Diamante	Э	
	SPECIFIC II	NPUT DATA							L INPUT	5	
Highway Data					Site Cor	ditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	8,500 vehic	les					Autos:	15		
Peak Hour	Percentage:	10%					rucks (2				
Peak H	our Volume:	850 vehic	les		He	avy Tru	cks (3+	Axles):	15		
	nicle Speed:	40 mph		1	Vehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	-	0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet			Noise S	ource F	levatio	ns (in f	oet)		
Centerline Dist. t	o Observer:	70.0 feet		F	10,00	Auto		.000	,,,,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (/	,	5.0 feet				vy Truck		.006	Grade Adj	ustment.	0.0
	d Elevation:	0.0 feet		L.		•					
	d Elevation:	0.0 feet		1	Lane Eq				reet)		
F	Road Grade:	0.0%			A 4 15 -	Auto		.223			
	Left View:	-90.0 degr				m Truck		i.065 i.081			
	Right View:	90.0 degr	ees		Hea	ry Truck	(S. 50	.081			
FHWA Noise Mode				•							
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Atte		m Atten
Autos:	66.51		-	-0.87		-1.20		-4.72		00	0.00
Medium Trucks:	77.72		-	-0.85	-	-1.20		-4.88		00	0.00
Heavy Trucks:	82.99			-0.8		-1.20		-5.28	0.0	100	0.00
Unmitigated Noise								-			
VehicleType Autos:	Leq Peak Ho	ur Leq Da	60.4	Leg E	vening 58.6		Night 52	6	Ldn 61.2		VEL 61.
Medium Trucks:		2.3 6.3	54.8		48.4		46	-	55.3	-	55.
Heavy Trucks:		7.6	56.2		47.1		48.	-	56.8		56.
Vehicle Noise:		4.3	62.6		59.3		54.		63.3		63.
Centerline Distanc	e to Noise C	ontour (in fe	et)								
				70 c	dBA	65	dBA	(0 dBA	55	dBA
			L							1	
			Ldn:	2	5	:	54		116	2	50

0-	er Frieder 11	Calo acca D				Danis :	A /	D	- Di		
	o: Existing W		ject				Name: lumber:		o Diamant	e	
Road Segmen	e: Warren Ro					JOD IV	umber:	9792			
Road Segmen	ii. S/O iviustai	ig vvy.									
	SPECIFIC II	NPUT D	ATA						L INPUT	S	
Highway Data					Site Co	nditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	12,300 v	ehicles					Autos:	15		
Peak Hour	Percentage:	10%			M	ledium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	1,230 v	ehicles		Н	leavy Tru	cks (3+	Axles):	15		
Vel	nicle Speed:	40 n	nph		Vehicle	Mix					
Near/Far Lar	ne Distance:	84 fe	eet		Ve	hicleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Rar	rier Height:	0.0	eet		٨	∕ledium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	70.0	eet		Noise S	Source E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	70.0	eet			Auto		.000	,		
Barrier Distance t	o Observer:	0.0	eet		Medi	um Truck	s: 2	.297			
Observer Height (A	,	5.0			Hea	avv Truck	s: 8	.006	Grade Ad	ljustment	0.0
	d Elevation:	0.0				,					
	d Elevation:	0.0			Lane E	quivalen		_ •	feet)		
F	Road Grade:	0.0%				Auto		.223			
	Left View:		degrees			um Truck		.065			
	Right View:	90.0	degrees		Hea	avy Truck	s: 56	.081			
FHWA Noise Mode		· -									
VehicleType	REMEL	Traffic I		Distance	_	e Road	Fres		Barrier At		m Atten
Autos:	66.51		-0.54		.87	-1.20		-4.72		000	0.00
Medium Trucks:	77.72		17.78		.85	-1.20		-4.88		000	0.00
Heavy Trucks:	82.99		21.73		.85	-1.20		-5.28	0.0	000	0.00
VehicleType	Levels (with Leg Peak Ho		and bar q Day	_	enuation , Evening	_	Night		Ldn		NEL
Autos:		3.9	62.0		60.:	<u> </u>	54.	2	62.		63
Medium Trucks:		7.9	56.4		50.	_	48.	_	56.	-	57
Heavy Trucks:		9.2	57.8		48.		50.		58.		58
Vehicle Noise:	-	5.9	64.2		60.	_	56.	-	64.	•	65
Centerline Distanc	e to Noise C	ontour (i	n feet)								
				70) dBA	65	dBA	6	60 dBA	55	dBA
			Ldn	:	32	6	69		148	3	320

Monday, January 25, 2016

FH	WA-RD-77-108	HIGHWAY	NOISE P	REDICTION	ON MOD	EL			
Scenario: Existing W Road Name: Sanderson Road Segment: s/o Florida	n Av.				Vame: R Imber: 9		o Diamante	•	
SITE SPECIFIC I	NPUT DATA			N	DISE M	ODE	L INPUTS	;	
Highway Data			Site Cor	ditions (Hard = 1	10, Sc	ft = 15)		
Average Daily Traffic (Adt):	23,600 vehicles				Α	utos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	cks (2 A)	kles):	15		
Peak Hour Volume:	2,360 vehicles		He	avy Truci	ks (3+ A)	kles):	15		
Vehicle Speed:	30 mph		Vehicle	Miv					
Near/Far Lane Distance:	50 feet			icleType	- 1	Dav	Evening	Night	Daily
Site Data			1			7.5%	-	9.6%	
Barrier Height:	0.0 feet		М	edium Tru		4.8%		10.3%	1.84%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 reet 0.0			Heavy Tru		6.5%		10.8%	0.74%
Centerline Dist. to Barrier:	54.0 feet								
Centerline Dist. to Observer:	54.0 feet		Noise S	ource Ele		•	et)		
Barrier Distance to Observer:	0.0 feet			Autos					
Observer Height (Above Pad):	5.0 feet			m Trucks					
Pad Flevation:	0.0 feet		Heav	y Trucks	8.00	06	Grade Adjı	ustment	: 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in t	eet)		
Road Grade:	0.0%			Autos.	48.1	25			
Left View:	-90.0 degree	s	Mediu	m Trucks.	47.9	41			
Right View:	90.0 degree		Heav	y Trucks	47.9	59			
FHWA Noise Model Calculation			1						
VehicleType REMEL	Traffic Flow	Distance		Road	Fresne		Barrier Atte		m Atten
Autos: 61.75			.15	-1.20		4.67	0.0		0.000
Medium Trucks: 73.48			.17	-1.20		4.87	0.0		0.000
Heavy Trucks: 79.92	-17.66	0	.17	-1.20	4	5.39	0.0	00	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho			Evening	Leq N	-		Ldn	C	NEL
		2.3	60.6		54.5		63.1		63.7
		7.2	50.9		49.3		57.8		58.0
,		9.8 5.1	50.8 61.4		52.0 57.2		60.4 65.7		60.5 66.2
Centerline Distance to Noise C			01.4		51.2		03.7		00.2
Centernine Distance to Noise C	ontour (In feet)	7	0 dBA	65 d	'BA	6	0 dBA	55	dBA
	1	dn:	28	61			130	-	281

	FH	IWA-RD-77-10	8 HIG	HWAY I	NOISE P	REDICT	ION MO	DDEL						
Road Na	ario: Existing W nme: Sanderson nent: n/o Stetso	n Av.				.,	Name: lumber:		o Diamant	В				
	E SPECIFIC I	NPUT DATA			04- 0-				L INPUT	S				
Highway Data					Site Cor	aitions	(Hard :							
Average Dail	ly Traffic (Adt):	26,500 vehicl	es					Autos:	15					
	ur Percentage:	10%				edium Tri								
	Hour Volume:	_,	es		He	eavy Truc	cks (3+	Axles):	15					
1	/ehicle Speed:	45 mph		- 1	Vehicle	Mix								
Near/Far L	.ane Distance:	50 feet		ı	Vet	icleType	,	Dav	Evening	Night	Dailv			
Site Data							Autos:	77.5%	-	9.6%	97.42%			
	arrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline I	Dist. to Barrier:	54.0 feet		ŀ	Noise Source Elevations (in feet)									
Centerline Dis	t. to Observer:	54.0 feet		ŀ	Autos: 0.000									
Barrier Distance	Barrier Distance to Observer: 0.0 feet						Medium Trucks: 2.297							
Observer Heigh	Observer Height (Above Pad): 5.0 feet							.006	Grade Ad	iustment	. 0.0			
	Pad Elevation:	0.0 feet			1100	vy Truck	J. U	.000	Orado ria,	dourion	. 0.0			
R	oad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distai	nce (in	feet)					
	Road Grade:	0.0%				Auto	s: 48	.125						
	Left View:	-90.0 degr	ees		Mediu	m Truck	s: 47	.941						
	Right View:	90.0 degr	ees		Heavy Trucks: 47.959									
FHWA Noise Mo	del Calculatio	ns												
VehicleType	REMEL	Traffic Flow		istance		Road	Fres		Barrier Att		m Atten			
Auto			-	0.1		-1.20		-4.67		000	0.000			
Medium Trucks			-	0.1		-1.20		-4.87		000	0.000			
Heavy Trucks	s: 84.25	5 -18.9	1	0.1	7	-1.20		-5.39	0.0	000	0.000			
Unmitigated No.			d barr	ier attei	nuation)									
VehicleType	Leq Peak Ho	our Leq Da	,	Leq E	vening		Night		Ldn		NEL			
Auto		9.7	67.8		66.0		60.		68.6		69.2			
Medium Trucks: 63.5 62.0 55.6							54.	-	62.5		62.7			
Heavy Trucks		4.3	62.9		53.9		55.		63.5		63.6			
Vehicle Noise		1.5	69.8		66.6		62	.0	70.5	5	71.0			
Centerline Dista	nce to Noise C	Contour (in fee	et)	70	dD A	65	AD A		SO dBA		dBA			
I dn:				70 dBA 65 dBA 6		271		83						
	Lan: CNFI:													
		,	ť	,,,	135		290 626		الم					

	FHV	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MOD	DEL			
	o: Existing Wi e: Florida Av. nt: e/o Warren	,					t Name: F lumber: 9		o Diamante	•	
	SPECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data				Si	ite Cor	ditions	(Hard =	10, S	oft = 15)		
	Traffic (Adt): 2 Percentage: our Volume:	23,500 vehicle: 10% 2,350 vehicle:					ucks (2 A cks (3+ A		15		
Vei	hicle Speed:	50 mph		Ve	ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet		-		icleTyp	9	Dav	Evening	Night	Daily
Site Data								77.5%		9.6	
Bar Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 7 Heavy 7		34.8% 36.5%		10.3°	
Centerline Dis		70.0 feet 70.0 feet		No	oise S	ource E	levations	(in f	eet)		
Roa	to Observer:	es es	La	Heav ane Eq Mediu	Auto m Truck yy Truck uivalen Auto m Truck yy Truck	(s: 2.2 (s: 8.0 (t Distance) (s: 56.2 (s: 56.0	97 06 e (in 223 065	Grade Adj	ustme	nt: 0.0	
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distar		Finite	Road	Fresn		Barrier Atte		erm Atten
Autos:	70.20	1.30		-0.87		-1.20		4.72	0.0		0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-15.94 -19.89		-0.85 -0.85		-1.20 -1.20		-4.88 -5.28	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	/ Le	eq Eve	ening	Leq	Night		Ldn		CNEL
Autos:	69	.4	67.5		65.8		59.7		68.3		68.9
Medium Trucks:	63		61.5		55.1		53.6		62.1		62.3
Heavy Trucks:	63		62.0		53.0		54.2		62.6		62.7
Vehicle Noise:	71	.1	69.4		66.3		61.6		70.1		70.6
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 dE	BA		dBA	- (60 dBA		55 dBA
	Ldn:			71				711			
		NEL:	76	76 165 355 76				764			

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TON MOI	DEL			
	o: Existing W e: Florida Av. nt: w/o Winch						t Name: F Number: S		o Diamante	•	
SITE S	SPECIFIC IN	NPUT DATA					NOISE N	IODE	L INPUTS	3	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Peak H	Percentage: our Volume:	10% 2,330 vehicle					rucks (2 A rucks (3+ A		15		
	hicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far Lar	ne Distance:	78 feet			Veh	icleTyp	e .	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.69	6 97.42%
Bar	rier Height:	0.0 feet			M	edium 7	rucks:	34.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0				Heavy 7	rucks:	36.5%	2.7%	10.89	6 0.74%
Centerline Dis		76.0 feet		٨	loise S	ource E	levations	(in f	eet)		
Centerline Dist.		76.0 feet				Auto	os: 0.0	100			
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2.2	97			
Observer Height (Above Pad):	5.0 feet			Hear	y Truck	s: 8.0	106	Grade Adj	ustmer	t: 0.0
	nd Elevation:	0.0 feet									
	nd Elevation:	0.0 feet		L	ane Eq		t Distanc		feet)		
F	Road Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck vy Truck					
			es		i ica	ry Truce	13. 00.0	500			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		ance		Road	Fresn		Barrier Atte	_	erm Atten
Autos:	70.20			-1.85		-1.20		4.73	0.0		0.000
Medium Trucks:	81.00			-1.84		-1.20		4.88	0.0		0.000
Heavy Trucks:	85.38			-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Noise											
,,	Leq Peak Ho			Leq Ev		Leq	Night		Ldn		CNEL
Autos:		3.4	66.5		64.7		58.7		67.3		67.9
Medium Trucks:		2.0	60.5		54.1		52.6		61.0		61.3
Heavy Trucks: Vehicle Noise:		2.4	61.0 68.4		51.9 65.3		53.2 60.5		61.6 69.1		61.7 69.5
					05.3		60.5		09.1		09.0
Centerline Distance	e to Noise C	ontour (in feet	9	70 di	BA	65	dBA		60 dBA	5	5 dBA
	Ldn:			66					660		
		С	71					709			

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	I YAWI	NOISE PI	REDICTI	ом ис	ODEL			
	e: Florida Av					Project i Job Nu			o Diamant	е	
SITE S	SPECIFIC II	NPUT DATA			Site Con				L INPUT	s	
Average Daily Peak Hour	Traffic (Adt): Percentage: our Volume:	21,100 vehicle 10% 2,110 vehicle			Me	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Vel Near/Far I ar	nicle Speed:	35 mph 84 feet			Vehicle				T T		
Site Data	ic Distance.	04 1001			Veh	icleType ^	utos:	77.5%	Evening 12.9%	Night 9.6%	Daily 97.42%
	rier Height: all, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr	ıcks:	84.8% 86.5%	4.9%	10.3% 10.8%	1.84%
Centerline Dis		70.0 feet 70.0 feet		ŀ	Noise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance to Observer Height (A		Ī		Autos m Trucks ry Trucks	: 2	0.000 2.297 3.006	Grade Ad	justment.	0.0		
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks ry Trucks	: 56	6.223 6.065 6.081			
FHWA Noise Mode	el Calculation	18									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	64.30			-0.8		-1.20		-4.72		000	0.000
Medium Trucks: Heavy Trucks:	75.75 81.57			-0.8 -0.8		-1.20 -1.20		-4.88 -5.28		000	0.000
Unmitigated Noise	Levels (with	hout Topo and	barri	er atter	nuation)						
	Leq Peak Ho			Leq E	vening	Leq I			Ldn		VEL
Autos:	-		62.7		61.0		54		63.	-	64.1
Medium Trucks:	-		57.3		51.0		49		57.9	-	58.1
Heavy Trucks: Vehicle Noise:			59.3 65.1		50.2 61.7		51 57		59.9 65.8		60.0
Centerline Distance					0			-	33.0	-	55.0
Centenine Distant	e to worse C	ontour (in reet		70	dBA	65 0	IBA	6	60 dBA	55	dBA
			Ldn:	3	37	80)	-1	171	3	69
		0	NFI:		39	85			183		94

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	WAY N	NOISE P	REDICT	ION M	DDEL			
Road Nam	io: Existing Wi ne: Stowe Rd. nt: w/o Californ	,					Name: umber:		o Diamant	е	
SITE :	SPECIFIC IN	PUT DATA			Sito Cor	N nditions			L INPUT	s	
	- m (4 m)	0.700 111			Site Coi	iuitions	(I lai u				
Average Daily	. ,	2,700 vehicle	S					Autos:	15		
	Percentage:	10%				edium Tru			15 15		
	lour Volume:	270 vehicle	S		HE	eavy Truc	CKS (3+	Axies):	15		
	hicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						1	Autos:	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			М	ledium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	-	0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	47.0 feet		T.	Noise S	ource El	evatio	ns (in fe	eet)		
Centerline Dist.		47.0 feet				Auto	s: C	.000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (5.0 feet			Hear	vy Truck	s: 8	.006	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		-							
	ad Elevation:	0.0 feet		-	Lane Eq	uivalen			feet)		
,	Road Grade:	0.0%				Auto		.704			
	Left View:	-90.0 degre				m Truck		.501			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 43	.521			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-7.13		0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	77.72	-24.36		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-28.32		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leg E	vening	Leq	Night		Ldn	С	NEL
Autos:	59		57.1		55.3		49	_	57.		58.5
Medium Trucks:	53		51.4		45.1		43	-	52.0	-	52.2
Heavy Trucks: Vehicle Noise:	54 61		52.9 59.2		43.8		45 51	•	53.4 60.0		53.5 60.4
					56.0)	51	4	60.0	J	60.4
Centerline Distant	ce to Noise Co	ontour (in feet)	70	dBA	65	dBA	-	60 dBA	54	i dBA
			Ldn:		0		2		47		101
	CNFI:							108			
		-	-				-				

	FHV	VA-RD-77-108	HIG	HWAY N	DISE P	REDICT	ION MO	DEL						
Road Nan	io: Existing Witne: Grand Av. nt: w/o Calvert	,					Name: umber: !		o Diamante	9				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	/IODE	L INPUT	5				
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)					
Average Daily	Traffic (Adt):	100 vehicles	3				,	Autos:	15					
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15					
Peak F	lour Volume:	10 vehicles	3		He	avy Tru	cks (3+ A	(xles	15					
Ve	hicle Speed:	40 mph		ν	ehicle	Mix								
Near/Far La	ne Distance:	84 feet		-		icleType	,	Day	Evening	Night	Daily			
Site Data					Autos: 77.5% 12.9% 9.6% 97									
Ra	rrier Height:	0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.									
Barrier Type (0-VI		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline Di		70.0 feet			·- · 0			- /! #	41					
Centerline Dist.	Centerline Dist. to Observer: 70.0 feet						Noise Source Elevations (in feet) Autos: 0.000							
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto		297						
Observer Height	(Above Pad):	5.0 feet				m Truck		297	Grade Ad	ustmont	. 0.0			
P	ad Elevation:	0.0 feet			Hea	y Truck	S: 8.0	JUb	Grade Au	usunem	. 0.0			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in	feet)					
	Road Grade:	0.0%				Auto	s: 56.	223						
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56.0	065						
	Right View:	90.0 degree	es		Hear	y Truck	s: 56.0	081						
FHWA Noise Mod	el Calculation:	s		I										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten			
Autos:		-21.44		-0.87		-1.20		-4.72		100	0.000			
Medium Trucks:		-38.68		-0.85		-1.20		-4.88		100	0.000			
Heavy Trucks:	82.99	-42.63		-0.85		-1.20		-5.28	0.0	00	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barr	ier attenu	ıation)									
VehicleType	Leq Peak Hou	r Leq Day	'	Leq Ev	ening	Leq	Night		Ldn	C	NEL			
Autos:	Autos: 43.0 41.1						33.3		41.9)	42.5			
Medium Trucks:	37.	.0	35.5							36.3				
Heavy Trucks:	38.		36.9		27.9		29.1		37.5		37.6			
Vehicle Noise:	45.	0 4	43.3		40.0		35.5	i	44.0)	44.4			
Centerline Distan	ce to Noise Co	ntour (in feet))											
						70 dBA 65 dBA 60 dBA			55	dBA				

	FH\	WA-RD-77-108	HIGH	HWAY N	OISE PI	REDICT	ION M	ODEL					
Road Nar	rio: Existing Wine: Grand Av. ent: e/o Patters	,					t Name lumber		o Diamant	е			
	SPECIFIC IN	IPUT DATA			24- 0				L INPUT	S			
Highway Data					site Con	aitions	(Hara	= 10, Sc					
Average Daily		100 vehicle	S					Autos:	15				
	Percentage:	10%			Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15								
	Hour Volume:	10 vehicle	S		He	avy Tru	icks (3+	- Axles):	15				
	ehicle Speed:	40 mph		١	/ehicle	Mix							
Near/Far La	ane Distance:	84 feet			Veh	icleType	е	Day	Evening	Night	Daily		
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%		
Ва	rrier Height:	0.0 feet			Medium Trucks: 84.8% 4.9% 10.3%								
Barrier Type (0-V	Vall, 1-Berm):	0.0			I	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%		
	ist. to Barrier:	70.0 feet			laina C		lovetic	ns (in fe	2041				
Centerline Dist.	to Observer:	70.0 feet		,	voise so			0.000	et)				
Barrier Distance	to Observer:	0.0 feet			Madiu	Auto m Truck		2.297					
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.006	Grade Ad	iuctmont	. 0.0		
F	ad Elevation:	0.0 feet			пеач	ry ITUCK	18. (5.006	Grade Au	usunen	. 0.0		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)				
	Road Grade:	0.0%				Auto	s: 50	6.223					
	Left View:	-90.0 degre	es		Mediu	m Truck	(s: 5)	6.065					
	Right View:	90.0 degre	es		Heav	ry Truck	rs: 50	6.081					
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fre		Barrier Att	en Ber	m Atten		
Autos:		-21.44		-0.87		-1.20		-4.72	0.0		0.000		
Medium Trucks:		-38.68		-0.85		-1.20		-4.88		000	0.000		
Heavy Trucks:	82.99	-42.63		-0.85	5	-1.20		-5.28	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)								
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL		
Autos:			41.1		39.3		33		41.9		42.5		
Medium Trucks:			35.5							36.3			
Heavy Trucks:			36.9						37.6				
Vehicle Noise:	45	5.0	43.3		40.0		35	.5	44.0)	44.4		
Centerline Distan	ce to Noise C	ontour (in feet)										
			- 1	70.0	IDΛ	65	ADA	1 6	O ADA	55	AD A		

Monday, January 25, 2016

	FHWA	-RD-77-108 F	HIGHWAY	NOISE P	REDICTIO	ом мо	DEL				
Scenario: Exist Road Name: Gran Road Segment: e/o C	d Av.	,			Project N Job Nu			o Diamante	•		
SITE SPECIF	IC INP	UT DATA			NC	ISE I	NODE	L INPUTS	;		
Highway Data				Site Cor	nditions (l	Hard =	10, S	oft = 15)			
Average Daily Traffic (A	Adt):	100 vehicles					Autos:	15			
Peak Hour Percent	age:	10%		Me	dium Truc	ks (2 /	Axles):	15			
Peak Hour Volu	ıme:	10 vehicles		He	avy Truck	s (3+ A	Axles):	15			
Vehicle Spi	eed:	40 mph		Vehicle	Mix						
Near/Far Lane Dista	nce:	84 feet			icleType		Day	Evening	Night	Daily	
Site Data						itos:	77.5%		9.6%		
Barrier Hei	aht.	0.0 feet		М	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-Wall, 1-Be		0.0			Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Bar	rrier:	70.0 feet		Noise S	ource Ele	vation	s (in f	eet)			
Centerline Dist. to Obse	rver:	70.0 feet		110100 0	Autos:		000	001)			
Barrier Distance to Obse	rver:	0.0 feet		Mediu	m Trucks:		297				
Observer Height (Above F	,	5.0 feet			vy Trucks:		006	Grade Adju	ustment	: 0.0	
Pad Eleva		0.0 feet			·						
Road Eleva		0.0 feet		Lane Eq	uivalent l			feet)			
Road Gr		0.0%			Autos:		223				
Left V		-90.0 degrees			m Trucks:		065				
Right V	iew:	90.0 degrees	3	Heav	y Trucks:	56.	081				
FHWA Noise Model Calcu	lations										
VehicleType REM	EL T	raffic Flow	Distance	e Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten	
	66.51	-21.44	-	1.87	-1.20		-4.72	0.0		0.000	
	77.72	-38.68	-	.85	-1.20		-4.88	0.0		0.000	
Heavy Trucks:	82.99	-42.63	-0).85	-1.20		-5.28	0.0	00	0.000	
Unmitigated Noise Levels	<u> </u>			,							
VehicleType Leq Pea		Leq Day		Evening	Leq N	_		Ldn	C	NEL	
Autos:	43.0		1.1	39.3		33.3		41.9		42.5	
Medium Trucks:	37.0		5.5	29.1		27.6		36.0		36.3	
Heavy Trucks: Vehicle Noise:	38.3 45.0		6.9 3.3	27.9 40.0		29.1		37.5 44.0		37.6 44.4	
Centerline Distance to No				.5.0		55.0	•	. 7.0			
Contenine Distance to No	136 GUIII	ioui (iii leet)	7	0 dBA	65 di	BA		60 dBA	55	dBA	
	Ldn:			1 3 6				13			
		CN	EL:	1 3				6		14	

	FHV	VA-RD-77-108	HIG	1 YAWH	NOISE P	REDICT	ION MOE	EL			
Road Nam	io: Existing Wine: Stetson Av. nt: e/o SR-79	(S.)				,,	Name: F umber: 9		o Diamante	9	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%					ucks (2 A		15		
Peak H	lour Volume:	10 vehicle	s		He	eavy True	cks (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		F	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data								77.5%		9.6%	
Ra	rrier Height:	0.0 feet			М	edium T	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 feet		-	M-1 0			/! f-			
Centerline Dist.	to Observer:	70.0 feet		H	Noise S		evations	•	et)		
Barrier Distance	to Observer:	0.0 feet			A 4 45 -	Auto					
Observer Height	(Above Pad):	5.0 feet				m Truck			Grade Ad	i rotmont	. 0 0
P	ad Elevation:	0.0 feet			пеа	vy Truck	s. o.u	06	Graue Au	usunen	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	23			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.0	65			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 56.0	81			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresne	el	Barrier Att	en Bei	m Atten
Autos:	70.20	-22.41		-0.8	7	-1.20	-	4.72	0.0	100	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20	-	5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barr	ier atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	45	.7	43.8		42.1		36.0		44.6	6	45.2
Medium Trucks:	39	.3	37.8		31.4		29.9		38.4	ļ	38.6
Heavy Trucks:	39	.7	38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47	.4	45.7		42.6		37.8		46.4		46.9
Centerline Distant	ce to Noise Co	ontour (in feet)								
				70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	- :	2		4		9		19

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICT	ION MO	DEL						
Road Nan	rio: Existing Witne: Stetson Av. ent: w/o Californ	(S.)					Name: umber: !		o Diamante	е				
	SPECIFIC IN	PUT DATA							L INPUT	S				
Highway Data				5	Site Cor	nditions	(Hard =							
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:						
Peak Hour	Percentage:	10%					ucks (2 A							
Peak F	Hour Volume:	10 vehicles	S		He	eavy True	cks (3+ A	(xies	15					
Ve	ehicle Speed:	50 mph		1	/ehicle	Mix								
Near/Far La	ne Distance:	84 feet		-	VehicleType Day Evening Night D									
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%			
Ra	rrier Heiaht:	0.0 feet			Medium Trucks: 84.8% 4.9% 10.3%									
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%			
., .	ist. to Barrier:	70.0 feet		-										
	Centerline Dist. to Observer: 70.0 feet						Noise Source Elevations (in feet)							
	Barrier Distance to Observer: 0.0 feet					Auto		000						
Observer Height	Observer Height (Above Pad): 5.0 feet					m Truck		297						
	ad Flevation:	0.0 feet			Hear	vy Truck	s: 8.0	006	Grade Adj	ustment	0.0			
Ro	ad Flevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)					
	Road Grade:	0.0%				Auto	s: 56.	223						
	Left View:	-90.0 degree	25		Mediu	m Truck	s: 56.0	065						
	Right View:	90.0 degree			Hear	vy Truck	s: 56.0	081						
FHWA Noise Mod	lel Calculations	s												
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atten			
Autos:	70.20	-22.41		-0.87	,	-1.20		-4.72	0.0	000	0.000			
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000			
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)									
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq	Night		Ldn	С	NEL			
Autos:		42.1 36.0 44.6					45.2							
Medium Trucks:	39.	3	37.8		31.4		29.9	1	38.4	1	38.6			
Heavy Trucks:	39.	7	38.3		29.3		30.5	,	38.9	9	39.0			
Vehicle Noise:	47.	4	45.7		42.6		37.8	}	46.4	1	46.9			
Centerline Distan	ce to Noise Co	ntour (in feet)											
	-			70 a	70 dBA 65 dBA 60 dBA 55 dB/				dBA					

	FH\	WA-RD-77-108	HIGH	1 YAWH	NOISE P	REDICT	ION M	ODEL			
Road Nan	io: Existing W ne: Stetson Av nt: e/o SR-79	r. (S.)					t Name. lumber.		no Diamant	е	
SITE Highway Data	SPECIFIC IN	NPUT DATA			Site Cor				L INPUT	S	
• •	Troffic (Adt):	100 vehicle			Site Cor	iuitions	(Haru	Autos:			
Average Daily	. ,		es		Ma	edium Tr	uaka (1				
	Percentage:	10% 10 vehicle				eavy Tru		,			
			es				CKS (3+	Axies).	. 15		
	hicle Speed: ne Distance:	50 mph 84 feet			Vehicle Mix						
Neal/Fal La	ne Distance.	04 leet			Veh	icleType	Э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Ва	rrier Height:	0.0 feet				ledium T				10.3%	1.84%
Barrier Type (0-VI	/all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	70.0 feet		F	Noise S	ourco E	lovatio	ne (in f	inot)		
Centerline Dist.	to Observer:	70.0 feet		-	110/30 0	Auto		0.000	ccij		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck	-	3.006	Grade Ad	iustmeni	r 0.0
P	ad Elevation:	0.0 feet								Juoumom	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	6.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Heav	vy Truck	s: 56	5.081			
FHWA Noise Mod	el Calculation										
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos:	70.20			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	81.00			-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:				-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois			barri	er atter	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	vening		Night		Ldn		NEL
Autos:	45		43.8		42.1		36		44.6	-	45.2
Medium Trucks:		9.3	37.8		31.4		29		38.4		38.6
Heavy Trucks:		9.7	38.3		29.3		30		38.9		39.0
Vehicle Noise:	**	7.4	45.7		42.6 37.8 46.4 46.					46.9	
Centerline Distan	ce to Noise C	ontour (in fee	t)	70	dBA	65	dBA		60 dBA		i dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICT	ION MODEL		
	o: Existing Wi e: Stetson Av. at: e/o Californ	(S.)				Name: Rand lumber: 9792		
SITES	SPECIFIC IN	PUT DATA					EL INPUTS	
Highway Data				Site Cor	nditions	(Hard = 10, 3	Soft = 15)	
Average Daily	Traffic (Adt):	100 vehicles				Auto	3: 15	
Peak Hour	Percentage:	10%		Me	edium Tr	ucks (2 Axles): 15	
Peak H	our Volume:	10 vehicles		He	eavy Tru	cks (3+ Axles): 15	
Vel	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lar	ne Distance:	84 feet			icleType	Day	Evening	Night Daily
Site Data						Autos: 77.5	-	9.6% 97.42%
Rar	rier Heiaht:	0.0 feet		М	edium T	rucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-W		0.0			Heavy T	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis		70.0 feet		Noise S	ource E	levations (in	feet)	
Centerline Dist.		70.0 feet			Auto	-	,	
Barrier Distance t		0.0 feet		Mediu	m Truck	s: 2.297		
Observer Height (,	5.0 feet		Hear	vy Truck	s: 8.006	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet				4 Di-4 //-		
	d Elevation:	0.0 feet		Lane Eq		t Distance (in s: 56.223	i reet)	
F	Road Grade: Left View:	0.0%		Madiu	Auto m Truck			
	Right View:	-90.0 degree 90.0 degree			vy Truck			
FHWA Noise Mode VehicleType	REMEL	Traffic Flow	Distance	Einito	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	70.20	-22.41	-0.		-1.20	-4.72		
Medium Trucks:	81.00	-39.65	-0.		-1.20	-4.88		
Heavy Trucks:	85.38	-43.60	-0.	85	-1.20	-5.28	0.00	0.000
Unmitigated Noise	Levels (with	out Topo and I	barrier atte	enuation)				
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq	Night	Ldn	CNEL
Autos:	45		13.8	42.1		36.0	44.6	45.2
Medium Trucks:	39		87.8	31.4		29.9	38.4	38.6
Heavy Trucks:	39		38.3	29.3		30.5	38.9	39.0
Vehicle Noise:	47		15.7	42.6		37.8	46.4	46.9
Centerline Distanc	e to Noise Co	ntour (in feet)) dBA	05	dBA	00 -104	55 dBA
		,	dn:	2 2		dBA 4	60 dBA 9	19
		_	un. IFI :	2				
		Ch		-		-	3	20

	FHV	WA-RD-77-108	HIG	HWAY N	NOISE PI	REDICT	ION MOI	DEL			
Road Nan	io: Existing Wine: Stetson Av. nt: e/o Street "	. (S.)					Name: I umber: 9		o Diamante	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak F	lour Volume:	10 vehicle	s		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	50 mph		H	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		-		icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	97.42%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 feet		-	M-1 0		evations	- /! #	41		
Centerline Dist.	to Observer:	70.0 feet		- 1	Noise S	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet			A de elle	Auto. m Truck		000 297			
Observer Height	(Above Pad):	5.0 feet						297 006	Grade Adj	i rodeno nd	
P	ad Elevation:	0.0 feet			пеан	ry Truck	s. o.c	000	Grade Auj	usunem	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distant	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.0	065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56.0	081			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	-22.41		-0.8	7	-1.20		-4.72	0.0	100	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	VEL
Autos:	45	.7	43.8		42.1		36.0		44.6	6	45.2
Medium Trucks:	39	.3	37.8		31.4		29.9		38.4	ļ	38.6
Heavy Trucks:	39	.7	38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47	.4	45.7		42.6		37.8		46.4		46.9
Centerline Distan	ce to Noise Co	ontour (in feet)								
					dBA		dBA	ϵ	60 dBA		dBA
			I dn:	- 2	2		4		9		19

	FHW	/A-RD-77-108	HIGH	WAY N	DISE PI	REDICT	ION MO	DEL			
Road Nan	io: Existing Wit ne: Stetson Av. nt: w/o Warren	(S.)					Name: lumber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Peak I- Ve Near/Far La Site Data Barrier Type (0-W Centerline Dist. Barrier Distance	Percentage: dour Volume: thicle Speed: ne Distance: rrier Height: fall, 1-Berm): st. to Barrier: to Observer: to Observer:	100 vehicles 10% 10 vehicles 50 mph 84 feet 0.0 feet 0.0 70.0 feet 70.0 feet		ν	Me He Veh M M I Ioise Se	edium Tru eavy Tru Mix icleType icleType edium Ti Heavy Ti	Lucks (2 / Lucks (3+ / Lucks (3+ / Lucks (3+ / Lucks: rucks: rucks: levation	Autos: Axles): Axles): Day 77.5% 84.8% 86.5%	Evening 6 12.9% 4.9% 2.7%	Night 9.6% 10.3% 10.8%	1.84%
Ro	ad Elevation: ad Elevation: ad Elevation: Road Grade: Left View: Right View:	5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	ane Eq Mediu	y Truck uivalen Auto m Truck y Truck	t Distant s: 56. s: 56.	223 065	Grade Adj	iustment	± 0.0
FHWA Noise Mod		·									
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	-22.41 -39.65 -43.60	Dis	-0.87 -0.85 -0.85		-1.20 -1.20 -1.20	Fresr	-4.72 -4.88 -5.28			0.000 0.000 0.000
Unmitigated Nois	e Levels (witho	out Topo and	barri	er attenu	ıation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	45. 39. 39. 47.	3 7	43.8 37.8 38.3 45.7		42.1 31.4 29.3 42.6		36.0 29.9 30.5 37.8) 5	44.6 38.4 38.9 46.4	1	45.2 38.6 39.0 46.9
Centerline Distan	ce to Noise Co	ntour (in feet))								
			L	70 d	BA	65	dBA	- (60 dBA	55	dBA

	FH	WA-RD-77-108	HIGH	1 YAWH	NOISE P	REDICT	ION MC	DEL			
Road Nan	rio: Existing W ne: Stetson Av nt: e/o Mustar	. (S.)					Name: lumber:		o Diamant	е	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	S	
Average Daily	Traffic (Adt):	100 vehicle	s		0.10 007		•	Autos			
	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
	Hour Volume:	10 vehicle	s				cks (3+.	,			
Ve	ehicle Speed:	50 mph		ŀ	Vehicle						
Near/Far La	ne Distance:	84 feet		-		icleType		Dav	Evening	Night	Dailv
Site Data					VCII		Autos:	77.5%	0	9.6%	. ,
	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%		10.3%	
Barrier Type (0-V		0.0 reet				Heavv T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist. to Barrier:	70.0 feet									
Centerline Dist.		70.0 feet		L	Noise S				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297	0		
P	ad Elevation:	0.0 feet			Heav	/y Truck	s: 8.	.006	Grade Ad	justment	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 56	.081			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	70.20	-22.41		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL
Autos:			43.8		42.1		36.	-	44.6	-	45.2
Medium Trucks:			37.8		31.4		29.	-	38.4	•	38.6
Heavy Trucks:			38.3		29.3		30.		38.9		39.0
Vehicle Noise:			45.7		42.6		37.	8	46.4	1	46.9
Centerline Distan	ce to Noise C	ontour (in feet	t)	70	-10.4		-/D4	1 .	20 -/04		-10.4
				70	dBA	65	dBA	1 6	60 dBA	55	dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTI	ON M	ODEL			
Road Name	o: Existing Wir e: Stetson Av. nt: e/o Warren	(S.)				Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC IN	PUT DATA			ite Con	N nditions (L INPUT	s	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	100 vehicles 10% 10 vehicles 50 mph			Me	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lar	ne Distance:	84 feet		-		icleType		Day	Evening	Night	Dailv
Site Data Bar Barrier Type (0-W	rier Height:	0.0 feet 0.0			М			77.5% 84.8% 86.5%	5 12.9% 5 4.9%	9.6%	1.84%
Centerline Dis	. ,	70.0 feet		١.	O	·		(! 6	41		
Centerline Dist. I Barrier Distance I Observer Height (A	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet		n	Mediu	Autos m Trucks ry Trucks	c (0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks y Trucks	: 56	5.223 5.065 5.081			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	tteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ev	ening	Leq I	Vight		Ldn	C	NEL
Autos:	45.	.7 4	3.8		42.1		36	.0	44.	6	45.2
Medium Trucks:	39.	.3 3	7.8		31.4		29	.9	38.	4	38.6
Heavy Trucks:	39.		8.3		29.3		30		38.	9	39.0
Vehicle Noise:	47.	.4	5.7		42.6		37	.8	46.	4	46.9
Centerline Distanc	e to Noise Co	ntour (in feet)									
				70 d	BA	65 c	IBA	(60 dBA	55	dBA
		-	dn:	2		4			9		19
		CN	IEL:	2		4			9		20

	FHW	/A-RD-77-108	HIG	HWAY N	OISE P	REDICTI	ON MOD	EL			
Road Nari	rio: Existing Wit me: Stetson Av. ent: e/o Fisher S	(S.)					Name: R umber: 9		Diamante	9	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cor	nditions	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					utos:	15		
Peak Hour	r Percentage:	10%			Me	edium Tru	icks (2 A)	xles):	15		
Peak I	Hour Volume:	10 vehicle:	S		He	eavy Truc	ks (3+ A)	xles):	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ane Distance:	84 feet		F		icleType	E	Day	Evening	Night	Daily
Site Data						A	utos: 7	7.5%	12.9%	9.6%	97.42%
Ba	arrier Height:	0.0 feet			М	edium Tr	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy Tr	ucks: 8	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet			laina C	ource El	o votio no	(in fe	n41		
Centerline Dist.	to Observer:	70.0 feet		^	orse s	Autos		•	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks					
Observer Height	(Above Pad):	5.0 feet				vy Trucks			Grade Adj	ivetmont	. 0.0
P	Pad Elevation:	0.0 feet								usuncin	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent		_	eet)		
	Road Grade:	0.0%				Autos	: 56.2	23			
	Left View:	-90.0 degree	es			m Trucks		65			
	Right View:	90.0 degree	es		Hear	vy Trucks	: 56.0	81			
FHWA Noise Mod	del Calculations	i									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresne	el .	Barrier Atte	en Bei	m Atten
Autos:	70.20	-22.41		-0.87		-1.20	-	4.72	0.0	100	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20	-	5.28	0.0	00	0.000
Unmitigated Nois	e Levels (with	ut Topo and	barr	ier attenu	ıation)						
VehicleType	Leq Peak Hou	Leq Day	,	Leq Ev	ening	Leq	Vight		Ldn	С	NEL
Autos:	45.	7	43.8		42.1		36.0		44.6	6	45.2
Medium Trucks:	39.	3	37.8		31.4		29.9		38.4	ļ	38.6
Heavy Trucks:	39.	7	38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47.	4	45.7	,	42.6		37.8		46.4		46.9
Centerline Distan	ice to Noise Co	ntour (in feet)								
				70 d	BA	65 (6	0 dBA		dBA
			I dn:	2		4			9		19

	FHW	/A-RD-77-108	HIGHW	AY N	DISE PI	REDICT	TION MOD	DEL			
Scenario: Road Name: Road Segment:		,					t Name: F Number: 9		o Diamante	:	
	ECIFIC IN	PUT DATA							L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tra Peak Hour Pe Peak Hou	ercentage:	10% 1,100 vehicles					rucks (2 A icks (3+ A				
Vehic	le Speed:	50 mph		ν	ehicle	Mix					
Near/Far Lane	Distance:	84 feet		-	Veh	icleTyp	e i	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Rarrie	er Heiaht:	0.0 feet			М	edium 7	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall		0.0			1	Heavy 7	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist.		70.0 feet			laina C	nuraa E	levations	(in f	204)		
Road Roa	Observer: ove Pad): Elevation: Elevation: ad Grade: Left View: tight View:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree 7raffic Flow -1.99 -19.23 -23.19		L	Mediu Heav ane Eq Mediu Heav	Auto m Truck ry Truck	os: 0.0 os: 2.2 os: 2.2 os: 8.0 os: 66.0 os: 56.0 Fresno	000 97 006 ee (in : 223 065	Grade Adji	en Ber 000 000	m Atten 0.000 0.000 0.000
-											
VehicleType Le	e vers (witho eq Peak Hour			eq Ev		l en	Night		l dn	_	NFI
Autos:	66.		64.2	LOYLV	62.5	Ley	56.4		65.0	-	65.6
Medium Trucks:	59.		58.2		51.8		50.4		58.8		59.0
Heavy Trucks:	60.	-	58.7		49.7		50.9		59.3		59.4
Vehicle Noise:	67.		66.1		63.0		58.3		66.8		67.3
Centerline Distance	to Noise Co	ntour (in feet)								
		. ,	L	70 di	BA	65	dBA	6	0 dBA	55	dBA
	Ldn:					43 9			199	- 4	129
		CI	VEL:	46			99		214	4	161

	FH	WA-RD-77-108	HIGHW	AY NOIS	E PREDIC	CTION M	ODEL			
	o: Existing W	ithout Project				ect Name		o Diamant	е	
Road Segmen					002		. 0.02			
	SPECIFIC II	NPUT DATA						L INPUT	S	
Highway Data				Site	Conditio	ns (Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,200 vehicle	:S				Autos:			
Peak Hour I	Percentage:	10%			Medium	,	,			
Peak Ho	our Volume:	820 vehicle	:S		Heavy T	rucks (3-	Axles):	15		
Vel	nicle Speed:	50 mph		Vehi	cle Mix					
Near/Far Lar	ne Distance:	84 feet			VehicleTy	rpe	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Ran	rier Heiaht:	0.0 feet			Medium	Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy	Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		Nois	e Source	Elevation	ons (in f	eet)		
Centerline Dist. t		70.0 feet			Αι	itos:	0.000			
Barrier Distance t		0.0 feet		Me	edium Tru	cks:	2.297			
Observer Height (/	,	5.0 feet		F	leavv Tru	cks:	8.006	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet								
	d Elevation:	0.0 feet		Lane	Equival			feet)		
F	Road Grade:	0.0%					6.223			
	Left View:	-90.0 degre			edium Tru		6.065			
	Right View:	90.0 degre	es	F	łeavy Tru	cks: 5	6.081			
FHWA Noise Mode										
VehicleType	REMEL	Traffic Flow	Distan		nite Road		snel	Barrier Att		rm Atten
Autos:	70.20			-0.87	-1.2	-	-4.72		000	0.00
Medium Trucks:	81.00			-0.85	-1.2	-	-4.88		000	0.00
Heavy Trucks:	85.38			-0.85	-1.2	:0	-5.28	0.0	000	0.00
Unmitigated Noise	-									
	Leq Peak Ho		_	eq Evenir	_	eq Night		Ldn	_	NEL
Autos:	-	4.9	63.0		1.2		5.1	63.8	-	64.
Medium Trucks:		3.4	56.9	-	0.6		9.0	57.	-	57.
Heavy Trucks: Vehicle Noise:		3.9	57.4 64.8		8.4		9.7 7.0	58.0 65.5	_	58. 66.
Centerline Distanc	-				-		-	30.	-	50.
Jenternile Distant	e 10 110/3E C	ontour (III lee	'	70 dBA	(65 dBA		60 dBA	55	dBA
			Ldn:	35		76	•	164	3	353

Monday, January 25, 2016

	FH'	WA-RD-77-108	HIGH	YAW	NOISE P	REDICTI	ON M	ODEL			
		ithout Project							o Diamant	е	
	e: Stetson Av					Job Ni	ımber:	9792			
Road Segmen	it: e/o Sandei	rson Av.									
SITE S Highway Data	SPECIFIC II	NPUT DATA			Site Cor	N ditions (L INPUT oft = 15)	S	
Average Daily	Traffic (Adt):	32 800 vehicle	e					Autos			
	Percentage:	10%	3		Me	dium Tru	cks (2				
	our Volume:	3.280 vehicle	e			avy Truc		,			
	hicle Speed:	45 mph	3				(0 .	7 151100).	.0		
Near/Far I ar		84 feet			Vehicle						
	ie Distance.	04 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet			Noise S	nurce Fle	evatio	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet			710700 0	Autos		0.000	001)		
Barrier Distance t	to Observer:	0.0 feet			Madiu	m Trucks		2.297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		3.006	Grade Ad	liustment	0.0
Pa	ad Elevation:	0.0 feet			rica	y Trucks		5.000	0,000,10	juoumom	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%				Autos	: 56	5.223			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 56	6.065			
	Right View:	90.0 degre	es		Heav	y Trucks	: 56	6.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		m Atten
Autos:	68.46			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	79.45			-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25			-0.8		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise	Leg Peak Ho					Leq I	liabt		Ldn		NEL
VehicleType Autos:			67.7	Ley E	ening 65.9	Leqi	vigrit 59	0	68.:		VEL 69.
Medium Trucks:			61.9		55.5		59		62.	-	62.6
Heavy Trucks:			62.8		53.8		55		63.		63.5
Vehicle Noise:			69.7		66.5		61		70.		70.
Centerline Distanc	e to Noise C	ontour (in feet)								
					dBA	65 c		(60 dBA		dBA
			Ldn:		75	16			346		46
		C	NEL:		80	17	2		371	8	00

Site Data Autos: 77.5% 12.9% 9.6% 97.		FH	WA-RD-77-108	HIGH	HWAY N	IOISE PI	REDICT	ION MO	DDEL			
Site Conditions (Hard = 10, Soft = 15)	Road Na	me: 9th St.	,				, ,			o Diamant	е	
Average Daily Traffic (Adt): 500 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Section 10% Peak Hour Volume: 50 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle		SPECIFIC II	NPUT DATA								s	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15	Highway Data					Site Cor	ditions	(Hard :	= 10, Sc	oft = 15)		
Peak Hour Volume: Vehicle Speed: 25 mph Vehicle Mix	Average Dai	ly Traffic (Adt):	500 vehicle	es								
Vehicle Speed: Near/Fer Lane Distance: 25 mph Meat/Fer Lane Distance: Vehicle Mix Vehicle Type Day Evening Night Day Site Data Autos: 77.5% 12.9% 9.0% 91.0% 91.0 Autos: 77.5% 12.9% 91.0% 91.0 91.0% 91.0	Peak Ho	ır Percentage:	10%									
Near/Far Lane Distance: 84 leet Vehicle Type Day Evening Night Day Site Data Number Near Nea	Peak	Hour Volume:	50 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
Site Data	1	/ehicle Speed:	25 mph			Vehicle	Mix					
Site Data	Near/Far I	ane Distance:	84 feet			Veh	icleTvpe	,	Dav	Evenina	Niaht	Dailv
Barrier Tegent U.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.5	Site Data								77.5%	Ü		97.42%
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 8.006 Grade Adjustment: 0.0 Grade Adjustment: 0.0		Parrier Height	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Autos: 0.000						1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Autos: Conterline Dist. to Observer: To.0 feet	Centerline I	Dist. to Barrier:	70.0 feet		-	Noise S	ource F	levatio	ns (in fe	oet)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	Centerline Dis	t. to Observer:	70.0 feet			110/36 01				JUL)		
Diserver Height (Above Pad):	Barrier Distance	e to Observer:	0.0 feet			Modiu						
Pad Elevation: 0.0 feet	Observer Heigh	t (Above Pad):	5.0 feet							Grade Ad	livetmant	- 0.0
Road Grade:		Pad Elevation:	0.0 feet			ncar	ry Truck	J. U		Orado ria	juoumom	. 0.0
Left View: -90.0 degrees Medium Trucks: 56.065 Heavy Trucks: 56.081 FHWA Noise Model Calculations	F	load Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	nce (in :	feet)		
FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 58.73 -12.41 -0.87 -1.20 -4.72 0.000 0.0		Road Grade:	0.0%				Auto	s: 56	6.223			
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Att		Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
VehicleType		Right View:	90.0 degre	es		Heav	y Truck	s: 56	3.081			
Autos: 58.73	FHWA Noise Mo	del Calculation	ıs									
Medium Trucks: 70.80 -29.65 -0.85 -1.20 -4.88 0.000 0 Heavy Trucks: 77.97 -33.60 -0.85 -1.20 -5.28 0.000 0 Umnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 44.3 42.4 40.6 34.5 43.2 Medium Trucks: 39.1 37.6 31.2 29.7 38.1 Heavy Trucks: 42.3 40.9 31.9 33.1 41.5 Vehicle Noise: 47.1 45.5 41.6 37.6 46.2 Centerline Distance to Noise Contour (in feet)	VehicleType	REMEL			stance	Finite		Fres		Barrier Att	en Bei	m Atten
Heavy Trucks: 77.97 -33.60 -0.85 -1.20 -5.28 0.000 0			-12.41		-0.8	7			-4.72	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	Medium Truck	s: 70.80	-29.65		-0.8	5	-1.20		-4.88	0.0	000	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 44.3 42.4 40.6 34.5 43.2 Medium Trucks: 39.1 37.6 31.2 29.7 38.1 Heavy Trucks: 42.3 40.9 31.9 33.1 41.5 Vehicle Noise: 47.1 45.5 41.6 37.6 46.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	Heavy Truck	s: 77.97	-33.60		-0.8	5	-1.20		-5.28	0.0	000	0.000
Autos: 44.3 42.4 40.6 34.5 43.2 Medium Trucks: 39.1 37.6 31.2 29.7 38.1 Heavy Trucks: 42.3 40.9 31.9 33.1 41.5 Vehicle Noise: 47.1 45.5 41.6 37.6 46.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA											1	
Medium Trucks: 39.1 37.6 31.2 29.7 38.1 Heavy Trucks: 42.3 40.9 31.9 33.1 41.5 Vehicle Noise: 47.1 45.5 41.6 37.6 46.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	,,				Leq E		Leq					
Heavy Trucks:											_	43.8
Vehicle Noise: 47.1 45.5 41.6 37.6 46.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA												38.4
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA												41.6
70 dBA 65 dBA 60 dBA 55 dBA						41.0		37.		40	_	70.0
Ldn: 2 4 8 18	Jenternine Dista	nee to Noise C	ontour (iii lee	'	70 (dBA	65	dBA	6	60 dBA	55	dBA
				Ldn:	2	2		4		8	•	18
CNEL: 2 4 9 19			С	NEL:	2	2		4		9		19

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TION MOD	EL			
	o: Existing W e: Wincheste ht: s/o Florida	r Rd.				.,	t Name: R Number: 9		Diamante		
SITE S	SPECIFIC IN	NPUT DATA					NOISE M	ODEL	INPUTS		
Highway Data				S	ite Cor	nditions	(Hard = 1	0, Soft	t = 15)		
Average Daily T Peak Hour I	. ,	10,700 vehicle 10%	s		Me	dium Ti	A rucks (2 A)	utos:	15 15		
	our Volume:	1.070 vehicle	e				icks (3+ A)		15		
	nicle Speed:	55 mph	3			-	10110 (0171)				
Near/Far I ar		36 feet		ν	ehicle'	Mix					
	ie Distance.	30 1661			Veh	icleTyp		,		Night	Daily
Site Data								7.5%	12.9%		97.42%
Bar	rier Height:	0.0 feet			М	edium 7		4.8%		10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	47.0 feet		^	loise S	ource E	levations	(in fee	t)		
Centerline Dist. t	o Observer:	47.0 feet		F	.0.00	Auto			.,		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck					
Observer Height (/	Above Pad):	5.0 feet				vy Truck			Grade Adju	stment:	0.0
Pa	d Elevation:	0.0 feet			rica	y much	13. 0.00	,0 -	rado riaja	ourrorn.	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance	(in fe	et)		
F	Road Grade:	0.0%				Auto	os: 43.70)4			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 43.50)1			
	Right View:	90.0 degree	es		Hear	vy Truck	ks: 43.5	21			
FHWA Noise Mode	l Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	I B	arrier Attei	n Bern	n Atten
Autos:	71.78	-2.53		0.77		-1.20		1.63	0.00	10	0.000
Medium Trucks:	82.40	-19.77		0.80		-1.20		1.87	0.00	10	0.000
Heavy Trucks:	86.40	-23.72		0.80		-1.20	-4	5.46	0.00	10	0.000
Unmitigated Noise											
	Leq Peak Ho		_	Leq Ev			Night	L	.dn	CN	
Autos:			66.9		65.2		59.1		67.7		68.3
Medium Trucks:			60.7		54.4		52.8		61.3		61.5
Heavy Trucks:	62	2.3	60.9		51.8		53.1		61.4		61.5
Vehicle Noise:	70).4	68.7		65.7		60.8		69.4		69.9
Centerline Distanc	e to Noise C	ontour (in feet)	70 -	D4	0.5	-(D4		-10.4		(D.4
			L -1	70 d			dBA		dBA	55 0	
			Ldn:		43		92		98	42	
		Ci	NEL:	46)		99	2	213	45	Э

	FH\	WA-RD-77-108	HIGH	1 YAWH	NOISE P	REDICT	ION M	ODEL			
Road Nan	rio: Existing W ne: 9th St. ent: e/o Winche	•					t Name: lumber:		no Diamant	е	
SITE Highway Data	SPECIFIC IN	NPUT DATA			04- 0				L INPUT:	S	
• •					Site Coi	iaitions	паги				
Average Daily		400 vehicle	S					Autos:			
	Percentage:	10%				edium Tr		,			
	lour Volume:	40 vehicle	S		He	eavy Tru	icks (3+	Axles):	15		
	ehicle Speed:	25 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ľ	Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Ва	rrier Heiaht:	0.0 feet			M	ledium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
,, ,	ist, to Barrier:	70.0 feet			M-! 0			/ 6	1		
Centerline Dist.	to Observer:	70.0 feet		L.	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 15 -	Auto m Truck		0.000			
Observer Height	(Above Pad):	5.0 feet				m i ruck vy Truck		2.297	Grade Ad	ii rotmo na	
P	ad Elevation:	0.0 feet			Hea	vy iruck	is: e	3.006	Grade Adj	jusimem	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	5.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Hea	vy Truck	rs: 56	3.081			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres		Barrier Att	en Bei	rm Atten
Autos:	58.73	-13.38		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	70.80	-30.62		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	77.97	-34.57		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	43	3.3	41.4		39.6		33	.6	42.2	2	42.8
Medium Trucks:	38	3.1	36.6		30.3		28	.7	37.2	2	37.4
Heavy Trucks:	41	1.3	39.9		30.9		32	.1	40.5	5	40.6
Vehicle Noise:	46	5.2	44.5		40.6		36	.7	45.2	2	45.6
Centerline Distan	ce to Noise C	ontour (in fee	!)								
				70 (dBA	65	dBA	1 6	60 dBA	55	dBA

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGHWA	AY NO	DISE PI	REDICT	ION MODE	L			
Scenario: E Road Name: \ Road Segment: r	Vinchester						Name: Ra lumber: 979		iamante		
	CIFIC IN	PUT DATA				N	IOISE MO	DEL I	NPUTS		
Highway Data				S	ite Con	ditions	(Hard = 10	, Soft :	= 15)		
Average Daily Traf Peak Hour Pero Peak Hour Vehicle	centage:	2,300 vehicles 10% 1,230 vehicles 45 mph			He	avy Tru	Aut ucks (2 Axk cks (3+ Axk	es):	15 15 15		
Near/Far Lane D	Distance:	36 feet		V	ehicle I			1-			D "
Site Data	notarioo.						Autos: 77	.5%	12.9%	9.6% 9	Daily 17.42%
Barrier Barrier Type (0-Wall,	Height: 1-Berm):	0.0 feet 0.0				edium T Heavy T		.8% .5%).3%).8%	1.84% 0.74%
Centerline Dist. to		47.0 feet		Λ	loise So	ource E	levations (n feet))		
Centerline Dist. to O Barrier Distance to O Observer Height (Abo Pad E	bserver:	47.0 feet 0.0 feet 5.0 feet 0.0 feet			Heav	Auto m Truck ry Truck	s: 2.297 s: 8.006	Gr	ade Adjustr	ment: (0.0
Road E	levation:	0.0 feet		L	ane Eq	uivalen	t Distance	(in fee	t)		
Road	d Grade:	0.0%				Auto	s: 43.70	1			
_	eft View: ght View:	-90.0 degree				m Truck ry Truck					
FHWA Noise Model C	alculations	5									
VehicleType F	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresnel	Ba	rrier Atten	Berm	Atten
Autos:	68.46	-1.05		0.77		-1.20	-4.	63	0.000		0.000
Medium Trucks:	79.45	-18.29		0.80		-1.20	-4.	87	0.000		0.000
Heavy Trucks:	84.25	-22.25		0.80		-1.20	-5.	46	0.000		0.000
Unmitigated Noise Le	vels (with	out Topo and	barrier a	ttenı	ıation)						
VehicleType Leq	Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night	Lo		CNE	L
Autos:	67.	-	65.1		63.3		57.3		65.9		66.5
Medium Trucks:	60.		59.3		52.9		51.3		59.8		60.0
Heavy Trucks:	61.		60.2		51.1		52.4		60.8		60.9
Vehicle Noise:	68.	8 6	67.1		63.9		59.3		67.8		68.3
Centerline Distance to	Noise Co	ntour (in feet))								
				70 di			dBA	60 c		55 dE	
			Ldn:	34			72	15		335	
		CN	VEL:	36		7	77	16	57	360)

Scenario: Existing With Project Road Name: Patterson Av. Road Segment: slo Grand Av. SITE SPECIFIC INPUT DATA Highway Data Average Daily Traffic (Adt): 100 vehicles Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph NeufFar Lane Distance: 12 feet										
Highway Data										
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Vehicle App Districts 11 feet										
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 10 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Mix										
Peak Hour Volume: 10 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Mix										
Vehicle Speed: 40 mph Vehicle Mix										
Near/Fox Lana Distance 12 feet										
Near/Far Lane Distance: 12 feet										
Near/Par Lane Distance. 12 feet VehicleType Day Evening I	Night Daily									
Site Data Autos: 77.5% 12.9%	9.6% 97.42%									
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9%	10.3% 1.84%									
	10.8% 0.74%									
Centerline Dist. to Barrier: 22.0 feet Noise Source Elevations (in feet)										
Centerline Dist. to Observer: 22.0 feet Autos: 0.000										
Parrier Distance to Observer: 0.0 feet										
Observer Height (Above Pad): 5.0 feet	Medium Trucks: 2.297 Heavy Trucks: 8,006 Grade Adjustment: 0.0									
Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjus	sunent. 0.0									
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	Lane Equivalent Distance (in feet)									
Road Grade: 0.0% Autos: 21.749	Autos: 21.749									
Left View: -90.0 degrees Medium Trucks: 21.338	Medium Trucks: 21.338									
Right View: 90.0 degrees Heavy Trucks: 21.378										
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atter	Berm Atten									
Autos: 66.51 -21.44 5.32 -1.20 -4.34 0.00										
Medium Trucks: 77.72 -38.68 5.44 -1.20 -4.85 0.00										
Heavy Trucks: 82.99 -42.63 5.43 -1.20 -6.07 0.00	0.00									
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn	CNEL									
Autos: 49.2 47.3 45.5 39.5 48.1	48.									
Medium Trucks: 43.3 41.8 35.4 33.9 42.3	42.									
Heavy Trucks: 44.6 43.2 34.1 35.4 43.7 Vehicle Noise: 51.2 49.5 46.2 41.7 50.2	43.5									
Centerline Distance to Noise Contour (in feet)										
70 dBA 65 dBA 60 dBA	55 dBA									
Ldn: 1 2 5	11									
CNEL: 1 2 5	11									

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MOD	EL							
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792										
SITE S	SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)									
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)						
Veh	Percentage: our Volume: nicle Speed:	400 vehicle 10% 40 vehicle 40 mph		V		avy Tru	rucks (2 A		15						
Near/Far Lan	ie Distance:	36 feet			Veh	icleTyp	e i	Day	Evening	Night	Daily				
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1	rucks: 8	77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%				
Centerline Dis	t. to Barrier:	47.0 feet		N	oise S	ource E	levations	(in fe	eet)						
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade: Left View: Right View:		47.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees		L	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521										
FHWA Noise Mode	l Calculation	ıs													
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten				
Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99	-15.42 -32.66 -36.61		0.77 0.80 0.80		-1.20 -1.20 -1.20		4.63 0.000 4.87 0.000 5.46 0.000		00	0.000				
						-1.20		0.40	0.0	00	0.000				
VehicleType							Night		I dn	_	NFI				
Venicie i ype Autos:	Leq Peak Hot		48.8	eq Eve	ening 47.0		1Vignt 40.9		49.6		NEL 50.2				
Medium Trucks:	44		48.8 43.2				35.2		43.7		43.9				
Heavy Trucks:	46				35.5 36.8					45.3					
Vehicle Noise:	52		51.0		47.7		43.1		51.7		52.1				
Centerline Distance	e to Noise C	ontour (in feet	t)												
				70 dE	BA	65 dBA		60 dBA		55	ō dBA				
			Ldn: CNFI:			6		13 14			28 30				
		C	VEL:	3			O		14		30				

FI	IWA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	ION MOD	EL					
Scenario: Existing With Project Road Name: California Av. Road Segment: n/o Stowe Rd.				Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC I		NOISE MODEL INPUTS										
Highway Data			S	ite Cor	ditions	(Hard = 1	10, Soi	t = 15)				
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	2,800 vehicle 10% 280 vehicle					A rucks (2 Ax icks (3+ Ax	,	15 15 15				
Vehicle Speed:	40 mph		v	ehicle	Mix							
Near/Far Lane Distance:	36 feet				icleTyp	е Г	Dav	Evening	Night Daily			
Site Data							7.5%	12.9%	9.6% 97.42			
Barrier Height:	0.0 feet			М	edium 7	rucks: 8	4.8%	4.9%	10.3% 1.849			
Barrier Type (0-Wall, 1-Berm):	0.0			1	Heavy 7	rucks: 8	6.5%	2.7%	10.8% 0.74			
Centerline Dist. to Barrier:	47.0 feet		N	loise S	ource E	levations	(in fe	et)				
Centerline Dist. to Observer: Barrier Distance to Observer:	47.0 feet 0.0 feet		Ē		Auto	os: 0.00	00	/				
Observer Height (Above Pad):	5.0 feet				m Truck							
Pad Flevation:	0.0 feet			Heav	y Truck	s: 8.00	06 (Grade Adju	stment: 0.0			
Road Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance	e (in fe	eet)				
Road Grade: 0.0%				Autos: 43.704								
Left View:	-90.0 degre	es		Mediu	m Truck	s: 43.5	01					
Right View:	90.0 degre	es		Heav	y Truck	s: 43.5	21					
FHWA Noise Model Calculatio	ns											
VehicleType REMEL	Traffic Flow	Dista			Road	Fresne		Barrier Atte				
Autos: 66.5			0.77		-1.20		4.63	0.00				
Medium Trucks: 77.7:			0.80		-1.20		4.87	0.00				
Heavy Trucks: 82.9			0.80		-1.20	-	5.46	0.00	0.00			
Unmitigated Noise Levels (wit								1	01/5/			
VehicleType Leq Peak Ho		_	Leq Eve		Leq	Night		Ldn	CNEL			
						49.4 43.7	58.0 52.2		58 52			
	3.1 51.6			45.2 43.7 44.0 45.2					52			
,	Heavy Trucks: 54.4 53.0 Vehicle Noise: 61.1 59.4				56.1 51.6 60.1 6							
Centerline Distance to Noise (Contour (in feet	f)										
Distance to Holde (,	70 dl	BA	65	dBA	60) dBA	55 dBA			
		Ldn:	10			22	48		103			
	C	NEL:	11			24		51	110			

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PE	REDICTIO	N MOD	ĒL						
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792									
SITE		NOISE MODEL INPUTS												
Highway Data					Site Con	ditions (l	lard = 1	0, Sof	t = 15)					
	Traffic (Adt): Percentage: four Volume:	100 vehicles 10% 10 vehicles 40 mph				dium Truc avy Truck	ks (2 Ax	/	15 15 15					
Ve	hicle Speed:				* ' '									
Near/Far La	ne Distance:	36 feet	-	Vehicle Mix VehicleType Day Evening Night Daily										
Site Data					VCII			7.5%		_	7.42%			
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0				edium Tru Ieavy Tru		4.8% 6.5%			1.84% 0.74%			
Centerline Di		47.0 feet		- 1	Noise So	ource Ele	vations	in fee	et)					
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Flevation:		47.0 feet 0.0 feet 5.0 feet 0.0 feet			Autos: m Trucks: ry Trucks:	2.29	7	Grade Adjust	tment: 0	0.0				
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)									
	Road Grade:	0.0%				Autos:	43.70	14						
	Left View:	-90.0 degree	es		Mediui	n Trucks:	43.50	11						
	Right View:	90.0 degree	es		Heav	y Trucks:	43.52	1						
FHWA Noise Mod	el Calculation	s												
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	В	arrier Atten	Berm .	Atten			
Autos:	66.51	-21.44		0.7	7	-1.20	-4	.63	0.000		0.000			
Medium Trucks:	77.72	-38.68		0.8	0	-1.20	-4.87		0.000		0.000			
Heavy Trucks:	82.99	-42.63		0.8	0	-1.20	-5.46		0.000		0.000			
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atten	uation)									
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq N	ight	L	Ldn	CNE	L			
Autos:	44				41.0		34.9		43.5	44.				
Medium Trucks:		8.6 37.1			30.8	29.2			37.7	37.				
Heavy Trucks:		0.0 38.5			29.5		30.8		39.1		39.2			
Vehicle Noise:	46		44.9		41.6		37.1		45.6		46.1			
Centerline Distan	ce to Noise Co	ontour (in feet))	70 (-(D.4	05.4	24		-104	CC -1C				
			L			65 di	34	60	dBA	55 dE	Ю			
			Ldn: VFI :	1		2			5	11 12				
		CI	VEL:	1		3			6	12				

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MO	DEL			
Road Nan	io: Existing W ne: California A nt: n/o Simpso	۸v.				.,	Name: umber:		o Diamant	В	
	SPECIFIC IN	IPUT DATA				N	IOISE I	MODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	8					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2)	4xles):	15		
Peak H	lour Volume:	10 vehicle:	3		He	avy Trud	cks (3+)	4xles):	15		
Ve	hicle Speed:	25 mph		ν	ehicle i	Mix					
Near/Far La	ne Distance:	36 feet		Ė		icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	47.0 feet			laina C	ource El	lovetion	o (in f	0041		
Centerline Dist.	to Observer:	47.0 feet		/4	orse se	Auto:		000	cei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height	(Above Pad):	5.0 feet				y Truck		006	Grade Ad	iuetman	- 0.0
P	ad Elevation:	0.0 feet				•				usunom	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Auto	s: 43.	704			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43.	501			
	Right View:	90.0 degree	es		Heav	y Truck	s: 43.	521			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	58.73	-19.40		0.77		-1.20		-4.63	0.0	000	0.000
Medium Trucks:	70.80	-36.64		0.80		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	77.97	-40.59		0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ıation)						
VehicleType	Leq Peak Hot	ır Leq Day	Le	eq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	38	1.9	37.0		35.2		29.2	2	37.8	3	38.4
Medium Trucks:	33	8.8	32.3		25.9		24.3	3	32.8	3	33.0
Heavy Trucks:	37	.0	35.6		26.5		27.8	3	36.1	l	36.3
Vehicle Noise:	41	.8	40.1		36.2		32.3	3	40.8	3	41.2
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dl	BA		dBA	6	60 dBA	55	dBA
			Ldn:	1			1		2		5
		CI	VEL:	1			1		3		6

	FH\	WA-RD-77-10	8 HIGI	WAY N	OISE P	REDICT	ION MC	DDEL			
	o: Existing W e: Warren Ro nt: s/o Esplan	l.					! Name: lumber:		o Diamante	е	
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data				S	Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	. ,		es					Autos:	15		
	Percentage:	10%				edium Ti			15		
	our Volume:	1,390 vehicle	es		He	eavy Tru	cks (3+	Axles):	15		
	nicle Speed:	55 mph		V	/ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	Э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			M	edium 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	t. to Barrier:	70.0 feet		^	loise S	ource E	levation	ns (in fe	eet)		
Centerline Dist. t	o Observer:	70.0 feet		<u> </u>	.0.00	Auto		.000	,01)		
Barrier Distance t	o Observer:	0.0 feet			Madiu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustment.	0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
F	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre				m Truck		.065			
	Right View:	90.0 degre	ees		Hear	vy Truck	s: 56	.081			
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78		-	-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40			-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-22.59	9	-0.85	,	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise				er atteni	uation)						
	Leq Peak Ho			Leq Ev			Night		Ldn		VEL
Autos:		3.3	66.4		64.7		58.	-	67.2		67.8
Medium Trucks:	-	.7	60.2		53.9		52.	-	60.8		61.
Heavy Trucks: Vehicle Noise:	-	1.8	60.3		51.3 65.2		52. 60.	-	60.9		61.
					05.2		60.	3	68.8	,	69.
	e to Noise C	ontour (in fee	et)						0.154		
Centerline Distanc											
Centerline Distanc			I dn:	70 d			dBA 27	6	0 dBA 273		dBA 88

Barrier Height: 0.0 feet		FHW	/A-RD-77-108 H	IIGHWA'	y noise	PREDICT	ON MODE	L		
SITE SPECIFIC INPUT DATA	Scenar	io: Existing Wit	h Project			Project	Name: Ra	ncho Diamante	:	
SITE SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15)	Road Nam	e: California A	v.			Job N	umber: 979	92		
Average Daily Traffic (Adt): Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Peak Hour Volume: 10 vehicles Vehicle Speed: 25 mph Vehicle Type Day Evening Night Daily Vehicle Mix Ve	Road Segme	nt: s/o Simpsor	n Rd.							
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3 Axles): 15		SPECIFIC IN	PUT DATA		0::				3	
Peak Hour Percentage: 10%					Site	conditions				
Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance: 25 mph Site Data		. ,	100 vehicles							
Vehicle Speed: Near/Far Lane Distance: 36 feet Vehicle Mix	Peak Hour	Percentage:	10%					/-		
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Daily	Peak H	lour Volume:	10 vehicles			Heavy True	cks (3+ Axle	es): 15		
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Daily	Ve	hicle Speed:	25 mph		Vehic	le Mix				
Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet Dist. to Barrier: 47.0 feet Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Centerline Dist. for Observ	Near/Far La	ne Distance:	36 feet				Da	y Evening	Night	Daily
Barrier Trype (C-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Autos: 0.000	Site Data					-	Autos: 77	.5% 12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):	Rai	rrier Heiaht	0.0 feet			Medium Ti	rucks: 84	.8% 4.9%	10.3%	1.84%
Centerline Dist. to Observer: A7.0 feet Autos: 0.000						Heavy Ti	rucks: 86	.5% 2.7%	10.8%	0.74%
Autos: 0.000	Centerline Di	st. to Barrier:	47.0 feet		Moise	Source E	ovations (in foot)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	Centerline Dist.	to Observer:	47.0 feet		140136					
Diserver Height (Above Pad): S.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0 feet 0.0 feet Road Grade: 0.0 feet	Barrier Distance	to Observer:	0.0 feet		140					
Pad Elevation: 0.0 feet	Observer Height (Above Pad):	5.0 feet						ietmant	0.0
Road Grade: Left View: 90.0 degrees Medium Trucks: 43.501 Heavy Trucks: 43.501	Pa	ad Elevation:	0.0 feet		- //	eavy IIuck	s. 0.000	Orade Adji	astiriciri.	0.0
Left View: Right View: 90.0 degrees Medium Trucks: 43.501	Roa	ad Elevation:	0.0 feet		Lane	Equivalent	Distance	(in feet)		
Right View: 90.0 degrees	1	Road Grade:	0.0%			Auto	s: 43.70	1		
		Left View:	-90.0 degrees	;	Me	dium Truck	s: 43.50°	l		
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 58.73 -19.40 0.77 -1.20 -4.63 0.000 0.00 Medium Trucks: 70.80 -36.64 0.80 -1.20 -4.87 0.000 0.00 Heavy Trucks: 77.97 -40.59 0.80 -1.20 -5.46 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evering Leq Night Ldn CNEL Autos: 38.9 37.0 35.2 29.2 37.8 38. Medium Trucks: 33.8 32.3 25.9 24.3 32.8 33. Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.1		Right View:	90.0 degrees	3	Н	eavy Truck	s: 43.52°	l		
Autos: 58.73	FHWA Noise Mode	el Calculations	3		-					
Medium Trucks: 70.80 -36.64 0.80 -1.20 -4.87 0.000 0.00	VehicleType	REMEL	Traffic Flow	Distanc	e Fii	nite Road	Fresnel	Barrier Atte	en Ber	m Atten
Heavy Trucks: 77.97 -40.59 0.80 -1.20 -5.46 0.000 0.000 Unmitigated Noise: Levels (without Trop and barrier attenuation) VehicleType Leq Peak Howr Leq Day Leq Evening Leq Night Ldn CNEL Autos: 38.9 37.0 35.2 29.2 37.8 33.8 Medium Trucks: 33.8 32.3 25.9 24.3 32.8 33.8 Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.	Autos:	58.73	-19.40	().77	-1.20	-4.	63 0.0	00	0.000
Unmittigated Noise Levels (without Topo and barrier attenuation)	Medium Trucks:	70.80	-36.64			-1.20	-4.	87 0.0	00	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 38.9 37.0 35.2 29.2 37.8 38. Medium Trucks: 33.8 32.3 25.9 24.3 32.8 33. Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.	Heavy Trucks:	77.97	-40.59	(0.80	-1.20	-5.	46 0.0	00	0.000
Autos: 38.9 37.0 35.2 29.2 37.8 38. Medium Trucks: 33.8 32.3 25.9 24.3 32.8 33. Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.	Unmitigated Noise	e Levels (with	out Topo and b	arrier at	tenuatio	n)				
Medium Trucks: 33.8 32.3 25.9 24.3 32.8 33. Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.	VehicleType	Leq Peak Hou	r Leq Day	Lec	Evenin	g Leq	Night	Ldn	CI	VEL
Heavy Trucks: 37.0 35.6 26.5 27.8 36.1 36.	Autos:	38.	9 3	7.0	3	5.2	29.2	37.8		38.4
	Medium Trucks:	33.	8 3	2.3	2	5.9	24.3	32.8		33.0
Vehicle Noise: 41.8 40.1 36.2 32.3 40.8 41	Heavy Trucks:	37.	0 3	5.6	2	6.5	27.8	36.1		36.3
70,000, 10,000, 11,000, 10,000,	Vehicle Noise:	41.	8 4	0.1	3	6.2	32.3	40.8		41.2
Centerline Distance to Noise Contour (in feet)	Centerline Distant	ce to Noise Co	ntour (in feet)							

Monday, January 25, 2016

	HWA-RD-77-1	08 HIGH\	WAY N	OISE P	REDICT	ION MODE	EL		
Scenario: Existing Road Name: Warren Road Segment: n/o Tres	Rd.					Name: Ra lumber: 97	incho Diama 92	ante	
SITE SPECIFIC	INPUT DATA	١					DEL INPU		
Highway Data			S	ite Cor	ditions	(Hard = 10	0, Soft = 15)	
Average Daily Traffic (Adt Peak Hour Percentage Peak Hour Volume Vehicle Speet	2: 10% 2: 1,390 vehic			He	avy Tru	Au ucks (2 Axl cks (3+ Axl	/		
Near/Far Lane Distance			V	ehicle			[5	A.C	-tri D-it-
Site Data				ven	icleType		ay Evenin 1.5% 12.9	_	ght Daily 9.6% 97.42%
Barrier Heigh Barrier Type (0-Wall, 1-Berm					edium T Heavy T	rucks: 84	i.8% 4.9 i.5% 2.7	% 1	0.3% 1.84% 0.8% 0.74%
Centerline Dist. to Barrie			٨	loise S	ource E	levations (in feet)		
Centerline Dist. to Observe Barrier Distance to Observe Observer Height (Above Pad Pad Elevation			Heav	Auto m Truck yy Truck	s: 2.29 s: 8.00	7 6 Grade	Adjust	ment: 0.0	
Road Elevation			L	ane Eq		t Distance	. ,		
Road Grade Left Viev Right Viev	/: -90.0 deg				Auto m Truck y Truck	s: 56.06	5		
FHWA Noise Model Calculat	ions								
VehicleType REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier .	Atten	Berm Atten
Autos: 71			-0.87		-1.20			0.000	0.000
Medium Trucks: 82		-	-0.85		-1.20			0.000	0.000
Heavy Trucks: 86			-0.85		-1.20	-5	.28	0.000	0.000
Unmitigated Noise Levels (v									01/5/
VehicleType Leq Peak	Hour Leq D 68.3	66.4	Leq Ev	ening 64.7		Night 58.6	Ldn	7.2	CNEL
Autos: Medium Trucks:	68.3	60.2		53.9		58.6 52.3	-	0.8	67.8 61.0
Heavy Trucks:	60.3		51.3		52.6		0.9	61.0	
Vehicle Noise:	61.8 69.9	68.1		65.2		60.3		8.9	69.3
Centerline Distance to Noise	Contour (in fe	et)							
	, ,	- /	70 d	BA	65	dBA	60 dBA		55 dBA
Ldn:				59 127		273		588	
	CNEL:								633

	FH\	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: Existing Wi ne: Warren Rd nt: n/o Devons	. ,				.,	Name: umber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA			04- 0				L INPUT	S	
Highway Data					Site Cor	iaitions	(Hara =				
Average Daily	. ,		S					Autos:	15		
	Percentage:	10%				edium Tri	,		15		
	lour Volume:	1,390 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	hicle Speed:	55 mph		Ī	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ı	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.42%
Par	rrier Heiaht:	0.0 feet			М	edium Ti	rucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Dis	st. to Barrier:	70.0 feet		F	Noise S	ource Fl	evation	ne (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		F	110/30 0	Auto		.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		.297			
Observer Height (Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iuetman	t- 0.0
Pa	ad Elevation:	0.0 feet			i ica	y much	s. 0	.000	Orace Au	usancn	n. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distar	ice (in	feet)		
I	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mode	el Calculation	s		- 1							
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:	71.78	-1.39		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	82.40	-18.63		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-22.59		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	68	.3	66.4		64.7		58.	6	67.2	2	67.8
Medium Trucks:	61	.7	60.2		53.9		52.	3	60.8	3	61.0
Heavy Trucks:	61	.8	60.3		51.3		52.	6	60.9	9	61.0
Vehicle Noise:	69	.9	68.1		65.2		60.	3	68.9)	69.3
Centerline Distant	ce to Noise Co	ontour (in feet)					,		,	
			L		dBA		dBA	(60 dBA		5 dBA
			Ldn:	-	9		27		273		588
		CI	VEL:	6	3	1:	36		294		633

	FHW.	A-RD-77-108 H	IGHWAY	NOISE P	REDICT	TION MODEL		
Road Name	o: Existing With e: Warren Rd. t: s/o Florida A	,				t Name: Ran Number: 9792	cho Diamante	
	PECIFIC INF	PUT DATA				NOISE MOD	EL INPUTS	3
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage:	5,600 vehicles 10% 1,660 vehicles 55 mph		He	eavy Tru	Auto rucks (2 Axles icks (3+ Axles	s): 15	
Near/Far Lan	ne Distance:	84 feet		Vehicle		e Dav	. I Commission	Mintel Daile
Site Data						Autos: 77.5	% 12.9%	Night Daily 9.6% 97.42%
	rier Height:	0.0 feet			ledium 1 Heavy 1			10.3% 1.84% 10.8% 0.74%
Barrier Type (0-Wa	. ,	0.0			neavy i	TUCKS: 86.5	1% 2.7%	10.8% 0.74%
Centerline Dis Centerline Dist. t		70.0 feet 70.0 feet		Noise S	ource E	levations (in	feet)	
Barrier Distance to Observer Height (A Pa Roa	o Observer: Above Pad): d Elevation: d Elevation:	0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hea		ks: 2.297 ks: 8.006 at Distance (i		ustment: 0.0
	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			Auto m Truck vy Truck	ks: 56.065		
FHWA Noise Mode								
VehicleType		Traffic Flow	Distance		Road	Fresnel	Barrier Atte	
Autos:	71.78	-0.62	-0.		-1.20	-4.7		
Medium Trucks: Heavy Trucks:	82.40 86.40	-17.86 -21.82	-0. -0.		-1.20 -1.20	-4.8 -5.2		
Unmitigated Noise	Levels (witho	ut Topo and ba	arrier atte	nuation)				
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leg	Night	Ldn	CNEL
Autos:	69.1	67	.2	65.4		59.4	68.0	68.6
Medium Trucks:	62.5	5 61	.0	54.6	i	53.1	61.5	61.8
Heavy Trucks:	62.5	5 61	.1	52.1		53.3	61.7	61.8
Vehicle Noise:	70.7	7 68	1.9	66.0		61.1	69.6	70.1
Centerline Distanc	e to Noise Cor	ntour (in feet)						
			70) dBA	65	dBA	60 dBA	55 dBA
		Lo	ln:	66	1	143	307	662
		CNE	L:	71	1	153	331	712

	FH	WA-RD-77-108	HIGHV	VAY NO	ISE P	REDICTIO	ON MO	DEL			
	: Existing W								Diamant	е	
	e: Warren Ro					Job Nu	mber:	9792			
Road Segmen	t: n/o Florida	Av.									
SITE S Highway Data	PECIFIC II	NPUT DATA			ito Cor	No nditions (L INPUT	S	
• •				31	te Cor	iaitions (i					
Average Daily 1	, ,		!S					Autos:	15		
Peak Hour I		10%				edium Truc		,	15		
	our Volume:	1,070 vehicle	!S		He	eavy Truck	(S (3+ A	ixies):	15		
	icle Speed:	55 mph		Ve	ehicle	Mix					
Near/Far Lan	e Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	ıtos:	77.5%	12.9%	9.6%	97.429
Barı	rier Height:	0.0 feet			М	ledium Tru	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0			1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	70.0 feet		N	oise S	ource Ele	vation	s (in fe	et)		
Centerline Dist. t	o Observer:	70.0 feet				Autos		000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks	2.5	97			
Observer Height (A	Above Pad):	5.0 feet			Heav	vy Trucks:	8.0	006	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		Lá	ane Eq	uivalent			eet)		
R	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degre				m Trucks:					
	Right View:	90.0 degre	es		Heav	vy Trucks:	56.	081			
FHWA Noise Mode	l Calculation	18									
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn		Barrier Att		m Atten
Autos:	71.78			-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40			-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			-0.85		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise										_	
	Leq Peak Ho			Leq Eve		Leq N			Ldn		NEL
Autos:	-	7.2	65.3		63.5		57.5		66.1		66
Medium Trucks:	-	0.6	59.1		52.7		51.2		59.6	-	59.
Heavy Trucks: Vehicle Noise:		0.6 3.8	59.2 67.0		50.2 64.0		51.4 59.2		59.8 67.7		59. 68.
. 0 0.0 0/00.	0.				00		55.2	•	01.1		50.
Contorlino Distanc	o to Noiso C	ontour (in foo									
Centerline Distanc	e to Noise C	ontour (in fee	1)	70 dE	BA .	65 d	BA	6	0 dBA	55	dBA
Centerline Distanc	e to Noise C	ontour (in fee	Ldn:	70 dE 49	3A	65 d		6	0 dBA 229		dBA 194

Monday, January 25, 2016

	FH	WA-RD-77-1	08 HIGI	HWAY N	OISE P	REDICTION	ON MO	DDEL			
	io: Existing W								no Diamant	te	
	e: Warren Ro					Job Nu	mber:	9792			
Road Segme	nt: n/o Whittie	r Av.									
	SPECIFIC II	NPUT DATA	١		a:- a				L INPUT	S	
Highway Data					Site Con	ditions (Hard				
Average Daily	Traffic (Adt):	15,000 vehic	les					Autos:			
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2	Axles).	15		
Peak H	lour Volume:	1,500 vehic	les		He	avy Truck	ks (3+	Axles).	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	Miv					
Near/Far La	ne Distance:	84 feet		H		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	97.42%
	rrier Heiaht:	0.0 feet			Me	edium Tru		84.8%			
Barrier Type (0-W		0.0 reet				Heavy Tru		86.5%			
Centerline Di	. ,	70.0 feet		L							• • • • • • • • • • • • • • • • • • • •
Centerline Dist.		70.0 feet		1	Voise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		0.000			
Observer Height		5.0 feet			Mediui	m Trucks:	: 2	2.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	: 8	3.006	Grade Ac	ljustmen	t: 0.0
	ad Elevation:	0.0 feet		-	ane Fo	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0 1661		F		Autos		5.223	,		
	Left View:	-90.0 deg	2000		Mediu	m Trucks:		6.065			
	Right View:	90.0 deg				y Trucks:		3.081			
	rugin view.	30.0 deg	ccs		11001	y Trucks.	. 50				
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow		stance	Finite		Fres		Barrier At		rm Atten
Autos:	71.78		-	-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	82.40			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-22.2	6	-0.8	5	-1.20		-5.28	0.	000	0.000
Unmitigated Nois	e Levels (with	nout Topo an	d barri	ier atten	uation)						
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq E	/ening	Leq N	light		Ldn	C	NEL
Autos:	68	3.7	66.8		65.0		58	.9	67.	6	68.2
Medium Trucks:	62	2.1	60.5		54.2		52	.6	61.	1	61.3
Heavy Trucks:	62	2.1	60.7		51.6		52	.9	61.	2	61.4
Vehicle Noise:	70	0.2	68.5		65.5	,	60	.6	69.	2	69.7
Centerline Distan	ce to Noise C	ontour (in fe	et)								
				70 c	iBA	65 d	BA		60 dBA	55	dBA
			Ldn:	6:	2	13	3		287		619
			CNEL:	6	7	14	3		309		666

	FHV	/A-RD-77-108	HIGHV	NAY N	IOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Existing Witne: Warren Rd. nt: s/o Whittier	,				.,	Name: umber:		o Diamant	е	
SITE Highway Data	SPECIFIC IN	PUT DATA			Sito Cor	N nditions			L INPUT	S	
• •					Site Coi	iuitions	_				
	Traffic (Adt): 1		S					Autos:	15		
	Percentage:	10%				edium Tru			15		
		1,480 vehicle	S		He	eavy Truc	KS (3+.	4xies):	15		
	hicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6	% 97.42%
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8	% 0.74%
Centerline Di	st. to Barrier:	70.0 feet		-	Noise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet		F		Autos		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height ((Above Pad):	5.0 feet			Hear	vy Trucks	: 8	006	Grade Ad	iustme	nt: 0.0
Pa	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degre				m Trucks		.065			
	Right View:	90.0 degre	es		Hear	vy Trucks	: 56	.081			
FHWA Noise Mod	el Calculation:	3									
VehicleType	REMEL	Traffic Flow	Dista	ance		Road	Fresi		Barrier Att		erm Atten
Autos:	71.78	-1.12		-0.87		-1.20		-4.72		000	0.000
Medium Trucks:		-18.36		-0.85	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-22.31		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leg E	vening	Leq I	Vight		Ldn	_	CNEL
Autos:	68.	6	66.7		64.9		58.	9	67.5	5	68.1
Medium Trucks:	62.	-	60.5		54.1		52.	-	61.0	-	61.3
Heavy Trucks:	62.		60.6		51.6		52.	_	61.2		61.3
Vehicle Noise:	70.	2	68.4		65.5		60.	ŝ	69.1	1	69.6
Centerline Distant	ce to Noise Co	ntour (in feet)								
			L	70 c		65 0		6	0 dBA	5	55 dBA
			Ldn:	6		13	_		285		613
		Ci	VEL:	6	6	14	2		306		660

					0.02		ION MOD				
	o: Existing Wi								Diamante		
	e: Warren Rd					Job N	lumber: 9	792			
Road Segmen	it: s/o Stetson	AV. (S.)									
	SPECIFIC IN	IPUT DATA							INPUTS		
Highway Data				S	ite Con	ditions	(Hard = 1				
Average Daily	. ,		es					utos:	15		
Peak Hour		10%					ucks (2 A		15		
	our Volume:	1,110 vehicle	es		He	avy Tru	cks (3+ A	kles):	15		
	nicle Speed:	45 mph		V	/ehicle l	Wix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleType) L	Day	Evening	Night	Daily
Site Data						,	Autos: 7	7.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			Me	edium T	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			F	leavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		٨	loise So	ource E	levations	(in fe	et)		
Centerline Dist. t		70.0 feet				Auto	s: 0.0	00			
Barrier Distance t		0.0 feet			Mediu	n Truck	s: 2.2	97			
Observer Height (5.0 feet			Heav	y Truck	s: 8.0	06	Grade Adju	stment	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	.ane Eq		t Distanc		eet)		
F	Road Grade:	0.0%			1 4 15 · ·	Auto					
	Left View:	-90.0 degre				n Truck					
	Right View:	90.0 degre	ees		Heav	y Truck	s: 56.0	81			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresne		Barrier Atte		m Atten
Autos:	68.46	-1.50		-0.87		-1.20		4.72	0.00		0.00
Medium Trucks:	79.45	-18.74		-0.85		-1.20		4.88	0.00		0.000
Heavy Trucks:	84.25	-22.69	9	-0.85		-1.20	-	5.28	0.00	00	0.00
Unmitigated Noise			_								
	Leq Peak Hou		,	Leq Ev		Leq	Night		Ldn	C	NEL
Autos:	64		63.0		61.2		55.2		63.8		64.
Medium Trucks:	58		57.2		50.8		49.2		57.7		57.
Heavy Trucks:	59		58.1		49.1		50.3		58.7		58.
Vehicle Noise:	66	i.7	65.0		61.8		57.2		65.7		66.
Centerline Distanc	e to Noise Co	ontour (in fee	t)								
			L	70 d			dBA		0 dBA		dBA
			Ldn:	36	3	7	78		168	3	62
			NFI:	39			34		180		189

	FH\	WA-RD-77-108	HIGH	IWAY N	IOISE P	REDICTI	ом мо	DEL			
Scenari	o: Existing W	ith Project				Project	Name:	Ranch	o Diamant	е	
	e: Warren Rd	-				Job No	ımber:	9792			
Road Segmer	nt: s/o Stetson	Av. (N.)									
SITE :	SPECIFIC IN	IPUT DATA			Sito Cor	N ditions			L INPUT	S	
					Site Cor	iditions					
Average Daily	. ,		S					Autos:	15		
	Percentage:	10%				dium Tru		,			
	our Volume:	1,090 vehicle	S		He	avy Truc	ks (3+ /	Axles):	15		
	hicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far Lai	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6%	97.429
Rar	rier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	st. to Barrier:	70.0 feet		1	Voise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet				Autos		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 2.	297			
Observer Height (Above Pad):	5.0 feet			Heat	vy Trucks	. 8	006	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet									
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degre				m Trucks		065			
	Right View:	90.0 degre	es		Hea	y Trucks	: 56.	081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		tance	_	Road	Fresi		Barrier Att		m Atten
Autos:	68.46	-1.58		-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	79.45	-18.82		-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-22.77		-0.85	-	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise								1			
,,	Leq Peak Hou			Leg Ev		Leq I			Ldn		NEL
Autos:	64		62.9		61.2		55.1		63.7		64
Medium Trucks:	58		57.1		50.7		49.2	-	57.6	-	57.
Heavy Trucks: Vehicle Noise:	59		58.0 64.9		49.0 61.8		50.2 57.2		58.6 65.6	-	58. 66.
Centerline Distance					20				50.1	-	- 50
Contenine Distant	e to Noise Ci	ontour (III lee	,	70 c	IBA	65 (IBA	6	60 dBA	55	dBA
			I dn:	36	0	7	7	•	166		358
			Luii.	31	D	/	/		100		556

Monday, January 25, 2016

	FH	WA-RD-77-1	08 HIGI	A YAWH	IOISE P	REDICTION	ON MO	DDEL			
Scenar	io: Existing W	/ith Project				Project I	Vame:	Ranch	no Diamant	e	
Road Nam	e: Warren Ro	d.				Job Nu	mber:	9792			
Road Segme	nt: s/o Mustar	ng Wy.									
	SPECIFIC II	NPUT DATA	١		04- 0	No ditions (L INPUT	S	
Highway Data					Site Con	iaitions (i	Hara :				
Average Daily	. ,		les					Autos			
	Percentage:	10%				dium Truc		,			
	lour Volume:	1,330 vehic	les		He	avy Truck	ks (3+	Axles).	15		
Ve	hicle Speed:	40 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	97.42%
Pa Pa	rrier Heiaht:	0.0 feet			Me	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0 feet			F	Heavy Tru	ıcks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	. ,	70.0 feet		_							
Centerline Dist.		70.0 feet			Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height		5.0 feet			Mediui	m Trucks:	: 2	.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	: 8	.006	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 feet		- 1	l ane Fo	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0 feet		i i	Larro Lq	Autos		5.223	1001)		
	Left View:	-90.0 deg			Mediu	m Trucks:		5.065			
	Right View:	90.0 deg				y Trucks:		5.081			
	ragni view.	90.0 deg	lees		ricav	y ITUCKS.		.001			
FHWA Noise Mod	el Calculation	ns									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier At		m Atten
Autos:	66.51			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	77.72	2 -17.4	14	-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-21.4	10	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Topo an	d barri	ier atten	uation)						
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq E	vening	Leq N	light		Ldn	C	NEL
Autos:	6	4.2	62.3		60.6		54	.5	63.	1	63.8
Medium Trucks:	5	8.2	56.7		50.4		48	.8	57.	3	57.5
Heavy Trucks:	5	9.5	58.1		49.1		50	.3	58.	7	58.8
Vehicle Noise:	6	6.3	64.5		61.2		56	.7	65.	2	65.7
Centerline Distan	ce to Noise C	ontour (in fe	et)								
				70 d	dBA	65 d	BA	-	60 dBA	55	dBA
			Ldn:	3	4	73	3		156	3	37
			CNEL:	3	6	78	3		167	3	861

	FHW	/A-RD-77-108	HIGHV	1 YAW	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Existing Wit ne: Warren Rd. nt: s/o Simpsor	,					Name: umber:		o Diamante	е	
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions ((Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	9,200 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	920 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		H	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		H		icleType		Dav	Evenina	Niaht	Dailv
Site Data					¥ C I		utos:	77.5%		9.69	
		0.0 feet		=	М	edium Tr		84.8%		10.39	
Barrier Type (0-W	rrier Height:	0.0 reet				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di		70.0 feet		L							
Centerline Dist.		70.0 feet		- 1	Noise S	ource Ele		٠,	eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height		5.0 feet				m Trucks	-	297			
	ad Elevation:	0.0 feet			Hear	y Trucks	: 8	.006	Grade Ad	iustmer	t: 0.0
	ad Elevation:	0.0 feet		ı	Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	.065			
	Right View:	90.0 degree	es		Hear	y Trucks	: 56	.081			
FHWA Noise Mod	el Calculations	3		-							
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-1.80		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	77.72	-19.04		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-23.00		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq I	Vight		Ldn	(CNEL
Autos:	62.	6	60.7		59.0		52.	9	61.5	5	62.2
Medium Trucks:	56.	-	55.1		48.8		47.	_	55.7		55.9
Heavy Trucks:	57.		56.5		47.5		48.		57.1		57.2
Vehicle Noise:	64.	7	62.9		59.6		55.	1	63.6	5	64.1
Centerline Distant	ce to Noise Co	ntour (in feet)	70	dBA	65 (JD A	1 4	60 dBA	-	5 dBA
			l dn:		ав <i>а</i> 16	5		1 (122		263
			VFI:	_	8	6	-		131		263 282
		Ci				0			.51		

	FHW	A-RD-77-108 HIGH	HWAY	NOISE PR	EDICTIO	N MOE	EL		
Road Name	o: Existing With e: Sanderson A t: n/o Stetson A	v. ,			Project N Job Nur		tancho Diam 792	ante	
SITE S	PECIFIC INP	UT DATA					ODEL INP		
Highway Data				Site Con	ditions (F	lard =	10, Soft = 15)	
Average Daily	Fraffic (Adt): 26	,700 vehicles				A	utos: 15		
Peak Hour	Percentage:	10%		Med	dium Truc	ks (2 A	xles): 15		
Peak H	our Volume: 2	,670 vehicles		Hea	avy Truck	s (3+ A	xles): 15		
Vel	nicle Speed:	45 mph	ŀ	Vehicle I	/lix				
Near/Far Lar	e Distance:	50 feet	ŀ		cleType		Day Evenii	na N	ight Daily
Site Data				10111			7.5% 12.9	~	9.6% 97.42%
Par	rier Heiaht:	0.0 feet		Me	dium Tru	cks: 8	34.8% 4.9		0.3% 1.84%
Barrier Type (0-W		0.0 feet		H	leavy Trui	cks: 8	86.5% 2.7	% 1	0.8% 0.74%
Centerline Dis		54.0 feet							
Centerline Dist. 1		54.0 feet	-	Noise So					
Barrier Distance t	o Observer:	0.0 feet			Autos:	0.0			
Observer Height (/	Above Pad):	5.0 feet			n Trucks:	2.2		A -15	
	d Elevation:	0.0 feet		Heav	y Trucks:	8.0	06 Grade	Aajust	ment: 0.0
Roa	d Elevation:	0.0 feet		Lane Equ	ıivalent E	Distanc	e (in feet)		
F	Road Grade:	0.0%			Autos:	48.1	25		
	Left View:	-90.0 degrees		Mediun	n Trucks:	47.9	41		
	Right View:	90.0 degrees		Heav	y Trucks:	47.9	59		
FHWA Noise Mode	l Calculations								
VehicleType			stance	Finite		Fresne			Berm Atten
Autos:	68.46	2.31	0.1	-	-1.20		4.67	0.000	0.00
Medium Trucks:	79.45	-14.92	0.1		-1.20		4.87	0.000	0.00
Heavy Trucks:	84.25	-18.88	0.1		-1.20	-	5.39	0.000	0.00
Unmitigated Noise									01/5/
	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	•	Ldn		CNEL
Autos:	69.7	67.8		66.1		60.0		68.6	69.2
Medium Trucks:	63.5 64.3	62.0 62.9		55.6 53.9		54.1 55.1		62.5 63.5	62.i
Heavy Trucks: Vehicle Noise:	71.6	69.8		66.7		62.0		70.5	71.
		****		00.7		6∠.0		70.5	/1.0
Centerline Distanc	e to Noise Con	tour (in feet)	70	dBA	65 dE	84	60 dBA		55 dBA
		Ldn:		59	126		272		586
		CNEL:		63	135		292		629
				-	.00				

	FHV	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MOI	DEL			
Scenario: Road Name: Road Segment:		Av.					t Name: F lumber: 9		o Diamante	•	
	PECIFIC IN	IPUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	ft = 15)		
Vehic	ercentage: ur Volume: cle Speed:	10% 2,380 vehicle 30 mph		V		avy Tru	ucks (2 A	/	15 15 15		
Near/Far Lane	Distance:	50 feet			Veh	icleTyp	9	Day	Evening	Night	Daily
Site Data Barrier Barrier Type (0-Wall	er Height: I, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1	rucks:	77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dist.		54.0 feet		Λ	loise S	ource E	levations	(in fe	et)		
Road Ro	Observer:	54.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre 90.0 degre		L	Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	s: 2.2 s: 8.0 t Distance s: 48.1 s: 47.9	97 106 e (in t 125 141	Grade Adju	ustment	: 0.0
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el .	Barrier Atte	en Ber	m Atten
Autos:	61.75	3.58		0.15		-1.20		4.67	0.0		0.000
Medium Trucks: Heavy Trucks:	73.48 79.92	-13.66 -17.62		0.17		-1.20 -1.20		-4.87 -5.39	0.0		0.000
						-1.20		0.39	0.0	00	0.000
VehicleType Le	eq Peak Hou			Leg Ev		Len	Night		l dn	C	NEL
Autos:	64		62.4	Log Li	60.6	209	54.6		63.2		63.8
Medium Trucks:	58		57.3		50.9		49.4		57.8		58.1
Heavy Trucks:	61	.3	59.8		50.8		52.1		60.4		60.5
Vehicle Noise:	66	i.8	65.1		61.4		57.3		65.8		66.2
Centerline Distance	to Noise Co	ontour (in fee	t)								
				70 di			dBA	6	0 dBA		dBA
			Ldn:	28			61		131		183
		С	NEL:	30			65		140	3	01

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGHW <i>A</i>	AY NO	DISE PI	REDICT	ION MO	DDEL			
Road Nam	io: Existing W ne: Florida Av nt: w/o Winch						Name: lumber:		no Diamant	te	
	SPECIFIC II	NPUT DATA							EL INPUT	S	
Highway Data				S	ite Con	ditions	(Hard:	= 10, S	oft = 15)		
. ,	. ,	23,500 vehicles	•					Autos			
	Percentage:	10%				dium Tr		,			
	lour Volume:	2,350 vehicles			He	avy Tru	cks (3+	Axles)	: 15		
	hicle Speed:	50 mph		V	ehicle i	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType	,	Day	Evening	Nig	ht Daily
Site Data						,	Autos:	77.5%	6 12.9%	9.	.6% 97.42%
Ba	rrier Height:	0.0 feet			M	edium T	rucks:	84.89	6 4.9%	10.	.3% 1.84%
Barrier Type (0-W		0.0			- 1	Heavy T	rucks:	86.59	6 2.7%	10.	.8% 0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	oise So	ource E	levatio	ns (in i	feet)		
Centerline Dist.	to Observer:	76.0 feet		-		Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (,	5.0 feet			Heav	y Truck	s: 8	.006	Grade Ac	ljustn	nent: 0.0
	ad Elevation:	0.0 feet		-						_	
	ad Elevation:	0.0 feet		Li	ane Eq	uivalen			feet)		
	Road Grade:	0.0%				Auto		.422			
	Left View:	-90.0 degree				m Truck		.286			
	Right View:	90.0 degree	!S		Heav	y Truck	s: 65	.300			
FHWA Noise Mod	el Calculation										
VehicleType	REMEL	Traffic Flow	Distan		Finite	Road	Fres		Barrier At		Berm Atten
Autos:	70.20			-1.85		-1.20		-4.73		000	0.000
Medium Trucks:	81.00			-1.84		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-19.89		-1.84		-1.20		-5.25	0.	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Ho			q Eve		Leq	Night		Ldn		CNEL
Autos:	-		66.6		64.8		58		67.		68.0
Medium Trucks:	-		30.5		54.2		52	-	61.		61.3
Heavy Trucks: Vehicle Noise:	-		61.0 68.4		52.0 65.4		53. 60		61. 69.		61.7 69.6
					05.4		60	.O	ъ9.	1	69.6
Centerline Distan	ce to Noise C	ontour (in feet)	_	70 dF	٥,٨	65	dBA	1	60 dBA	1	55 dBA
			dn:	66			43		308		664
		-	IFI:	71			43 54		331		713
		Oi.		, ,			٠.				

	FHV	VA-RD-77-108	HIGH	YAW	NOISE PI	REDICT	ION MC	DEL			
Road Nam	io: Existing Wit ne: Florida Av. nt: e/o Warren	,					Name: lumber:		o Diamante	е	
SITE Highway Data	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	S	
					Site Con	iditions	(naru =				
	Traffic (Adt): 2		S					Autos:	15		
	Percentage:	10%				dium Tr			15		
		2,420 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
	hicle Speed:	50 mph		Ī	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		Ī	Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.42%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0			-	Heavy T	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di	st. to Barrier:	70.0 feet		f	Noise S	ource E	levation	ıs (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet		f		Auto	s: 0	.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustmer	t: 0.0
Pa	ad Elevation:	0.0 feet									
Roi	ad Elevation:	0.0 feet			Lane Eq				feet)		
	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 56	.081			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres		Barrier Att	en Be	rm Atten
Autos:	70.20	1.43		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	81.00	-15.81		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-19.76		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise			barrie	er atter	nuation)			_			
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	69.	6	67.7		65.9		59.	8	68.5	5	69.1
Medium Trucks:	63.		61.6		55.3		53.	7	62.2	-	62.4
Heavy Trucks:	63.		62.1		53.1		54.		62.7		62.8
Vehicle Noise:	71.		69.5		66.5		61.	7	70.2	2	70.7
Centerline Distant	ce to Noise Co	ntour (in feet)	70	dBA	65	dBA	-	60 dBA	- 5	5 dBA
			I dn:		'3		56		337		725
			VEL:		'8		68		362		779
		0,			-						

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MOD	EL			
	Existing W Stowe Rd. w/o Califor	,					t Name: F Number: 9		o Diamante	:	
	PECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data				S	Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
	Percentage: ur Volume:	2,700 vehicle 10% 270 vehicle					rucks (2 A rucks (3+ A		15 15 15		
	icle Speed:	40 mph		V	/ehicle	Mix					
Near/Far Lan	e Distance:	36 feet			Veh	icleTyp	e i	Day	Evening	Night	Daily
Site Data								77.5%		9.6%	97.42%
Barr	ier Height:	0.0 feet			М	edium 1	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	II, 1-Berm):	0.0				Heavy 1	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist	to Barrier:	47.0 feet			loise S	ource F	levations	(in f	oet)		
Road R	Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		L	Hea ane Eq Mediu	Auto m Truck ny Truck uivalen Auto m Truck ny Truck	(s: 2.2 (s: 8.0 ot Distance (s: 43.7 (s: 43.5	97 06 e (in 04 01	Grade Adji feet)	ustment	± 0.0
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		tance		Road	Fresn		Barrier Atte		m Atten
Autos:	66.51	-7.13		0.77		-1.20		4.63	0.0		0.000
Medium Trucks:	77.72	-24.36		0.80		-1.20		4.87	0.0		0.000
Heavy Trucks:	82.99			0.80		-1.20		5.46	0.0	00	0.000
Unmitigated Noise											
	.eq Peak Ho			Leq Ev		Leq	Night		Ldn	-	NEL
Autos:			57.1		55.3		49.2		57.9		58.5
Medium Trucks:			51.4		45.1		43.5		52.0		52.2
Heavy Trucks:			52.9		43.8		45.1		53.4		53.5
Vehicle Noise:	61	.0	59.2		56.0		51.4		60.0		60.4
Centerline Distance	to Noise C	ontour (in feet	t)								
			L	70 d			dBA	6	60 dBA		dBA
			Ldn:	10			22		47		101
		C	NEL:	11			23		50	1	108

	FHV	VA-RD-77-108 I	HIGHWAY	NOISE P	REDICTIO	N MODEL			
	o: Existing Wir e: Florida Av. at: e/o Myers S	•				ame: Ran nber: 979	icho Diamant 2	e	
	SPECIFIC IN	PUT DATA					DEL INPUT	S	
Highway Data				Site Co	nditions (F		Soft = 15)		
Average Daily	. ,					Auto			
Peak Hour i		10%			edium Truc	- (-/		
		2,160 vehicles		He	eavy Truck	s (3+ Axle	s): 15		
	nicle Speed:	35 mph		Vehicle	Mix				
Near/Far Lar	ne Distance:	84 feet		Vel	nicleType	Day	/ Evening	Night	Daily
Site Data					Au	tos: 77.	5% 12.9%	9.6%	97.429
Ran	rier Height:	0.0 feet		N	ledium Tru	cks: 84.	8% 4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0			Heavy Tru	cks: 86.	5% 2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	70.0 feet		Noise S	ource Elev	ations (ii	n feet)		
Centerline Dist. t	to Observer:	70.0 feet			Autos:	0.000	,		
Barrier Distance t	o Observer:	0.0 feet		Madii	ım Trucks:	2.297			
Observer Height (/	Above Pad):	5.0 feet			vy Trucks:	8.006	Grade Ad	liustment	- 0.0
Pa	d Elevation:	0.0 feet			•			juou non	. 0.0
Roa	d Elevation:	0.0 feet		Lane Ed	quivalent E	Distance (in feet)		
F	Road Grade:	0.0%			Autos:	56.223			
	Left View:	-90.0 degree	S		ım Trucks:	56.065			
	Right View:	90.0 degree	S	Hea	vy Trucks:	56.081			
FHWA Noise Mode	el Calculation:	s		1					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	ten Bei	rm Atten
Autos:	64.30	2.48	-0	.87	-1.20	-4.7	72 0.0	000	0.00
Medium Trucks:	75.75	-14.75	-0	.85	-1.20	-4.8	38 0.0	000	0.00
Heavy Trucks:	81.57	-18.71	-0	.85	-1.20	-5.2	28 0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	oarrier atte	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq Ni	ight	Ldn	С	NEL
Autos:	64.		2.8	61.1		55.0	63.6		64
Medium Trucks:	58.	-	7.4	51.1		49.5	58.0	-	58
Heavy Trucks:	60.		9.4	50.3	3	51.6	60.0	0	60
Vehicle Noise:	66	.9 6	5.2	61.8	3	57.4	65.9	9	66
Centerline Distanc	e to Noise Co	ntour (in feet)						1	
) dBA	65 dE	BA	60 dBA		dBA
			.dn:	38	81		174		375
		CN	EL:	40	86		186	4	101

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICTIO	N MODEL		
Road Nam	io: Existing Wi e: Grand Av. nt: e/o Patters	,				ame: Ranc nber: 9792	ho Diamante	
SITE	SPECIFIC IN	PUT DATA					EL INPUTS	
Highway Data				Site Con	nditions (F	lard = 10, S	oft = 15)	
Average Daily	Traffic (Adt):	100 vehicles				Autos	: 15	
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles)	: 15	
Peak H	our Volume:	10 vehicles	;	He	avy Truck	s (3+ Axles,	: 15	
Vei	hicle Speed:	40 mph		Vehicle	Mix			
Near/Far Lai	ne Distance:	84 feet			icleType	Day	Evening N	light Daily
Site Data						tos: 77.5°		9.6% 97.42%
Rar	rier Height:	0.0 feet		М	edium Tru	cks: 84.8°	% 4.9% 1	10.3% 1.84%
Barrier Type (0-W		0.0		1	Heavy Tru	cks: 86.5°	% 2.7% 1	10.8% 0.74%
Centerline Dis	st. to Barrier:	70.0 feet		Noise So	ource Elev	ations (in	feet)	
Centerline Dist.		70.0 feet			Autos:	0.000		
Barrier Distance		0.0 feet		Mediu	m Trucks:	2.297		
Observer Height (,	5.0 feet		Heav	vy Trucks:	8.006	Grade Adjus	tment: 0.0
	ad Elevation:	0.0 feet			-			
	ad Elevation:	0.0 feet		Lane Eq		Distance (in	feet)	
F	Road Grade:	0.0%			Autos:	56.223		
	Left View:	-90.0 degree			m Trucks:	56.065		
	Right View:	90.0 degree	:S	Heav	y Trucks:	56.081		
FHWA Noise Mode	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-21.44	-0.		-1.20	-4.72		
Medium Trucks:	77.72	-38.68	-0.		-1.20	-4.88		
Heavy Trucks:	82.99	-42.63	-0.		-1.20	-5.28	0.000	0.000
Unmitigated Noise								
	Leq Peak Hou			Evening	Leq Ni	•	Ldn	CNEL
Autos:	43		11.1	39.3		33.3	41.9	42.5
Medium Trucks:	37		35.5	29.1		27.6	36.0	36.3
Heavy Trucks: Vehicle Noise:	38 45		36.9 43.3	27.9 40.0		29.1 35.5	37.5 44.0	37.6 44.4
Centerline Distance				40.0		00.0	44.0	44.4
Contenine Distant	10 110/36 01	mour (m reer)		dBA	65 dE	BA	60 dBA	55 dBA
		L	dn:	1	3		6	13
		CN	IEL:	1	3		6	14

	FHW	/A-RD-77-108	HIGH	WAY N	IOISE P	REDICTI	ON MC	DEL				
Road Nan	rio: Existing Wit ne: Grand Av. nt: w/o Calvert	,					Name: umber:		o Diamante	е		
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data					Site Cor	nditions ((Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:	15			
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2	Axles):	15			
Peak F	lour Volume:	10 vehicles	3		He	eavy Truc	ks (3+.	Axles):	15			
Ve	ehicle Speed:	40 mph		F	Vehicle	Miv						_
Near/Far La	ne Distance:	84 feet		H		nicleType		Dav	Evenina	Niah	t Da	ilv
Site Data							utos:	77.5%	- 3	9.6		
Ba	rrier Heiaht:	0.0 feet			M	ledium Tr	ucks:	84.8%	4.9%	10.3	% 1.8	34%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8	% 0.7	74%
Centerline Di	ist. to Barrier:	70.0 feet		H	Naisa S	ource Ele	avation	e (in f	oof)			_
Centerline Dist.	to Observer:	70.0 feet		- F	110/30 0	Autos		000				_
Barrier Distance	to Observer:	0.0 feet			Modis	m Trucks		297				
Observer Height	(Above Pad):	5.0 feet				vy Trucks		006	Grade Ad	iuotmo	nt: 0.0	
P	ad Elevation:	0.0 feet			пеа	vy mucks	. 0.	000	Grade Au	usunc	т. О.О	
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	: 56	223				
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	065				
	Right View:	90.0 degree	es		Hea	vy Trucks	: 56	081				
FHWA Noise Mod	lel Calculations	;										_
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en E	Berm Att	len
Autos:	66.51	-21.44		-0.8	7	-1.20		-4.72	0.0	000	0.	.000
Medium Trucks:	77.72	-38.68		-0.8	5	-1.20		-4.88	0.0	000	0.	.000
Heavy Trucks:	82.99	-42.63		-0.8	5	-1.20		-5.28	0.0	000	0.	.000
Unmitigated Nois	e Levels (witho	out Topo and	barrie	r atten	uation)							_
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq I	Vight		Ldn		CNEL	
Autos:	43.	0	41.1		39.3		33.	3	41.9)	4	42.5
Medium Trucks:	37.	0	35.5		29.1		27.	6	36.0)		36.3
Heavy Trucks:	38.	3	36.9		27.9	1	29.	1	37.5	5		37.6
Vehicle Noise:	45.	0	43.3		40.0		35.	5	44.0)	4	44.4
Centerline Distan	ce to Noise Co	ntour (in feet)									
	-				dBA	65 0		(60 dBA		55 dBA	
			Ldn:	1		3			6		13	
		CI	VEL:	1	I	3	3		6		14	

	FHI	WA-RD-77-108	HIGI	WAY NO	DISE P	REDICT	ION M	ODEL			
Road Nan	rio: Existing W ne: Stetson Av nt: e/o SR-79	. (S.)					Name lumber		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	iditions	(Hard		oft = 15)		
Average Daily		100 vehicle	S					Autos:			
	Percentage:	10%				dium Tr					
	lour Volume:	10 vehicle	S		He	avy Tru	cks (3+	· Axles):	15		
	hicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	70.0 feet			laina C	ource E	lovotio	no (in f	0.041		
Centerline Dist.	to Observer:	70.0 feet		- 1	iorse s	Auto		0.000	eei)		
Barrier Distance	to Observer:	0.0 feet			M = -15.	Auto m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.006	Grade Ad	iuetman	t- 0.0
P	ad Elevation:	0.0 feet			пеа	лу ттиск	S. (5.006	Orace Au	Justinon	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 50	6.223			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 50	6.065			
	Right View:	90.0 degre	es		Hear	y Truck	s: 50	6.081			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fre		Barrier Att		rm Atten
Autos:		-22.41		-0.87		-1.20		-4.72		000	0.000
Medium Trucks:				-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois			barri								
VehicleType	Leq Peak Hou	, ,	/	Leg Ev	ening	Leq	Night		Ldn	(NEL
Autos:			43.8		42.1		36		44.6	-	45.2
Medium Trucks:			37.8		31.4		29		38.4		38.6
Heavy Trucks:			38.3		29.3		30		38.9		39.0
Vehicle Noise:	•	* *	45.7		42.6		37	'.8	46.4	1	46.9
Centerline Distan	ce to Noise C	ontour (in feet)	70.0		-	10.4			-	
				70 di	DΑ	05	dBA	- 1 (60 dBA	1 5	i dBA

		WA-RD-77-108									
Road Nan	rio: Existing W ne: Grand Av.	•				.,	t Name Iumber		o Diamant	e	
	nt: e/o Calvert			-							
Highway Data	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	S	
Average Daily	Troffic (Adt)	100 vehicle			One ou	iditions	(mara	Autos:			
,		100 veriicie	25		14	odium T	uaka (Autos. : Axles):			
	Percentage:	10% 10 vehicle						· Axles):			
			28		п	avy IIu	CKS (34	Axies).	15		
	ehicle Speed: ane Distance:	40 mph 84 feet			Vehicle	Mix					
Near/Far La	ine Distance:	84 feet			Veh	icleTyp	Э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Ва	rrier Height:	0.0 feet			M	ledium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-VI	Vall, 1-Berm):	0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	ist. to Barrier:	70.0 feet		-	Noise S	ource F	lovatio	ne (in f	oof)		
Centerline Dist.	to Observer:	70.0 feet		H	140/30 0	Auto		0.000	JUL 1		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck	-	3.006	Grade Ad	liustment	. 0.0
P	ad Elevation:	0.0 feet		L						juou non	. 0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 5	6.223			
	Left View:	-90.0 degre	ees		Mediu	m Truck	s: 5	6.065			
	Right View:	90.0 degre	ees		Hea	vy Truck	s: 5	6.081			
FHWA Noise Mod				'							
VehicleType	REMEL	Traffic Flow		stance	_	Road	Fre		Barrier At		m Atten
Autos:		-21.44		-0.8		-1.20		-4.72		000	0.00
Medium Trucks:				-0.8	-	-1.20		-4.88		000	0.00
Heavy Trucks:				-0.8	-	-1.20		-5.28	0.0	000	0.00
Unmitigated Nois			l barri	ier atter	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos:			41.1		39.3		33		41.	-	42.
Medium Trucks:		'.O	35.5		29.1		27		36.	-	36.
Heavy Trucks:		3.3	36.9		27.9		29		37.		37.
Vehicle Noise:	45	5.0	43.3		40.0		35	.5	44.	0	44.
Centerline Distan	ce to Noise C	ontour (in fee	t)	70	10.4		/D.4				10.4
				70	dBA	65	dBA	6	60 dBA	55	dBA

Monday, January 25, 2016

	FHWA	-RD-77-108 H	IIGHWAY	NOISE P	REDICTI	ON MODEL		
Scenario: E Road Name: S Road Segment: e		S.)				Name: Rand umber: 9792	cho Diamante	
SITE SPE	CIFIC INP	UT DATA					EL INPUTS	i
Highway Data				Site Cor	nditions	$(Hard = 10, \cdot)$	Soft = 15)	
Average Daily Traf Peak Hour Per Peak Hour Vehicle	centage:	100 vehicles 10% 10 vehicles 50 mph		He	eavy Truc	Auto icks (2 Axles ks (3+ Axles): 15	
Near/Far Lane D	istance:	84 feet		Vehicle		1 5	1	A.C. 1
Site Data				ver	icleType A	lutos: 77.5	% 12.9%	Night Daily 9.6% 97.42%
Barrier	Height:	0.0 feet		M	ledium Tr	ucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-Wall,	1-Berm):	0.0			Heavy Tr	ucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dist. to	Barrier:	70.0 feet		Noise S	ource Fl	evations (in	feet)	
	bserver:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hea		2.297 8: 8.006 Distance (ii		ustment: 0.0
L	d Grade: eft View: ht View:	0.0% -90.0 degrees 90.0 degrees			Autos m Trucks vy Trucks	56.065		
FHWA Noise Model C	alculations							
VehicleType F	REMEL T	raffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	70.20	-22.41		1.87	-1.20	-4.7		
Medium Trucks:	81.00	-39.65	-	.85	-1.20	-4.8		
Heavy Trucks:	85.38	-43.60	-0).85	-1.20	-5.2	3 0.00	0.000
Unmitigated Noise Le		t Topo and b						
.,	Peak Hour	Leq Day		Evening		Night	Ldn	CNEL
Autos:	45.7		3.8	42.1		36.0	44.6	45.2
Medium Trucks:	39.3		7.8	31.4		29.9	38.4	38.6
Heavy Trucks: Vehicle Noise:	39.7 47.4		3.3 5.7	29.3 42.6		30.5 37.8	38.9 46.4	39.0 46.9
Centerline Distance to				72.0		57.0	70.4	40.3
Centerline Distance to	Noise Con	tour (in feet)	7	0 dBA	65 (dBA	60 dBA	55 dBA
		Lo	dn:	2	4	1	9	19
		CNE	EL:	2	4	1	9	20

	FHV	VA-RD-77-108	HIGH	IWAY N	DISE PI	REDICTI	ON M	DDEL				
Road Nam	io: Existing Wit ne: Stetson Av. nt: w/o Californ	(S.)					Name: umber:		o Diamante	е		
SITE :	SPECIFIC IN	PUT DATA			4- 0	N			L INPUT	s		
• •				3	ne con	aitions	(naru					
Average Daily		100 vehicles	3					Autos:	15			
	Percentage:	10%				dium Tru			15			
	lour Volume:	10 vehicles	3		Heavy Trucks (3+ Axles): 15							
	hicle Speed:	50 mph		ν	Vehicle Mix							
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily	
Site Data						F	lutos:	77.5%	12.9%	9.6%	97.42%	
Bai	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-W	/all, 1-Berm):	0.0			F	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dis	st. to Barrier:	70.0 feet		A	laica Sa	ource El	ovatio	ne (in f	not)			
Centerline Dist.	to Observer:	70.0 feet			Uise St	Autos		0.000	(
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		.297				
Observer Height ((Above Pad):	5.0 feet				y Trucks		1.006	Grade Ad	iuetmant	. 0.0	
Pa	ad Elevation:	0.0 feet			11cus	y much	, c		Orado riaj	Juoumoni	. 0.0	
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)			
	Road Grade:	0.0%				Autos	s: 56	6.223				
	Left View:	-90.0 degree	es			m Trucks		6.065				
	Right View:	90.0 degree	es		Heav	y Trucks	s: 56	3.081				
FHWA Noise Mode	el Calculation:	S										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten	
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000	
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000	
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day		Leg Ev	ening	Leq	Night		Ldn	C	NEL	
Autos:	45.	7	43.8		42.1		36	.0	44.6	3	45.2	
Medium Trucks:	39.	3	37.8		31.4		29	.9	38.4	4	38.6	
Heavy Trucks:	39.	7 :	38.3		29.3		30	.5	38.9	9	39.0	
Vehicle Noise:	47.	4	45.7		42.6		37	.8	46.4	4	46.9	
Centerline Distant	ce to Noise Co	ntour (in feet,)					,				
			L	70 di	BA		dBA	6	60 dBA		dBA	
			Ldn:	2		4	4		9		19	

	FHW	A-RD-77-108	HIGI	I YAWH	NOISE P	REDICTION	ON MOD	DEL			
Scenario: Exis Road Name: Stet Road Segment: e/o	son Av.	(S.)					Vame: F mber: 9) Diamante	è	
SITE SPECI	FIC IN	PUT DATA							L INPUTS	3	
Highway Data					Site Cor	nditions (Hard =	10, So	ft = 15)		
Average Daily Traffic ((Adt):	100 vehicle	s				A	lutos:	15		
Peak Hour Percen	tage:	10%			Me	dium Tru	cks (2 A	xles):	15		
Peak Hour Vol	lume:	10 vehicle	s		He	eavy Truci	ks (3+ A	xles):	15		
Vehicle Sp	peed:	50 mph		-	Vehicle	Mix					
Near/Far Lane Dist	ance:	84 feet		+		icleType		Dav	Evening	Night	Daily
Site Data								77.5%	12.9%	9.6%	,
Barrier He	iaht.	0.0 feet			M	edium Tru	icks: 8	34.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-B		0.0				Heavy Tru	icks: 8	36.5%	2.7%	10.8%	0.749
Centerline Dist. to Ba	arrier:	70.0 feet			Noise S	ource Ele	vations	(in fe	et)		
Centerline Dist. to Obse	erver:	70.0 feet		t		Autos		•	01/		
Barrier Distance to Obse	erver:	0.0 feet			Modiu	m Trucks					
Observer Height (Above	Pad):	5.0 feet				vy Trucks.			Grade Adj	ustmen	t: 0.0
Pad Elev	ation:	0.0 feet				•					
Road Elev	ation:	0.0 feet		L	Lane Eq	uivalent			eet)		
Road G	rade:	0.0%				Autos.					
Left	View:	-90.0 degree	es		Mediu	m Trucks.	56.0	165			
Right	View:	90.0 degree	es		Hea	vy Trucks.	56.0	181			
FHWA Noise Model Calc	ulations										
VehicleType REN	1EL	Traffic Flow	Di	stance	Finite	Road	Fresn	el l	Barrier Atte	en Be	rm Atten
Autos:	70.20	-22.41		-0.8	7	-1.20		4.72	0.0	00	0.00
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		4.88	0.0	00	0.00
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		5.28	0.0	00	0.00
Unmitigated Noise Level	s (witho	ut Topo and	barri	ier atter	nuation)						
	ak Hour			Leq E	vening	Leq N	_		Ldn		NEL
Autos:	45.7		43.8		42.1		36.0		44.6		45.
Medium Trucks:	39.3	-	37.8		31.4		29.9		38.4		38.
Heavy Trucks:	39.7		38.3		29.3		30.5		38.9		39.
Vehicle Noise:	47.4	4	45.7		42.6		37.8		46.4		46.
Centerline Distance to N	oise Co	ntour (in feet)								
			L		dBA	65 d	BA	6	0 dBA	55	5 dBA
			Ldn:		2	4			9		19
		Ci	VEL:		2	4			9		20

	FH\	WA-RD-77-108	HIGH	I YAWI	NOISE P	REDICT	ION MC	DDEL			
Road Nan	rio: Existing Wine: Stetson Avent: e/o Californ	. (S.)					t Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	s	
Highway Data					Site Cor	iaitions	(Hara =				
Average Daily	. ,	100 vehicle	S					Autos:			
	Percentage:	10%					rucks (2	,			
	lour Volume:	10 vehicle	S		He	eavy Iru	cks (3+	Axles):	15		
	ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Ba	rrier Heiaht:	0.0 feet			M	ledium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
,, ,	ist, to Barrier:	70.0 feet		-	M-1 0			/! #	41		
Centerline Dist.	to Observer:	70.0 feet		-	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297	0		
	ad Elevation:	0.0 feet			Hea	vy Truck	:s: 8	.006	Grade Ad	justment	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ice (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223	-		
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.8	37	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	81.00	-39.65		-0.8	15	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-43.60		-0.8	15	-1.20		-5.28	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:			43.8		42.1		36.		44.6	-	45
Medium Trucks:	39	.3	37.8		31.4		29.	9	38.4	4	38
Heavy Trucks:	39	.7	38.3		29.3		30.	5	38.9	9	39
Vehicle Noise:	47	'.4	45.7		42.6		37.	8	46.4	4	46.
Centerline Distan	ce to Noise C	ontour (in feet)								
				70	dBA	65	dBA		60 dBA	55	dBA

Monday, January 25, 2016

	FHV	/A-RD-77-108	HIGH	MAY N	IOISE PI	REDICTI	ON M	ODEL			
Road Name	o: Existing Wit e: Stetson Av. nt: e/o Mustang	(S.)				Project Job No			o Diamant	е	
SITE S	SPECIFIC IN	PUT DATA			Sita Car	N nditions			L INPUT	S	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	600 vehicles 10% 60 vehicles 50 mph			Ме Не	edium Tru eavy Truc	icks (2	Autos: Axles).	15 15		
Near/Far Lar	ne Distance:	84 feet		H	Vehicle Veh	icleType		Day	Evening	Night	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		70.0 feet		T.	Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance of Observer Height (A	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks /y Trucks	: 2	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
	d Elevation:	0.0 feet		1	Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%		ħ		Autos	: 56	5.223			
	Left View: Right View:	-90.0 degree				m Trucks /y Trucks		6.065 6.081			
FHWA Noise Mode	el Calculations	3									
VehicleType	REMEL	Traffic Flow	Dist	tance		Road	Fres		Barrier At		m Atten
Autos:	70.20	-14.63		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	81.00	-31.87		-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-35.82		-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise						1 1	V E - de 4	-	Ldn		NEL
VehicleType Autos:	Leq Peak Hou 53.		51.6	Leq E	vening 49.8	Leq I	vignt 43	0	Lan 52.		VEL 53.0
Medium Trucks:	47.	-	45.6		39.2		37		46.		46.4
Heavy Trucks:	47.		46.1		37.0		38		46.		46.8
Vehicle Noise:	55.	2	53.5		50.4		45	.6	54.	2	54.6
Centerline Distanc	e to Noise Co	ntour (in feet))								
					dBA	65 (1BA		60 dBA	55	dBA
			Ldn:	6		1	-		29		62
		CI	VEL:	7	,	1-	4		31		66

	FH	WA-RD-77-108	HIGI	HWAY N	IOISE P	REDICT	ION MO	DDEL					
Road Na	ario: Existing W nme: Stetson Av nent: w/o Warre	/. (S.)				,,	Name: lumber:		o Diamant	е			
	SPECIFIC II	NPUT DATA							L INPUT	s			
Highway Data					Site Cor	nditions	(Hard :	= 10, Sc	oft = 15)				
Average Dail	ly Traffic (Adt):	1,300 vehicle	:S					Autos:					
Peak Hou	ır Percentage:	10%				edium Tr							
Peak	Hour Volume:	130 vehicle	S		He	eavy Trui	cks (3+	Axles):	15				
\	/ehicle Speed:	50 mph			Vehicle	Mix							
Near/Far L	ane Distance:	84 feet			Ver	icleType	,	Dav	Evening	Night	Dailv		
Site Data							Autos:	77.5%	-	9.6%	97.42%		
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%		
Centerline I	Dist. to Barrier:	70.0 feet			Noise Source Elevations (in feet)								
Centerline Dis	t. to Observer:	70.0 feet		H.	Autos: 0.000								
Barrier Distance	Barrier Distance to Observer: 0.0 feet						Medium Trucks: 2.297						
Observer Heigh	Observer Height (Above Pad): 5.0 feet							.006	Grade Ad	iuetmant	- 00		
	Pad Elevation:	0.0 feet			rica	vy Truck	s. u	.000	Orado Ad	usunon	. 0.0		
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	nce (in	feet)				
	Road Grade:	0.0%				Auto	s: 56	.223					
	Left View:	-90.0 degre	es		Medium Trucks: 56.065								
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081					
FHWA Noise Mo	del Calculation	18											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten		
Auto				-0.8		-1.20		-4.72		000	0.000		
Medium Trucks				-0.8	-	-1.20		-4.88		000	0.000		
Heavy Trucks	s: 85.38	-32.46		-0.8	5	-1.20		-5.28	0.0	000	0.000		
Unmitigated No.			barri	ier atten	uation)								
VehicleType	Leq Peak Ho	ur Leq Day	55.0	Leq E	vening		Night		Ldn		NEL		
Auto		53.2		47.		55.8		56.4					
Medium Trucks		0.4	48.9		42.6		41.	-	49.5	-	49.7		
Heavy Trucks		0.9	49.4		40.4		41.		50.0		50.1		
Vehicle Noise	9: 5	8.6	56.8		53.8		49	.0	57.5	5	58.0		
Centerline Dista	nce to Noise C	ontour (in fee	t)	750	-ID 4	-	-10.4		20 -104	-	-10.4		
			I dn:		dBA 0		dBA	(60 dBA 48		dBA 103		
		_	Lan: NFI:	1	-		22		48 52		103		
		C	IVEL:	1	1	2	:4		52	1	111		

	FHWA-	RD-77-108	HIGHW	AY NO	DISE P	REDICT	ION MOD	EL			
Scenario: Existi Road Name: Stetso Road Segment: e/o Fi	on Av. (S	,					t Name: R lumber: 9		Diamante	•	
SITE SPECIF	IC INPL	JT DATA					NOISE M	ODEI	. INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard = 1	10, So	ft = 15)		
Average Daily Traffic (A	dt): 1	100 vehicles					Α	utos:	15		
Peak Hour Percenta	ge:	10%			Me	dium Ti	ucks (2 A	xles):	15		
Peak Hour Volui	ne:	10 vehicles			He	avy Tru	cks (3+ A	xles):	15		
Vehicle Spe	ed:	50 mph		1/	ehicle	Miv					
Near/Far Lane Distar	ice:	84 feet				icleType	e /	Dav	Evening	Night	Daily
Site Data								7.5%	12.9%	9.6%	,
Barrier Heid	ıht.	0.0 feet			М	edium 7	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Bei		0.0				Heavy 7	rucks: 8	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Bar	rier:	70.0 feet		N	nisa S	ource F	levations	(in fo	of)		
Centerline Dist. to Obser	ver:	70.0 feet		/*	0/36 0	Auto		•	<i>(</i> 1)		
Barrier Distance to Obser	ver:	0.0 feet			Modiu	m Truck					
Observer Height (Above Pa	ad):	5.0 feet				vy Truck			Grade Adju	ustment	: 0.0
Pad Elevat	ion:	0.0 feet									
Road Elevat		0.0 feet		L	ane Eq		t Distanc		eet)		
Road Gra		0.0%				Auto					
Left Vi		90.0 degree				m Truck					
Right Vi	ew:	90.0 degree	:S		Hea	ry Truck	s: 56.0	81			
FHWA Noise Model Calcul	ations										
VehicleType REME	L Tr	affic Flow	Dista	nce	Finite	Road	Fresne	el L	Barrier Atte	en Ber	m Atten
Autos:	0.20	-22.41		-0.87		-1.20	-	4.72	0.0	00	0.000
Medium Trucks: 8	31.00	-39.65		-0.85		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks: 8	35.38	-43.60		-0.85		-1.20	-	5.28	0.0	00	0.000
Unmitigated Noise Levels	(without	Topo and	barrier	attenu	ation)						
VehicleType Leq Pea		Leq Day		.eq Eve	ening	Leq	Night		Ldn		NEL
Autos:	45.7		13.8		42.1		36.0		44.6		45.2
Medium Trucks:	39.3		37.8		31.4		29.9		38.4		38.6
Heavy Trucks:	39.7		38.3		29.3		30.5		38.9		39.0
Vehicle Noise:	47.4	4	15.7		42.6		37.8		46.4		46.9
Centerline Distance to Noi	se Cont	our (in feet)									
			L	70 dl	BA	65	dBA	6) dBA	55	dBA
			dn:	2			4		9		19
		CN	IEL:	2	4 9 20					20	

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE P	REDICTI	ION M	ODEL			
Road Nam	io: Existing Wi ne: Stetson Av. nt: e/o Warren	(S.)					Name: umber:		o Diamant	е	
SITE Highway Data	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	S	
Average Daily Peak Hour Peak F	Traffic (Adt): Percentage: four Volume: hicle Speed: ne Distance:	100 vehicle: 10% 10 vehicle: 50 mph 84 feet			Me He Vehicle	edium Tru eavy Truc	ucks (2 cks (3+	Autos: Axles):	15 15	Night	Daily
Site Data							Autos:	77.5%	-	9.6%	,
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0				ledium Ti Heavy Ti		84.8% 86.5%		10.3% 10.8%	
Centerline Di Centerline Dist. Barrier Distance Observer Height (Ph. Ro.		Hear	Autos m Trucks vy Trucks	s: 0 s: 2 s: 8 t Dista s: 56 s: 56	0.000 2.297 3.006	Grade Ad	ijustment	: 0.0			
FHWA Noise Mod	Right View:	90.0 degree				,					
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	Traffic Flow -22.41 -39.65 -43.60	Di	stance -0.8 -0.8	37 35	-1.20 -1.20 -1.20	Fres	-4.72 -4.88 -5.28	0.0	en Ber 000 000	0.000 0.000 0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Hou	r Leg Day	′	Leq E	vening	Leg	Night		Ldn	C	NEL
Autos: Medium Trucks: Heavy Trucks:	45 39 39	3	43.8 37.8 38.3		42.1 31.4 29.3		36 29 30	.9	44.6 38.4 38.9	4	45.2 38.6 39.0
Vehicle Noise:	47	•	45.7		42.6		37	.8	46.4	4	46.9
Centerline Distant	ce to Noise Co	ntour (in feet)		-/D.4		-10.4		00 -ID4		-10.4

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHV	NAY N	IOISE PI	REDICT	ION MC	DEL			
	io: Existing Wi e: Stetson Av nt: e/o New St	. 1					Name: lumber:		no Diamante	е	
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	8,900 vehicle 10%	S			dium Tri		,	15		
	our Volume:	890 vehicle	S		He	avy Truc	cks (3+	Axles).	15		
	hicle Speed:	50 mph		- 1	Vehicle i	Mix					
Near/Far Lai	ne Distance:	84 feet		F	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Rar	rier Heiaht:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			I	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet		-	Noise So	ource Fi	levation	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet		ľ	10,00 0	Auto		.000	001)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (,	5.0 feet				y Truck		.006	Grade Adj	iustment:	0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		<u> </u>	Lane Eq			_	feet)		
F	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre				m Truck		.065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-2.91		-0.87	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-24.11		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)						
	Leq Peak Hou			Leg E	_	Leq	Night		Ldn		VEL
Autos:	65		63.3		61.6		55.	-	64.1		64.7
Medium Trucks:	58		57.3		50.9		49.		57.8		58.1
Heavy Trucks:	59		57.8		48.8		50.		58.4		58.5
Vehicle Noise:	66	6.9	65.2		62.1		57.	3	65.9	9	66.4
Centerline Distand	ce to Noise Co	ontour (in feet)								
				70 c			dBA		60 dBA		dBA
			Ldn:	3			30		173		72
		C	VEL:	4	0	8	36		186	4	00

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	I YAW	NOISE P	REDICT	ION MO	DEL			
Road Nam	io: Existing Wit ne: Stetson Av. nt: e/o Cawston	,					Name: lumber:		o Diamant	9	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	1,600 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%				edium Tr			15		
Peak H	lour Volume:	1,160 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		-	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		-		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Dis	st. to Barrier:	70.0 feet			Noise S	ource E	levatio	ıs (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet				Auto	s: 0	.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	ustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		L		•					
Roa	ad Elevation:	0.0 feet		L	Lane Eq				feet)		
1	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 56	.081			
FHWA Noise Mode	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-1.76		-0.8	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	81.00	-19.00		-0.8	15	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-22.96		-0.8	15	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	66.	4	64.5		62.7		56.	7	65.3	3	65.9
Medium Trucks:	59.		58.4		52.1		50.	5	59.0)	59.2
Heavy Trucks:	60.		58.9		49.9		51.		59.5		59.6
Vehicle Noise:	68.	.1	66.3		63.3		58.	5	67.0)	67.5
Centerline Distant	ce to Noise Co	ntour (in feet)								
			L		dBA		dBA	1 6	0 dBA		5 dBA
			Ldn:		14		96		206		444
		Ci	NEL:	4	18	1	03		222		477

	FHWA	-RD-77-108	HIGH	HWAY N	OISE P	REDICT	TION MOD	EL			
Scenario: Existing Road Name: 9th St. Road Segment: w/o Wi		•					t Name: R Number: 9		Diamante	•	
SITE SPECIFIC	INPL	JT DATA					NOISE M	ODEI	LINPUTS	3	
Highway Data				5	Site Cor	nditions	(Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Ad	,	500 vehicle	s			-ti	A rucks (2 A)	utos:	15 15		
Peak Hour Percentag		10%	_				rucks (2 A) icks (3+ A)	,	15		
Peak Hour Volum		50 vehicle	S		П	avy III	ICKS (3+ A)	(les).	15		
Vehicle Spee		25 mph		١	/ehicle	Mix					
Near/Far Lane Distanc	e:	84 feet			Veh	icleTyp	e E	Day	Evening	Night	Daily
Site Data							Autos: 7	7.5%	12.9%	9.6%	97.42%
Barrier Heigh	t:	0.0 feet			М	edium 1	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Bern	n):	0.0				Heavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrie	er:	70.0 feet			loise S	ource E	levations	(in fe	et)		
Centerline Dist. to Observe		70.0 feet				Auto		•	,		
Barrier Distance to Observe		0.0 feet			Mediu	m Truck					
Observer Height (Above Pac		5.0 feet				vy Truck		06	Grade Adju	ustmen	t: 0.0
Pad Elevation		0.0 feet		-							
Road Elevation		0.0 feet		L	ane Eq		t Distance		eet)		
Road Grad		0.0%				Auto					
Left Vie		90.0 degre				m Truck					
Right Vie	W:	90.0 degre	es		Hea	vy Truck	ks: 56.0	81			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	Ti	raffic Flow	Dis	stance	Finite	Road	Fresne	el l	Barrier Atte	en Be	rm Atten
Autos: 58	.73	-12.41		-0.87	,	-1.20	-	4.72	0.0	00	0.000
Medium Trucks: 70	.80	-29.65		-0.85	,	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks: 77	.97	-33.60		-0.85	,	-1.20	-	5.28	0.0	00	0.000
Unmitigated Noise Levels (
VehicleType Leq Peak		Leq Day		Leq Ev			Night		Ldn		NEL
Autos:	44.3		42.4		40.6		34.5		43.2		43.8
Medium Trucks:	39.1		37.6		31.2		29.7		38.1		38.4
Heavy Trucks:	42.3		40.9		31.9		33.1		41.5		41.6
Vehicle Noise:	47.1		45.5		41.6		37.6		46.2		46.5
Centerline Distance to Nois	e Cont	our (in feet)								
			L	70 a		65	dBA	6	0 dBA		dBA
			Ldn:	2			4		8		18
		Ci	NEL:	2			4		9		19

	FH'	WA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	TION MOI	DEL			
	o: Existing W e: Stetson Av t: e/o Sander						t Name: F Number: 9		o Diamante		
SITE S	PECIFIC II	NPUT DATA					NOISE N	IODE	L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily i Peak Hour I Peak Ho		33,000 vehicle 10% 3,300 vehicle					rucks (2 A icks (3+ A	,			
	nicle Speed:	45 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	e .	Day	Evening	Night	Daily
Site Data								77.5%	-	9.6%	,
Rar	rier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		N	oise S	ource E	levations	s (in fe	eet)		
Centerline Dist. t	o Observer:	70.0 feet				Auto		000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (/	,	5.0 feet				vy Truck		006	Grade Adju	ustmen	t: 0.0
	d Elevation:	0.0 feet		_							
	d Elevation:	0.0 feet		L	ane Eq		t Distanc		feet)		
F	Road Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck ⁄y Truck					
FHWA Noise Mode	l Calculation										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	n Re	rm Atten
Autos:	68.46		Dioto	-0.87		-1.20		-4.72	0.0	_	0.000
Medium Trucks:	79.45	-14.00		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-17.96		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	iation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ 1	Leg Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	69	9.6	67.7		66.0		59.9		68.5		69.1
Medium Trucks:	63	3.4	61.9		55.5		54.0		62.4		62.7
Heavy Trucks:	64	1.2	62.8		53.8		55.0		63.4		63.5
Vehicle Noise:	71	1.5	69.7		66.6		61.9		70.4		70.9
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dl		65	dBA	6	60 dBA		5 dBA
			Ldn:	75			161		348		749
		C	NEL:	80		1	173		373		803

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTIO	N MODEL		
Road Nam	io: Existing Wi e: 9th St. nt: e/o Winche	,				ame: Rand nber: 9792	cho Diamante	
SITE	SPECIFIC IN	IPUT DATA			NO	ISE MOD	EL INPUTS	
Highway Data				Site Cor	nditions (F	lard = 10,	Soft = 15)	
Average Daily	Traffic (Adt): Percentage:	400 vehicles	S	Me	edium Truc	Auto ks (2 Axles		
	our Volume:	40 vehicles	e			s (3+ Axles		
	hicle Speed:	25 mph	3			0 (01 7 1000	.,	
Near/Far Lai		84 feet		Vehicle				
Near/Far Lar	ne Distance.	04 1661		Vel	nicleType	Day	Evening	Night Daily
Site Data					Au	tos: 77.5		9.6% 97.42%
Bar	rier Height:	0.0 feet		M	ledium Tru	cks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy Tru	cks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis		70.0 feet		Noise S	ource Elev	ations (in	feet)	
Centerline Dist.	to Observer:	70.0 feet			Autos:	0.000	,	
Barrier Distance	to Observer:	0.0 feet		Media	m Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			vy Trucks:	8.006	Grade Adju	stment: 0.0
Pa	ad Elevation:	0.0 feet			*			
Roa	ad Elevation:	0.0 feet		Lane Eq	juivalent E	Distance (ii	n feet)	
F	Road Grade:	0.0%			Autos:	56.223		
	Left View:	-90.0 degree	es	Mediu	ım Trucks:	56.065		
	Right View:	90.0 degree	es	Hea	vy Trucks:	56.081		
FHWA Noise Mode	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos:	58.73	-13.38	-().87	-1.20	-4.72	2 0.00	0.000
Medium Trucks:	70.80	-30.62	-(0.85	-1.20	-4.88	8 0.00	0.000
Heavy Trucks:	77.97	-34.57	-(0.85	-1.20	-5.28	8 0.00	0.000
Unmitigated Noise								
	Leq Peak Hou			Evening	Leq Ni	•	Ldn	CNEL
Autos:	43		41.4	39.6		33.6	42.2	42.8
Medium Trucks:	38		36.6	30.3		28.7	37.2	37.4
Heavy Trucks:	41	.3	39.9	30.9	1	32.1	40.5	40.6
Vehicle Noise:	46	.2	44.5	40.6		36.7	45.2	45.6
Centerline Distanc	ce to Noise Co	ontour (in feet					,	
				70 dBA	65 dE	BA	60 dBA	55 dBA
			Ldn:	2	3		7	16
		CI	VEL:	2	4		8	16

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MC	DEL			
Road Nan	io: Year 2019 ne: Winchester nt: s/o Florida	Rd.	t				Name: umber:		o Diamante	9	
	SPECIFIC IN	IPUT DATA			Cito Cor				L INPUT	5	
Highway Data					Site Cor	laitions	-				
,	Traffic (Adt):		S					Autos:	15		
	Percentage:	10%				dium Tri			15		
	lour Volume:	1,080 vehicle	S		He	avy Truc	cks (3+.	Axles):	15		
	hicle Speed:	55 mph			Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	6 97.42%
Ro	rrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W	-	0.0			1	Heavy Ti	rucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Di	st. to Barrier:	47.0 feet			Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	47.0 feet				Auto	s: 0.	.000	,		
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2.	297			
Observer Height		5.0 feet			Heav	y Truck	s: 8.	006	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		Ľ	Lane Eq			_ •	feet)		
	Road Grade:	0.0%				Auto		.704			
	Left View:	-90.0 degre	es			m Truck		.501			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	.521			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-2.49		0.7	7	-1.20		-4.63	0.0	00	0.000
Medium Trucks:	82.40	-19.73		0.8	0	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	86.40	-23.68		0.8	0	-1.20		-5.46	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	68	.9	67.0		65.2		59.	1	67.8	3	68.4
Medium Trucks:	62	.3	60.8		54.4		52.	9	61.3	3	61.6
Heavy Trucks:	62	.3	60.9		51.9		53.	1	61.5	5	61.6
Vehicle Noise:	70	.5	68.7		65.7		60.	9	69.4	ļ	69.9
Centerline Distan	ce to Noise Co	ontour (in feet)	70	·D.4		10.4				- 10.4
			L		dBA		dBA	1 6	0 dBA		5 dBA
		_	Ldn:		3	_	13		199		430
		C	NEL:	4	б	10	00		215		462

	FHV	VA-RD-77-108 I	HIGH	HWAY N	OISE P	REDICTI	ION MOI	DEL			
Road Nan	rio: Year 2019 ne: Patterson Ant: s/o Grand A						Name: I umber: 9		o Diamant	е	
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles					,	Autos:	15		
Peak Hour	Percentage:	10%				edium Tru					
Peak H	Hour Volume:	10 vehicles			He	eavy Truc	cks (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	12 feet		F	Vet	icleType		Day	Evening	Night	Daily
Site Data						- /	Autos:	77.5%	12.9%	9.6%	97.429
Ra	rrier Height:	0.0 feet			M	edium Tr	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0				Heavy Tr	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di		22.0 feet		-	· 0	ource El		. /! #	41		
Centerline Dist.	to Observer:	22.0 feet		, n	ioise s				eet)		
Barrier Distance	to Observer:	0.0 feet			14	Autos m Trucks					
Observer Height	(Above Pad):	5.0 feet				m Trucks vy Trucks			Grade Ad	iustmant	. 0.0
P	ad Elevation:	0.0 feet			пеа	vy Trucks	s. o.c	106	Orace Au	usuriorit.	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	e (in	feet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degrees	S			m Trucks		338			
	Right View:	90.0 degrees	S		Hea	vy Trucks	s: 21.3	378			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresn		Barrier Att		m Atter
Autos:		-21.44		5.32		-1.20		-4.34		000	0.00
Medium Trucks:		-38.68		5.44		-1.20		-4.85		000	0.00
Heavy Trucks:		-42.63		5.43		-1.20		-6.07	0.0	000	0.00
Unmitigated Nois			arri	er atteni	uation)						
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn		NEL
Autos:			7.3		45.5		39.5		48.1		48.
Medium Trucks:			1.8		35.4		33.9		42.3		42.
Heavy Trucks: Vehicle Noise:			9.5		34.1 46.2		35.4 41.7		43.7 50.2		43 50
Centerline Distan									2012		50.
Cerneriine Distan	ce to worse Co	ontour (In feet)	Т	70 d	BA	65	dBA	6	60 dBA	55	dBA
			L								

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	TION MOD	EL			
	e: Wincheste	Without Project r Rd.	t				t Name: R Number: 9		Diamante		
	SPECIFIC IN	IPUT DATA					NOISE M				
Highway Data				S	ite Cor	ditions	(Hard = 1	0, Sot	t = 15)		
Average Daily	Traffic (Adt):	12,400 vehicle	S				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Ti	rucks (2 Ax	des):	15		
Peak H	lour Volume:	1,240 vehicle	S		He	avy Tru	icks (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	36 feet		Ė		icleTyp	е Г.)av	Evening	Night	Daily
Site Data								7.5%	12.9%	9.6%	97.42%
Rai	rrier Height:	0.0 feet			М	edium 7	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy 7	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis		47.0 feet						(! £	-41		
Centerline Dist.	to Observer:	47.0 feet		N	orse S		levations		et)		
Barrier Distance	to Observer:	0.0 feet			1415-	Auto m Truck					
Observer Height (Above Pad):	5.0 feet				m Truci v Truci			Grade Adju	o4mon4:	0.0
Pa	ad Elevation:	0.0 feet			Heat	ry Truci	rs: 8.00	06 (этайе мији	suneni.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	nt Distance	e (in fe	eet)		
I	Road Grade:	0.0%				Auto	os: 43.70)4			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 43.50	01			
	Right View:	90.0 degre	es		Heav	y Truck	ks: 43.52	21			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	I E	Barrier Attei	n Berr	n Atten
Autos:	68.46			0.77		-1.20		4.63	0.00		0.000
Medium Trucks:	79.45			0.80		-1.20		4.87	0.00		0.000
Heavy Trucks:	84.25	-22.21		0.80		-1.20	-4	5.46	0.00	0	0.000
Unmitigated Noise											
	Leq Peak Ho			eq Eve		Leq	Night		Ldn	C١	IEL
Autos:	67		65.1		63.4		57.3		65.9		66.5
Medium Trucks:	60		59.3		52.9		51.4		59.8		60.1
Heavy Trucks:	61		60.2		51.2		52.4		60.8		60.9
Vehicle Noise:	68		67.1		64.0		59.3		67.8		68.3
Centerline Distant	ce to Noise C	ontour (in feet	t)	70 dl	D.4	-	-104		-104		-ID 4
			I do				dBA) dBA		dBA
Ldn:				34 73 156 337							
	CNEL:					36 78 168 362				02	

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWA'	Y NOISE PI	REDICTIO	N MODE	L		
Road Nam	io: Year 2019 \ ne: California A nt: n/o Stowe F					ame: Rai nber: 979	ncho Diaman 32	te	
	SPECIFIC IN	PUT DATA		011 0			DEL INPUT	s	
Highway Data				Site Con	iditions (F		Soft = 15)		
Average Daily	. ,	2,800 vehicles				Aut			
	Percentage:	10%			dium Truc				
	lour Volume:	280 vehicles		He	avy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet			icleType	Da	y Evening	Night	Daily
Site Data					Au	tos: 77	5% 12.9%	9.6%	97.42%
Rai	rrier Heiaht:	0.0 feet		M	edium Tru	cks: 84	8% 4.9%	10.3%	1.84%
Barrier Type (0-W		0.0		1	Heavy Tru	cks: 86	5% 2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet		Maine C	ource Elev	rations (n foot)		
Centerline Dist.	to Observer:	47.0 feet		140/36 30	Autos:	0.000			
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet			/y Trucks:	8.006		djustment	. 0.0
Pa	ad Elevation:	0.0 feet						ajusunone	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent E	Distance	(in feet)		
1	Road Grade:	0.0%			Autos:	43.704	ļ.		
	Left View:	-90.0 degree	s	Mediu	m Trucks:	43.501			
	Right View:	90.0 degree	S	Heav	y Trucks:	43.521			
FHWA Noise Mod	el Calculation:	s							
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier At		m Atten
Autos:	66.51	-6.97).77	-1.20	-4.		000	0.000
Medium Trucks:	77.72	-24.21		0.80	-1.20	-4.		000	0.000
Heavy Trucks:	82.99	-28.16	(0.80	-1.20	-5.	46 0.	000	0.000
Unmitigated Noise									
VehicleType	Leq Peak Hou			Evening	Leq Ni	-	Ldn		NEL
Autos:	59.		7.2	55.5		49.4	58.		58.6
Medium Trucks:	53.		1.6	45.2		43.7	52.	_	52.4
Heavy Trucks:	54.		3.0	44.0		45.2	53.	-	53.7
Vehicle Noise:	61.		9.4	56.1		51.6	60.	.1	60.6
Centerline Distant	ce to Noise Co	ntour (in feet)					00 154	T	10.4
				70 dBA	65 dE	SA	60 dBA		dBA
		_	.dn:	10	22		48		03
		C٨	IEL:	11	24		51	1	10

	FH\	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Year 2019 me: California A ent: s/o Stowe I	۸v.	t				Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard :	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	400 vehicle	S					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	40 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far L	ane Distance:	36 feet				icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	. ,
D	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
	Dist. to Barrier:	47.0 feet									
Centerline Dis		47.0 feet			Noise S			_	eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Heigh	t (Above Pad):	5.0 feet				m Truck		.297			
	Pad Elevation:	0.0 feet			Hear	y Truck	s: 8	.006	Grade Ad	justment	: 0.0
R	oad Elevation:	0.0 feet		l	Lane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%		l		Auto	s: 43	.704	-		
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	3.501			
	Right View:	90.0 degre	es		Hear	y Truck	s: 43	3.521			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos	66.51	-15.42		0.7	77	-1.20		-4.63	0.0	000	0.000
Medium Trucks	: 77.72	-32.66		0.8	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	82.99	-36.61		0.8	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noi	se Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	_	Night		Ldn		NEL
Autos			48.8		47.0		40.	-	49.6	-	50.2
Medium Trucks			43.2		36.8		35.	_	43.7		43.9
Heavy Trucks Vehicle Noise			44.6 51.0		35.5 47.7		36. 43.	-	45.1 51.1		45.3 52.1
Centerline Dista					71.1		73.		31.1		J2.1
Centernile Dista	ince to NOISE C	ontour (III leet	,	70	dBA	65	dBA	6	60 dBA	55	dBA
	Ldn:							28			
	CNEL:				3 6 14 30				30		

	FHV	VA-RD-77-108 H	HIGHV	VAY NO	DISE P	REDICTI	ION MOI	DEL			
Road Nan	rio: Year 2019 'ne: California A nt: n/o Simpso						Name: F umber: 9		o Diamant	е	
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles					-	Autos:	15		
Peak Hour	Percentage:	10%					ucks (2 A				
Peak H	lour Volume:	10 vehicles			He	eavy Truc	cks (3+ A	xles):	15		
Ve	ehicle Speed:	25 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	36 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						- /	Autos:	77.5%	12.9%	9.6%	97.42
Ra	rrier Height:	0.0 feet			М	edium Tr	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0				Heavy Tr	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Di		47.0 feet					evations	. /! #	41		
Centerline Dist.	to Observer:	47.0 feet		N	orse s				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos					
Observer Height	(Above Pad):	5.0 feet				m Trucks			Grade Ad	iustmont	. 0.0
P	ad Elevation:	0.0 feet			Hea	vy Trucks	s: 8.0	106	Grade Au	usunent	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	s: 43.7	704			
	Left View:	-90.0 degrees	3		Mediu	m Trucks	s: 43.5	501			
	Right View:	90.0 degrees	3		Hear	vy Trucks	s: 43.5	521			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn		Barrier Att		m Atter
Autos:		-19.40		0.77		-1.20		-4.63		000	0.00
Medium Trucks:		-36.64		0.80		-1.20		-4.87		000	0.00
Heavy Trucks:	77.97	-40.59		0.80		-1.20		-5.46	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier	attenu	ıation)						
VehicleType	Leq Peak Hou			Leq Eve			Night		Ldn		NEL
Autos:			7.0		35.2		29.2		37.8		38
Medium Trucks:			2.3		25.9		24.3		32.8		33
Heavy Trucks: Vehicle Noise:			5.6 0.1		26.5 36.2		27.8		36.1 40.8		36 41
					00.2		02.0		.0.0	•	
Centerline Distan	ce to Noise Co	ontour (in feet)		70 dE	RA	65	dBA	,	60 dBA	55	dBA
				/ U UL	J. 1		3DA		JU GLIN	- 50	JUN

FH\	WA-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MODEL			
Scenario: Year 2019 Road Name: California A Road Segment: s/o Stetson	۸v.	t			Name: Rand lumber: 9792		e	
SITE SPECIFIC IN	IPUT DATA				IOISE MOD		S	
Highway Data			Site Co	nditions	(Hard = 10,	Soft = 15)		
Average Daily Traffic (Adt):	100 vehicle	S			Auto	s: 15		
Peak Hour Percentage:	10%		٨	ledium Tri	ucks (2 Axles	;): 15		
Peak Hour Volume:	10 vehicle	S	F	leavy Truc	cks (3+ Axles	;): 15		
Vehicle Speed:	40 mph		Vehicle	Miv				
Near/Far Lane Distance:	36 feet		_	hicleType	Day	Evening	Night	Daily
Site Data				-	Autos: 77.5	% 12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Лedium Т	rucks: 84.8	% 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy T	rucks: 86.5	% 2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet		Noise	Source El	levations (in	feet)		
Centerline Dist. to Observer:	47.0 feet			Auto		,		
Barrier Distance to Observer:	0.0 feet		Med	um Truck	s: 2.297			
Observer Height (Above Pad):	5.0 feet		He	avy Truck	s: 8.006	Grade Ad	ljustment	0.0
Pad Elevation:	0.0 feet							
Road Elevation:	0.0 feet		Lane E		t Distance (ii	n feet)		
Road Grade:	0.0%			Auto				
Left View:	-90.0 degree			um Truck				
Right View:	90.0 degree	es	He	avy Truck	s: 43.521			
FHWA Noise Model Calculation								
VehicleType REMEL	Traffic Flow	Distanc		e Road	Fresnel	Barrier Att		m Atten
Autos: 66.51	-21.44		0.77	-1.20	-4.6		000	0.000
Medium Trucks: 77.72			0.80	-1.20	-4.8		000	0.000
Heavy Trucks: 82.99	-42.63		0.80	-1.20	-5.4	6 0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and	barrier at	tenuation)				
VehicleType Leq Peak Hou	- 1 - 7		q Evening		Night	Ldn		NEL
Autos: 44		42.7	41.	-	34.9	43.5		44.2
Medium Trucks: 38		37.1	30.	-	29.2	37.7		37.9
Heavy Trucks: 40		38.5	29.		30.8	39.		39.2
14 4 1 1 44 1	5.7	44.9	41.	6	37.1	45.6	6	46.1
Vehicle Noise: 46).1			-			-	

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGH	YAWH	IOISE PI	REDICTIO	МИ	DDEL			
Scenar	io: Year 2019 V	Vithout Project				Project N	lame:	Ranch	o Diamant	te	
	ne: California A					Job Nu	mber:	9792			
Road Segme	nt: s/o Simpsor	n Rd.									
	SPECIFIC IN	PUT DATA			Cito Con	NO ditions (l			L INPUT	s	
Highway Data					Site Con	iaitions (i	Hara :				
Average Daily	. ,	100 vehicles	3					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	10 vehicles	3		He	avy Truck	ıs (3+	Axles):	15		
	hicle Speed:	25 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet		F		icleType		Day	Evening	Night	Daily
Site Data						AL	ıtos:	77.5%	12.9%	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-W		0.0			F	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet									
Centerline Dist.		47.0 feet		- 4	Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height		5.0 feet				m Trucks:		.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	8	.006	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 feet		- 1	Lane Eq	uivalent l	Distai	nce (in	feet)		
	Road Grade:	0.0%		F		Autos		3.704	,		
	Left View:	-90.0 degree			Mediu	m Trucks:		3.501			
	Right View:	90.0 degree				y Trucks:		3.521			
	rugin vion.	30.0 degree	,,,		77007	y muono.					
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		rm Atten
Autos:	58.73	-19.40		0.7		-1.20		-4.63		000	0.000
Medium Trucks:	70.80	-36.64		0.8	-	-1.20		-4.87		000	0.000
Heavy Trucks:	77.97	-40.59		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barri	er atter	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq N	light		Ldn	С	NEL
Autos:	38.	9 ;	37.0		35.2		29	.2	37.	8	38.4
Medium Trucks:	33.	8 :	32.3		25.9		24	.3	32.	8	33.0
Heavy Trucks:	37.	0 ;	35.6		26.5		27	.8	36.	1	36.3
Vehicle Noise:	41.	8	40.1		36.2		32	.3	40.	8	41.2
Centerline Distan	ce to Noise Co	ntour (in feet))								
				70	dBA	65 d	BA		60 dBA	55	dBA
			Ldn:		ı	1			2		5
		CI	IFI:		1	1			3		6

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MC	DEL			
Road Nam	io: Year 2019 \ ne: Warren Rd. nt: s/o Esplana		t				Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA			o:- o				L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	14,200 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tri			15		
Peak H	lour Volume:	1,420 vehicle	S		He	avy Truc	cks (3+.	Axles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	6 97.42%
Ra	rrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0			1	Heavy Ti	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di	st. to Barrier:	70.0 feet		1	Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet				Auto	s: 0.	.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		006	Grade Ad	iustmer	t: 0.0
Pa	ad Elevation:	0.0 feet									
Roi	ad Elevation:	0.0 feet		I	Lane Eq	uivalen		_ •	feet)		
	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	.081			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	71.78	-1.30		-0.87	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	82.40	-18.54		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-22.49		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leg E	vening	Leq	Night		Ldn	(ONEL
Autos:	68	.4	66.5		64.7		58.	7	67.3	3	67.9
Medium Trucks:	61	.8	60.3		53.9		52.	4	60.9)	61.1
Heavy Trucks:	61		60.4		51.4		52.	-	61.0		61.1
Vehicle Noise:	70	.0	68.2		65.3		60.	4	69.0)	69.4
Centerline Distant	ce to Noise Co	ontour (in feet)	70		-	10.4				
			L	70 c			dBA	1 6	0 dBA	5	5 dBA
			Ldn:	6	-		29		277		597
		Ci	NEL:	6-	4	1:	38		298		642

	- FHV	WA-RD-77-108	HIGH	WATN	DISE PREI	DIC HON M	ODEL			
	: Warren Rd		ct			oject Name Iob Numbe		o Diamante	9	
	PECIFIC IN	NPUT DATA						L INPUTS	S	
Highway Data				S	ite Condit	ions (Hard	= 10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	14,200 vehicle	es				Autos:			
Peak Hour F		10%				m Trucks (2	,			
	ur Volume:	1,420 vehicle	es		Heavy	/ Trucks (3-	+ Axles):	15		
	icle Speed:	55 mph		ν	ehicle Mix	(
Near/Far Lan	e Distance:	84 feet			Vehicle	Туре	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.42%
Barr	ier Height:	0.0 feet			Media	um Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			Hea	avy Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist		70.0 feet		٨	loise Sour	ce Elevatio	ons (in fe	eet)		
Centerline Dist. to		70.0 feet				Autos:	0.000			
Barrier Distance to		0.0 feet			Medium 7	rucks:	2.297			
Observer Height (A	,	5.0 feet			Heavy 7	rucks:	8.006	Grade Adj	ustment	0.0
	l Elevation:	0.0 feet		,	one Faulu	alent Dista	noo (in	foot)		
	d Elevation:	0.0 feet		-			6.223	ieei)		
R	oad Grade: Left View:	0.0%			Medium 7		6.065			
	Right View:	-90.0 degre 90.0 degre			Heavy 1		6.081			
FHWA Noise Model	Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite Ro	ad Fre	snel	Barrier Atte	en Ber	m Atten
Autos:	71.78	-1.30		-0.87		1.20	-4.72	0.0	100	0.00
Medium Trucks:	82.40	-18.54		-0.85		1.20	-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-22.49		-0.85		1.20	-5.28	0.0	000	0.00
Unmitigated Noise										
	.eq Peak Hοι			Leq Ev	-	Leq Night		Ldn		VEL
Autos:	68		66.5		64.7		3.7	67.3		67.
Medium Trucks:	61		60.3		53.9		2.4	60.9		61.
Heavy Trucks:	61		60.4		51.4		2.6	61.0		61.
Vehicle Noise:	70		68.2		65.3	60).4	69.0)	69.
	to Noise Co	ontour (in fee	t)	70 d	D4	65 dBA		60 dBA		dBA
Centerline Distance										
Centerline Distance			L - L - L							
Centerline Distance			Ldn: NFI:	60)	129 138		277 298	5	97 42

	FH	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	ION MC	DEL			
	: Warren Ro		:t				t Name: lumber:		o Diamante	е	
SITE S Highway Data	PECIFIC II	NPUT DATA			ito Con				L INPUT:	S	
Average Daily T Peak Hour F Peak Ho	, ,	14,200 vehicle 10% 1,420 vehicle 55 mph			Ме Не	edium Tr eavy Tru	-	Autos: Axles):	15 15		
Near/Far Lan	e Distance:	84 feet		V	ehicle	icleType	,	Day	Evening	Night	Daily
	ier Height:	0.0 feet			М		Autos: rucks:	77.5% 84.8% 86.5%	12.9% 4.9%	9.6% 10.3%	97.42%
Barrier Type (0-Wa Centerline Dist. Centerline Dist. to	t. to Barrier: Observer:	0.0 70.0 feet 70.0 feet		N			levation			10.076	0.14/
Barrier Distance to Observer Height (A Pac		0.0 feet 5.0 feet 0.0 feet				m Truck /y Truck		.297	Grade Adj	iustmen	t: 0.0
R	d Elevation: oad Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre		L	Mediu	Auto M Truck y Truck	s: 56	.223 .065 .081	reet)		
FHWA Noise Mode	l Calculation	18									
VehicleType Autos: Medium Trucks:	71.78 82.40	-18.54		-0.87 -0.85		-1.20 -1.20	Fresi	-4.72 -4.88	0.0	000	0.000 0.000
Heavy Trucks:	86.40			-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise								1			
VehicleType I	eq Peak Ho		66.5	Leq Eve	ening 64.7	Leq	Night 58.	7	Ldn 67.3		NEL 67.
Medium Trucks:			60.3		53.9		52.		60.9	-	61.
Heavy Trucks:	-		60.4		51.4		52.		61.0		61.
Vehicle Noise:	70	0.0	68.2		65.3		60.	4	69.0)	69.
Centerline Distance	e to Noise C	ontour (in feet	t)								
		•	Ldn:	70 dl			dBA 29	-	60 dBA 277		6 dBA 597
		C	NEL:	64			38		298		642

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHWA	AY NO	DISE P	REDICT	ION MOI	DEL		
	: Warren Rd	-					Name: F lumber: 9		o Diamante	
	PECIFIC IN	IPUT DATA							L INPUTS	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)	
		10,700 vehicles 10% 1,070 vehicles 55 mph			He	avy Tru	ucks (2 A cks (3+ A	/	15	
Near/Far Lan		84 feet		V	ehicle					
	e Distance.	o4 leet			Veh	icleType		Day	-	light Daily
Site Data Barrier Type (0-Wa	rier Height:	0.0 feet				edium T Heavy T	rucks:	77.5% 84.8% 86.5%	4.9%	9.6% 97.42% 0.3% 1.84% 0.8% 0.74%
Centerline Dist	. ,	70.0 feet								
Centerline Dist. to		70.0 feet		N	oise S	ource E	levations	in f	eet)	
Barrier Distance to Observer Height (A	Observer:	0.0 feet 5.0 feet 0.0 feet				Auto m Truck ry Truck	s: 2.2	97	Grade Adjus	tment: 0.0
Road	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in	feet)	
R	oad Grade:	0.0%				Auto	s: 56.2	223		
į	Left View: Right View:	-90.0 degree				m Truck ry Truck				
FHWA Noise Model	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	e/	Barrier Atten	Berm Atten
Autos:	71.78	-2.53		0.87		-1.20		4.72	0.000	0.000
Medium Trucks:	82.40	-19.77		-0.85		-1.20		4.88	0.000	0.000
Heavy Trucks:	86.40	-23.72		-0.85		-1.20		-5.28	0.000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	iation)					
VehicleType L	Leq Peak Hou	ır Leq Day	Le	q Eve	ening	Leq	Night		Ldn	CNEL
Autos:	67	.2	65.3		63.5		57.5		66.1	66.7
Medium Trucks:	60	.6 5	59.1		52.7		51.2		59.6	59.9
Heavy Trucks:	60	.6 5	59.2		50.2		51.4		59.8	59.9
Vehicle Noise:	68	i.8 6	67.0		64.0		59.2		67.7	68.2
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dl			dBA		60 dBA	55 dBA
Ldn:				49 106 229 494 53 115 247 531						
	CNEL:					1	15		247	531

FH	WA-RD-77-108	HIGH	IWAY N	OISE PE	REDICTION	ON MO	DEL			
Scenario: Year 2019 Road Name: Warren Ro Road Segment: s/o Florida	d.	t				Name: ımber:		o Diamant	Э	
SITE SPECIFIC II	NPUT DATA			n: 0				L INPUT	S	
Highway Data				Site Con	ditions (Hard =	: 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	17,700 vehicles	S					Autos:	15		
Peak Hour Percentage:	10%			Me	dium Tru	icks (2 i	Axles):	15		
Peak Hour Volume:	1,770 vehicles	S		He	avy Truc	ks (3+)	Axles):	15		
Vehicle Speed:	55 mph		1	Vehicle I	Mix					
Near/Far Lane Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data					Α	utos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		^	Voise Sc	ource Ele	evation	s (in fe	eet)		
Centerline Dist. to Observer:	70.0 feet				Autos	: 0.	000			
Barrier Distance to Observer:	0.0 feet			Mediui	n Trucks	: 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	: 8.	006	Grade Ad	iustmeni	t: 0.0
Pad Elevation:	0.0 feet		-				-			
Road Elevation:	0.0 feet		L	Lane Eq				eet)		
Road Grade:	0.0%				Autos		223			
Left View:	-90.0 degree				n Trucks		065			
Right View:	90.0 degree	es		Heav	y Trucks	: 56.	.081			
FHWA Noise Model Calculation	ns									
VehicleType REMEL	Traffic Flow	Dis	stance	Finite		Fresi		Barrier Att		rm Atten
Autos: 71.78			-0.87		-1.20		-4.72		000	0.000
Medium Trucks: 82.40			-0.85	-	-1.20		-4.88		000	0.000
Heavy Trucks: 86.40			-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho		_	Leq Ev		Leq I			Ldn		NEL
Autos: 6		67.5		65.7		59.7		68.3		68.9
		61.3		54.9		53.4		61.8		62.1
						53.6		62.0		
Heavy Trucks: 6	2.8	61.4 69.2		52.4 66.2		61.4	-	69.9		
Heavy Trucks: 6 Vehicle Noise: 7	2.8	69.2					-			
Heavy Trucks: 6	2.8	69.2	70 a	66.2	65 c	61.4	4)	62.1 70.4 i dBA
Heavy Trucks: 6 Vehicle Noise: 7	2.8 1.0 Contour (in feet,	69.2	70 a	66.2 IBA	65 d	61.4 IBA	4	69.9	55	70.4

	FH	WA-RD-77-108	HIGH	HWAY N	OISE P	REDICT	ION M	ODEL			
Road Nam	io: Year 2019 ie: Warren Ro nt: s/o Whittie		ct				Name lumber		o Diamant	e	
SITE :	SPECIFIC II	NPUT DATA			ite Cor			MODE = 10, Sc	L INPUT	s	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume: hicle Speed:	16,000 vehicle 10% 1,600 vehicle 55 mph			Ме	edium Tr eavy Tru	ucks (2	Autos: Axles): Axles):	15 15 15		
Near/Far La	ne Distance:	84 feet				icleType	. 1	Dav	Evening	Night	Daily
Site Data					VCI		Autos:	77.5%	U	9.6%	,
Barrier Type (0-W	rrier Height: 'all, 1-Berm):	0.0 feet 0.0				edium T Heavy T		84.8% 86.5%	4.9%	10.3%	1.84%
Centerline Dis	st. to Barrier:	70.0 feet		^	loise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. Barrier Distance Observer Height (to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Hea	Auto m Truck vy Truck	s: (s: 2 s: 8	0.000 2.297 3.006	Grade Ad	justment	: 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in i	feet)		
ı	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Auto m Truck vy Truck	s: 50	6.223 6.065 6.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Bei	m Atten
Autos:	71.78	-0.78		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	82.40	-18.02		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-21.98		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	У	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:		3.9	67.0		65.3		59	-	67.8	-	68.4
Medium Trucks:		2.3	60.8		54.5		52		61.4		61.6
Heavy Trucks:		2.4	60.9		51.9		53		61.5	_	61.6
Vehicle Noise:	70).5	68.8		65.8		60	1.9	69.5	5	70.0
Centerline Distant	ce to Noise C	ontour (in fee	t)	70			10.4	1 .			10.4
			1 -1	70 d			dBA	6	0 dBA		dBA
		0	Ldn: NFI:	65 69			39 50		300		346 395
		C	IVEL:	65	,	1	50		323		190

FH	IWA-RD-77-108 H	HIGHWAY	NOISE P	REDICTIC	N MOI	DEL			
Scenario: Year 2019 Road Name: Warren R Road Segment: n/o Whittie	d.			Project N Job Nui			Diamant	е	
SITE SPECIFIC I Highway Data	NPUT DATA		Site Co.	NC nditions (I			L INPUT	S	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance: Site Data	10% 1,620 vehicles 55 mph 84 feet		Me He Vehicle Veh	edium Truck eavy Truck Mix icleType	iks (2 A	Autos: xles):	15 15 15 15 Evening 12.9%	Night 9.6%	
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	0.0 feet 0.0 70.0 feet			Heavy Tru	cks:	86.5%	2.7%	10.8%	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade: Left View:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 w -90.0 degrees		Mediu Hea	Autos: m Trucks: ny Trucks: uivalent I Autos: m Trucks:	0.0 2.2 8.0 Distanc 56.2	97 96 96 96 (in f	Grade Ad	ijustment	: 0.0
Right View:	90.0 degrees			y Trucks:					
FHWA Noise Model Calculation			1		_	. 1			
VehicleType REMEL Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40	-17.97	-0	.87 .85 .85	-1.20 -1.20 -1.20		-4.72 -4.88 -5.28	0.0	000 000 000	0.00 0.00 0.00 0.00
Unmitigated Noise Levels (wit	hout Topo and b	arrier att	enuation)						
VehicleType Leq Peak Ho	-		Evening	Leq N	ight		Ldn	C	NEL
Medium Trucks: 6	2.4 6	7.1 0.9	65.3 54.5		59.3 53.0		67.9 61.4	4	68 61
		1.0 8.8	52.0 65.8		53.2 61.0		61.6 69.5	-	61 70
Centerline Distance to Noise C	Contour (in feet)								
	•		0 dBA	65 di		6	0 dBA		dBA
	L CN	dn: EL:	65 70	140 151			302 325		51 '01

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Barrier Height: 0.0 feet 0.0 feet		FH	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICTI	ON M	ODEL			
Mighway Data	Road Na	me: Warren Ro	d.	ct						no Diamant	te	
Average Daily Traffic (Adt): 12,700 vehicles Peak Hour Percentage: 10% Peak Hour Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet Wehicle Type Day Evening Night Daily Site Data Sarrier Height: 0.0 feet Medium Trucks (2 Axles): 15 Wehicle Type Day Evening Night Daily Site Data Autos: 77.5% 12.9% 9.6% 97.42% Noise Trucks: 86.5% 2.7% 10.3% 1.3% Noise Source Elevations: 0.00 Noise Source Elevations N		SPECIFIC II	NPUT DATA			Site Cor					s	
Site Data	Average Daily Peak Hou Peak V	r Percentage: Hour Volume: ehicle Speed:	10% 1,270 vehicle 45 mph			Me He Vehicle	edium Truc eavy Truc Mix	icks (2 :ks (3+	Autos Axles) Axles)	: 15 : 15 : 15		
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Centerline Dist. for Observer: 70.0 feet Centerli	Site Data					ven				-		. ,
Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Traffic Flow Dis									,	6 4.9%	10.3%	1.84%
Autos: 0.000						Noise S	ource Ele	evatio	ns (in t	eet)		
Road Grade:	Barrier Distance Observer Height	Barrier Distance to Observer: 0.0 Observer Height (Above Pad): 5.0 Pad Elevation: 0.0					m Trucks	3: 2	2.297	Grade Ad	ljustmen	t: 0.0
Left View:	Re	oad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
VehicleType		Left View:	-90.0 degre				m Trucks	s: 56	6.065			
Medium Trucks: 68.46	FHWA Noise Mo	del Calculation	าร									
Medium Trucks: 79.45								Fres				
Heavy Trucks: 84.25												0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.5 63.6 61.8 55.8 64.4 65.6 Medium Trucks: 59.2 57.7 51.4 49.8 58.3 58. Heavy Trucks: 60.1 58.7 49.6 50.9 59.2 59. Vehicle Noise: 67.3 65.6 62.4 57.7 66.3 66. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396						-						0.000
Autos: 65.5 63.6 61.8 55.8 64.4 65. Medium Trucks: 59.2 57.7 51.4 49.8 58.3 58. Heavy Trucks: 60.1 58.7 49.6 50.9 59.2 59. Vehicle Noise: 67.3 65.6 62.4 57.7 66.3 66. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396	Unmitigated Nois	se Levels (with	hout Topo and	barri	er atte	nuation)						
Medium Trucks: 59.2 57.7 51.4 49.8 58.3 58. Heavy Trucks: 60.1 58.7 49.6 50.9 59.2 59. Vehicle Noise: 67.3 65.6 62.4 57.7 66.3 66. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396					Leq E							
Heavy Trucks: 60.1 58.7 49.6 50.9 59.2 59. Vehicle Noise: 67.3 65.6 62.4 57.7 66.3 66. Centerline Distance to Noise Contour (in feet)												65.0
Vehicle Noise: 67.3 65.6 62.4 57.7 66.3 66. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396											-	
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396												66.7
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 40 85 184 396	Centerline Distar	nce to Noise C	ontour (in fee	t)								
					70	dBA	65 (dBA		60 dBA	55	5 dBA
CNEL: 42 92 197 425							-	-				
			C	NEL:	4	12	9:	2		197		425

	FH\	WA-RD-77-108	HIGHV	WAY N	IOISE P	REDICTION	ON MO	DEL			
Road Nam	io: Year 2019 ie: Warren Rd int: s/o Stetson		t				Name: ımber:		o Diamante	9	
	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data					Site Cor	nditions (Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	12,300 vehicles	S					Autos:			
Peak Hour	Percentage:	10%				edium Tru					
Peak H	lour Volume:	1,230 vehicles	S		He	eavy Truc	ks (3+)	Axles):	15		
	hicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		İ	Veh	nicleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			М	ledium Tru	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0				Heavy Tru	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis		70.0 feet		H	Maiaa C	ource Ele	n rotion	o (in f	004)		
Centerline Dist.	to Observer:	70.0 feet		H.	worse 3	Autos		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		006	Grade Adj	iietmar	#: 0.0
Pa	ad Elevation:	0.0 feet			rica	vy Trucks	. 0.	000	Orace Au	usunci	t. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
1	Road Grade:	0.0%				Autos	: 56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	065			
	Right View:	90.0 degree	es		Hear	vy Trucks	: 56.	.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Atte	en Be	rm Atten
Autos:	68.46	-1.05		-0.8	7	-1.20		-4.72	0.0	100	0.000
Medium Trucks:	79.45	-18.29		-0.8	5	-1.20		-4.88	0.0	100	0.000
Heavy Trucks:	84.25	-22.25		-0.8	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq N	Vight		Ldn	(CNEL
Autos:	65	.3	63.4		61.7		55.6	3	64.2	2	64.8
Medium Trucks:	59	.1	57.6		51.2		49.7	7	58.2	2	58.4
Heavy Trucks:	60		58.5		49.5		50.7		59.1		59.2
Vehicle Noise:	67	.2	65.4		62.3		57.0	6	66.2	2	66.6
Centerline Distant	ce to Noise Co	ontour (in feet)								
				70 (65 a		- (60 dBA		5 dBA
			Ldn:	-	9	84			180		388
		CI	VEL:	4	2	90)		193		416

	FHW	/A-RD-77-108 HIG	HWAY N	OISE P	REDICT	ION MODEL		
	e: Warren Rd.	Vithout Project				Name: Ran lumber: 9792		е
SITE S	PECIFIC IN	PUT DATA			-	NOISE MOD	EL INPUT	S
Highway Data			5	Site Cor	ditions	(Hard = 10,	Soft = 15)	
Average Daily T Peak Hour F Peak Ho	. ,	9,800 vehicles 10% 980 vehicles				Auto rucks (2 Axles cks (3+ Axles	s): 15	
Veh	icle Speed:	40 mph	1	/ehicle	Mix			
Near/Far Lan	e Distance:	84 feet	F	Ver	icleType	e Dav	Evening	Night Daily
Site Data						Autos: 77.5	% 12.9%	9.6% 97.42%
Rarı	rier Heiaht:	0.0 feet		М	edium T	rucks: 84.8	4.9%	10.3% 1.84%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 86.5	3% 2.7%	10.8% 0.74%
Centerline Dist	t. to Barrier:	70.0 feet		Voise S	ource E	levations (in	feet)	
Barrier Distance te Observer Height (A Pai Roai R	Centerline Dist. to Observer: 70.0 feet					s: 0.000 s: 2.297 s: 8.006 t Distance (i s: 56.223 s: 56.065 s: 56.081		iustment: 0.0
FHWA Noise Mode								
VehicleType Autos:	REMEL 66.51	Traffic Flow D	istance -0.87		Road -1.20	Fresnel -4.7	Barrier Atte	
Medium Trucks:	77.72	-1.55	-0.85		-1.20	-4.7 -4.8		0.000
Heavy Trucks:	82.99	-10.77	-0.85		-1.20	-4.0 -5.2		0.000
Unmitigated Noise	Levels (with	out Topo and bar	rier atten	uation)				
	Leg Peak Hou		Leg Ev		Leg	Night	Ldn	CNEL
Autos:	62.	9 61.0		59.3		53.2	61.8	62.4
Medium Trucks:	56.	9 55.4		49.0		47.5	55.9	56.2
Heavy Trucks:	58.	2 56.8		47.8		49.0	57.4	57.5
Vehicle Noise:	64.	9 63.2		59.9		55.4	63.9	64.4
Centerline Distance	e to Noise Co	ntour (in feet)						
			70 a	IBA	65	dBA	60 dBA	55 dBA
		Ldn	27	7		59	128	275
		CNEL	29	9	•	63	137	294

	FH\	WA-RD-77-108	HIGHW	AY N	DISE P	REDICT	ION MODE	-		
	e: Warren Rd		t				t Name: Rar lumber: 979	icho Diamant 2	е	
SITE S	SPECIFIC IN	NPUT DATA						DEL INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard = 10,	Soft = 15)		
	Traffic (Adt): Percentage: our Volume:	14,200 vehicle: 10% 1,420 vehicle:					Auto rucks (2 Axle rcks (3+ Axle	s): 15		
Vel	hicle Speed:	40 mph		ν	ehicle	Mix				
Near/Far Lar	ne Distance:	84 feet		Ė		icleType	e Da	/ Evening	Night	Daily
Site Data					*011		Autos: 77.		9.6%	,
Rar	rier Height:	0.0 feet			М	edium T	rucks: 84.	8% 4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0				Heavy T	rucks: 86.	5% 2.7%	10.8%	6 0.74%
Centerline Dis	st. to Barrier:	70.0 feet			loise S	nurce F	levations (in	n feet)		
Roa	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		L	Heav	Auto m Truck ry Truck uivalen	s: 2.297 s: 8.006 t Distance (justmer	nt: 0.0
	Left View: Right View:	-90.0 degree				m Truck ry Truck	s: 56.065			
FHWA Noise Mode						1		1		
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresnel	Barrier Att	_	erm Atten
Autos:	66.51			-0.87		-1.20	-4.7		000	0.000
Medium Trucks: Heavy Trucks:	77.72 82.99			-0.85 -0.85		-1.20 -1.20	-4.8 -5.2		000	0.000
Unmitigated Noise	l evels (with	out Topo and	harrier	atteni	ation)					
	Leq Peak Ho			eq Ev		Lea	Night	Ldn		CNEL
Autos:			62.6		60.9		54.8	63.4	4	64.0
Medium Trucks:	58	3.5	57.0		50.6		49.1	57.6	6	57.8
Heavy Trucks:	59	9.8	58.4		49.4		50.6	59.0)	59.1
Vehicle Noise:	66	6.5	64.8		61.5		57.0	65.	5	66.0
Centerline Distance	e to Noise C	ontour (in feet)							
				70 di	BA	65	dBA	60 dBA	5	5 dBA
			Ldn:	35			76	163		352
		CI	VEL:	38		1	81	175		377

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	1 YAW	IOISE PI	REDICTION	ON MO	ODEL			
	e: Sanderson					Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC II	NPUT DATA			Site Con	N nditions (L INPUT	s	
Average Daily i Peak Hour I Peak Ho	. ,	23,900 vehicles 10% 2,390 vehicles 30 mph			Me He	edium Tru eavy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lar		50 feet		H	Vehicle I	icleType		Day	Evening	Night	Dailv
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium Tro Heavy Tro		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		54.0 feet		İ	Noise So	ource Ele	vatio	ns (in f	eet)		
Centerline Dist. t Barrier Distance t Observer Height (o Observer:	54.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks y Trucks	: 2	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%				Autos	: 48	3.125			
	Left View: Right View:	-90.0 degree				m Trucks ⁄y Trucks		7.941 7.959			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier At		m Atten
Autos:	61.75			0.1	-	-1.20		-4.67		000	0.000
Medium Trucks:	73.48			0.1		-1.20		-4.87		000	0.000
Heavy Trucks:	79.92			0.1		-1.20		-5.39	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Ho			Leq E	vening	Leq N		^	Ldn		NEL
Autos: Medium Trucks:	-		52.4 57.3		60.6 50.9		54 49		63.: 57.:	_	63.8 58.1
Heavy Trucks:			57.3 59.9		50.9		49 52		60.	-	58.° 60.6
Vehicle Noise:	-		65.1		61.5		57		65.	•	66.2
Centerline Distanc	e to Noise C	ontour (in feet)								
Dictano		(111100)	T	70	dBA	65 d	BA		60 dBA	55	dBA
			Ldn:	2	8	61			132	2	83
		CI	VEL:	3	0	65	5		140	3	02

	FHV	VA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MO	DDEL			
Road Nam	io: Year 2019 vie: Sanderson nt: n/o Stetson	Av.	t				t Name: lumber:		o Diamante	е	
SITE :	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	S	
					Site Coi	iaitions	(naru :				
Average Daily	. ,		S					Autos:	15		
	Percentage:	10%				edium Tr			15		
	lour Volume:	2,690 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
	hicle Speed:	45 mph		İ	Vehicle	Mix					
Near/Far La	ne Distance:	50 feet		İ	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	st. to Barrier:	54.0 feet		İ	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	54.0 feet		l		Auto	s: 0	.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustmer	t: 0.0
Pa	ad Elevation:	0.0 feet				•					
Roa	ad Elevation:	0.0 feet			Lane Eq				feet)		
ı	Road Grade:	0.0%				Auto		.125			
	Left View:	-90.0 degre	es			m Truck		.941			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 47	.959			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres		Barrier Att	en Be	rm Atten
Autos:	68.46	2.35		0.1	15	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	79.45	-14.89		0.1	17	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.85		0.1	17	-1.20		-5.39	0.0	000	0.000
Unmitigated Noise		-	barri	er atte	nuation)						
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn		CNEL
Autos:	69		67.9		66.1		60.	-	68.7		69.3
Medium Trucks:	63		62.0		55.7		54.	1	62.6		62.8
Heavy Trucks: Vehicle Noise:	64 71		63.0 69.9		53.9 66.7		55. 62.		63.5 70.6		63.6 71.0
					66.7		62	U	70.6)	/1.0
Centerline Distant	ce to Noise Co	ontour (in feet		70	dBA	65	dBA	6	60 dBA	5	5 dBA
			Ldn:		59	1	27		273		589
		Ci	NEL:		63	1	36		293		632

	FH	WA-RD-77-10	B HIGI	HWAY N	OISE P	REDICT	ION M	ODEL			
Road Nam	io: Year 2019 le: Florida Av. nt: e/o Warrer		ct				Name. lumber.		o Diamant	Э	
SITE :	SPECIFIC II	NPUT DATA			ite Cor			MODE = 10, Sc	L INPUT	S	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume: hicle Speed:	24,800 vehicle 10% 2,480 vehicle 50 mph			Ме Не	edium Tr eavy Tru	ucks (2	Autos: Axles):	15 15 15		
Near/Far La	ne Distance:	84 feet		V	ehicle	iviix nicleType		Dav	Evening	Night	Daily
Site Data					VCI		Autos:	77.5%	U	9.6%	,
	rrier Height: 'all, 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks:	84.8% 86.5%	4.9%	10.3%	1.84%
Centerline Dis	st. to Barrier:	70.0 feet			laisa S	ource F	lovatio	ns (in fe	of)		
Centerline Dist. Barrier Distance Observer Height (Pa	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Auto m Truck vy Truck	s: 0 s: 2	0.000 2.297 3.006	Grade Ad	iustment	± 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in :	feet)		
ı	Road Grade: Left View: Right View:	0.0% -90.0 degre 90.0 degre				Auto m Truck vy Truck	s: 56	5.223 5.065 5.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	70.20	1.54	ļ.	-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-15.70)	-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-19.66	6	-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	l barri	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	У	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	69	9.7	67.8		66.0		60	.0	68.6	3	69.2
Medium Trucks:		3.2	61.7		55.4		53	.8	62.3		62.
Heavy Trucks:		3.7	62.2		53.2		54		62.8		62.9
Vehicle Noise:	71	1.4	69.6		66.6		61	.8	70.3	3	70.8
Centerline Distant	ce to Noise C	ontour (in fee	t)								
			l	70 d			dBA	1 6	0 dBA		dBA
			Ldn:	74			59		342		737
		C	NEL:	79	,	1	71		368	7	792

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	TION MOI	EL			
	: Florida Av.		t				t Name: F Number: 9		Diamante		
	PECIFIC IN	IPUT DATA							L INPUTS		
Highway Data				S	ite Cor	ditions	(Hard =	10, So	ft = 15)		
	Percentage: our Volume: icle Speed:	23,700 vehicle 10% 2,370 vehicle 50 mph 78 feet		V		avy Tru	rucks (2 A	,	15 15 15		
Neal/Fal Lall	e Distance.	76 1661			Veh	icleTyp		Day	-	Night	Daily
Site Data Barrier Type (0-Wa	ier Height: II, 1-Berm):	0.0 feet 0.0				edium 7 Heavy 7	rucks:	77.5% 84.8% 86.5%	12.9% 4.9% 2.7%	9.6% 10.3% 10.8%	97.42% 1.84% 0.74%
Centerline Dist	to Barrier:	76.0 feet		N	oise S	ource E	levations	(in fe	et)		
Centerline Dist. to Barrier Distance to Observer Height (A Pac Road R	L	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300						0.0			
FHWA Noise Mode	l Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el l	Barrier Atte	n Beri	m Atten
Autos:	70.20	1.34		-1.85		-1.20		4.73	0.00		0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-15.90 -19.86		-1.84 -1.84		-1.20 -1.20		4.88 5.25	0.00		0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	iation)						
	eq Peak Hou			Leg Eve		Leq	Night		Ldn	CN	IEL
Autos:	68	3.5	66.6		64.8		58.8		67.4		68.0
Medium Trucks:	62	2.1	60.6		54.2		52.6		61.1		61.3
Heavy Trucks:	62		61.1		52.0		53.3		61.6		61.8
Vehicle Noise:	70).2	68.4		65.4		60.6		69.2		69.6
Centerline Distance	e to Noise C	ontour (in fee	t)								
			L	70 dl			i dBA		0 dBA		dBA
		_	Ldn:	67			144		310		67
		С	NEL:	72		1	154		333	7	17

Monday, January 25, 2016

	FH	IWA-RD-77	-108 HIGH	HWAY N	IOISE PE	REDICTION	ON MC	DDEL			
	io: Year 2019 ne: Florida Av nt: e/o Myers	٠.	oject			Project N Job Nu			no Diamant	е	
	SPECIFIC I	NPUT DA	ГА						L INPUT	s	
Highway Data					Site Con	ditions (Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,200 veh	nicles					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2	Axles).	15		
Peak H	lour Volume:	2,220 veh	nicles		He	avy Truck	ks (3+	Axles).	15		
Ve	hicle Speed:	35 mp	h	-	Vehicle I	Miv					
Near/Far La	ne Distance:	84 fee	t	F		icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%		9.6%	
Pa Pa	rrier Heiaht:	0.0 fe	-4		Me	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0	CL		F	Heavy Tru	ıcks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di		70.0 fe	et	L.							
Centerline Dist.		70.0 fe		1	Voise So	ource Ele			eet)		
Barrier Distance	to Observer:	0.0 fe				Autos:		.000			
Observer Height	(Above Pad):	5.0 fe	et			m Trucks:		.297			
	ad Elevation:	0.0 fe			Heav	y Trucks:	: 8	.006	Grade Ad	justment	: 0.0
Ro	ad Elevation:	0.0 fe	et	1	Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Autos	: 56	.223			
	Left View:	-90.0 de	egrees		Mediui	m Trucks:	: 56	.065			
	Right View:	90.0 de	egrees		Heav	y Trucks:	: 56	.081			
FHWA Noise Mod	el Calculation	ns									
VehicleType	REMEL	Traffic Flo	ow Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Ber	m Atten
Autos:	64.30		2.60	-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	75.75	5 -14	1.63	-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	81.57	7 -18	3.59	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (wit	hout Topo	and barri	ier atten	uation)						
VehicleType	Leq Peak Ho	our Leq	Day	Leq E	/ening	Leq ∧	light		Ldn		NEL
Autos:	6	4.8	62.9		61.2		55.	1	63.	7	64.3
Medium Trucks:		9.1	57.6		51.2		49.		58.		58.3
Heavy Trucks:		0.9	59.5		50.5		51.		60.		60.2
Vehicle Noise:	6	7.1	65.4		61.9		57.	.5	66.	1	66.
Centerline Distan	ce to Noise C	Contour (in	feet)								
				70 c		65 d			60 dBA		dBA
			Ldn:	3	-	82	-		177		882
			CNEL:	4	1	88	3		189	4	108

Monday, January 25, 2016

	FHV	/A-RD-77-108	HIGH	IWAY I	NOISE P	REDICTI	ION MO	DEL			
Road Nam	io: Year 2019 \ ne: Stowe Rd. nt: w/o Californ	,	t				Name: umber:		o Diamante	е	
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	2,700 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	ucks (2	Axles):	15		
Peak H	lour Volume:	270 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		H	Vehicle	Miv					
Near/Far La	ne Distance:	36 feet		F		nicleType	.	Dav	Evenina	Niaht	Dailv
Site Data					*0,		Autos:	77.5%		9.69	
	rrier Height:	0.0 feet			M	ledium Tr	rucks:	84.8%		10.39	
Barrier Type (0-W		0.0 1661				Heavy Tr	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di		47.0 feet		-							
Centerline Dist.		47.0 feet		-	Noise S	ource El		٠,	eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height	(Above Pad):	5.0 feet				m Trucks		.297			
	ad Elevation:	0.0 feet			Hea	vy Trucks	s: 8	.006	Grade Ad	ustmer	it: 0.0
	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 43	.704			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 43	.501			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 43	.521			
FHWA Noise Mod	el Calculation:	3									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:	66.51	-7.13		0.7	77	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	77.72	-24.36		0.8	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-28.32		0.8	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	59.	0	57.1		55.3		49.	2	57.9)	58.5
Medium Trucks:	53.	0	51.4		45.1		43.	5	52.0)	52.2
Heavy Trucks:	54.	3	52.9		43.8	i	45.	1	53.4	1	53.5
Vehicle Noise:	61.	0	59.2		56.0)	51.	4	60.0)	60.4
Centerline Distant	ce to Noise Co	ntour (in feet)								
				70	dBA		dBA	6	0 dBA	5	5 dBA
			Ldn:		10	_	2		47		101
		CI	VEL:		11	2	:3		50		108

	FH\	VA-RD-77-108	HIG	HWAY	NOISE P	REDICT	ION MOI	DEL			
Road Nan	rio: Year 2019 ne: Grand Av. nt: w/o Calvert	Without Project Av.					Name: I lumber: 9		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	;					Autos:			
Peak Hour	Percentage:	10%					ucks (2 A				
Peak H	Hour Volume:	10 vehicles	;		He	eavy Trui	cks (3+ A	(xles	15		
Ve	ehicle Speed:	40 mph		F	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ŀ		icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.429
Ro	rrier Heiaht:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di		70.0 feet		ļ.							
Centerline Dist.			-	Noise Source Elevations (in feet)							
Barrier Distance				Autos: 0.000							
Observer Height		0.0 feet 5.0 feet				m Truck		297			
	ad Flevation:	0.0 feet			Hea	vy Truck	s: 8.0	006	Grade Ad	justment	: 0.0
-	ad Elevation: ad Flevation:	0.0 feet		f	Lane Ed	uivalen	t Distanc	e (in	feet)		
	Road Grade:	0.0%		f		Auto			,		
	Left View:	-90.0 degree			Mediu	m Truck					
	Right View:	90.0 degree				vy Truck					
						,					
FHWA Noise Mod	lel Calculation REMEL	s Traffic Flow	_	stance	1	Road	Fresn	-/	Barrier Att	0	rm Atten
VehicleType Autos:		-21.44	DI	-0.8		-1.20		ei -4.72		en Bei	711 Atten
Medium Trucks:		-21.44		-0.6		-1.20		-4.72 -4.88		000	0.00
Heavy Trucks:		-42.63		-0.6	-	-1.20		-5.28		000	0.00
Unmitigated Nois		out Tono and	harr	ior atto	nuation)				-		
VehicleType	Leq Peak Hou		_		vening	Lea	Night		l dn		NEL
Autos:			11.1	Log L	39.3		33.3		41.9		42.
Medium Trucks:			35.5		29.1		27.6		36.0	-	36
Heavy Trucks:			36.9		27.9		29.1		37.5	-	37
Vehicle Noise:			13.3		40.0		35.5		44.0		44.
Centerline Distan	ce to Noise Co	ontour (in feet)									
		(111 1001)		70	70 dBA 65 dBA 60 dBA 55 dBA					dBA	
			'					•		-	

	FHV	VA-RD-77-108	HIGH	A YAWI	IOISE P	REDICT	ION M	ODEL			
Road Nan	rio: Year 2019 ne: Grand Av. ent: e/o Patters	,	t				Name. lumber		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:			
	Percentage:	10%				dium Tr		/			
	lour Volume:	10 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ı	Veh	icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist. to Barrier:	70.0 feet		-	Noise S	ouroo E	lovetio	no lin f	004)		
Centerline Dist.	to Observer:	70.0 feet		· ·	voise 3	Auto		0.000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.006	Grade Ad	iuetmani	- 00
P	ad Elevation:	0.0 feet								Justinoni	. 0.0
Ro	ad Elevation:	0.0 feet		, i	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	3.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Hea	/y Truck	s: 56	5.081			
FHWA Noise Mod	lel Calculation	-									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att	_	rm Atten
Autos:		-21.44		-0.8		-1.20		-4.72		000	0.00
Medium Trucks:		-38.68		-0.8	-	-1.20		-4.88		000	0.00
Heavy Trucks:	82.99	-42.63		-0.8	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Nois			barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq E		Leq	Night		Ldn		NEL
Autos:			41.1		39.3		33		41.9	-	42.
Medium Trucks:			35.5		29.1		27		36.0		36.
Heavy Trucks:			36.9		27.9		29		37.5		37.
Vehicle Noise:	45	.0	43.3		40.0		35	.5	44.0)	44.
Centerline Distan	ce to Noise Co	ontour (in feet)	70	10.4		10.4				
				70 0	JDA	05	dBA	1 6	60 dBA	1 55	dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	MAY N	IOISE PE	REDICTIO	N MOD	EL			
Road Nam	io: Year 2019 e: Grand Av. nt: e/o Calvert	Without Project Av.	t				lame: R mber: 9		o Diamante		
SITE	SPECIFIC IN	IPUT DATA				NC	ISE M	ODE	L INPUTS		
Highway Data					Site Con	ditions (l	lard = 1	0, Sc	oft = 15)		
	Traffic (Adt): Percentage: our Volume:	100 vehicles 10% 10 vehicles				dium Truc avy Truck	ks (2 Ax	,	15 15 15		
Ve	hicle Speed:	40 mph		H	Vehicle I	Miv					
Near/Far Lai	ne Distance:	84 feet		-		icleType	Γ.)av	Evening I	Vight	Daily
Site Data								7.5%	-	9.6%	97.42%
Barrier Type (0-W	. ,	0.0 feet 0.0				edium Tru Heavy Tru		4.8% 6.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		70.0 feet		1	Noise So	ource Ele	vations	(in fe	eet)		
Centerline Dist. Barrier Distance Observer Height (to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos: m Trucks: ry Trucks:	2.29	97	Grade Adju	stment:	0.0
Ros	ad Elevation:	0.0 feet		1	Lane Eq	uivalent l	Distance	e (in t	feet)		
F	Road Grade:	0.0%		Ī		Autos:	56.22	23			
	Left View: Right View:	-90.0 degree				m Trucks: y Trucks:					
FHWA Noise Mode	al Calculation	e									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	/	Barrier Atter	Beri	m Atten
Autos:	66.51	-21.44		-0.8	7	-1.20	-4	1.72	0.00	0	0.000
Medium Trucks:	77.72	-38.68		-0.8		-1.20	-4	4.88	0.00	0	0.000
Heavy Trucks:	82.99	-42.63		-0.8	5	-1.20	-4	5.28	0.00	0	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq N	ight		Ldn	CI	VEL
Autos:	43	.0	41.1		39.3		33.3		41.9		42.5
Medium Trucks:	37	.0	35.5		29.1		27.6		36.0		36.3
Heavy Trucks:	38	.3 :	36.9		27.9		29.1		37.5		37.6
Vehicle Noise:	45	.0	43.3		40.0	•	35.5		44.0		44.4
Centerline Distanc	ce to Noise Co	ontour (in feet))								
				70 d	dBA	65 dl	3A	6	i0 dBA	55	dBA
			Ldn:	1		3			6		3
		CI	VEL:	1	l	3			6	1	4

	FHW	/A-RD-77-108	HIG	1 YAWH	NOISE P	REDICTI	ON MOD	EL			
Road Nan	rio: Year 2019 V ne: Stetson Av. nt: e/o SR-79 S	(S.)	t				Name: R umber: 9		o Diamante)	
	SPECIFIC IN	PUT DATA							L INPUTS	3	
Highway Data					Site Cor	nditions	(Hard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10%					ıcks (2 A.		15		
Peak H	Hour Volume:	10 vehicle	s		He	eavy Truc	ks (3+ A	kles):	15		
Ve	ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet				icleType	L	Day	Evening	Night	Daily
Site Data						F	lutos: 7	7.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tr	ucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy Tr	ucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet		-	Maine C	ouroo El	evations	(in fe	na41		
Centerline Dist.	to Observer:	70.0 feet			Noise 3	Auto:		•	el)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Autos m Trucks					
Observer Height	(Above Pad):	5.0 feet				vy Trucks			Grade Adi	uetmont	. 0.0
P	ad Elevation:	0.0 feet			пеа	vy Trucks	s. 0.U	00	Grade Auj	usunent	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos	s: 56.2	23			
	Left View:	-90.0 degree	es		Mediu	m Trucks	56.0	65			
	Right View:	90.0 degre	es		Hear	vy Trucks	56.0	81			
FHWA Noise Mod	lel Calculations	:									
VehicleType	REMEL	Traffic Flow	D	istance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	-22.41		-0.8	7	-1.20	-	4.72	0.0	00	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20	-	5.28	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	CI	VEL
Autos:	45.	7	43.8		42.1		36.0		44.6	i	45.2
Medium Trucks:	39.	3	37.8		31.4		29.9		38.4		38.6
Heavy Trucks:	39.	7	38.3		29.3		30.5		38.9	1	39.0
Vehicle Noise:	47.	4	45.7		42.6		37.8		46.4		46.9
Centerline Distan	ce to Noise Co	ntour (in feet)								
-				70	dBA	65		6	0 dBA	55	dBA
			Ldn:		2	4	1		9		19

	FHW	/A-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION MOE	DEL		
	o: Year 2019 V e: Stetson Av. t: w/o Californ	(S.)	1				t Name: F lumber: 9	Rancho Dian 1792	nante	
	PECIFIC IN	PUT DATA						ODEL INF		
Highway Data				S	ite Cor	ditions	(Hard =	10, Soft = 1	5)	
	Percentage: our Volume: nicle Speed:	100 vehicles 10% 10 vehicles 50 mph 84 feet		ν	He ehicle	avy Tru Mix	ucks (2 A cks (3+ A	xles): 15		
	c Distance.	04 1001			Veh	icleTyp		Day Even	-	ight Daily
Barrier Type (0-Wa	. ,	0.0 feet 0.0				edium 7 Heavy 7	rucks: 8	34.8% 4.	9% 1	9.6% 97.42% 0.3% 1.84% 0.8% 0.74%
Centerline Dis Centerline Dist. t		70.0 feet 70.0 feet		Ν	loise S	ource E	levations	(in feet)		
Barrier Distance to Observer Height (A Pa Roa	o Observer: Above Pad): d Elevation: d Elevation: coad Grade:	0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		L	Hear ane Eq	Auto	s: 2.2 s: 8.0 t Distanc s: 56.2	97 06 <i>Grade</i> e (in feet) 23	e Adjusi	tment: 0.0
	Left View: Right View:	-90.0 degree				m Truck vy Truck				
FHWA Noise Mode										
VehicleType Autos:	70.20	Traffic Flow -22.41	Dist	ance -0.87		-1.20	Fresne	el Barrie 4.72	n Atten 0.000	Berm Atten 0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-39.65 -43.60		-0.85 -0.85		-1.20 -1.20 -1.20		4.72 4.88 5.28	0.000	0.000
Unmitigated Noise	Levels (witho	out Topo and	barrie	r attenu	ıation)					
VehicleType	Leq Peak Hou			Leq Ev	ening	Leq	Night	Ldn		CNEL
Autos:	45.	-	43.8		42.1		36.0		44.6	45.2
Medium Trucks:	39.		37.8		31.4		29.9		38.4	38.6
Heavy Trucks: Vehicle Noise:	39. 47.		38.3 45.7		29.3 42.6		30.5 37.8		38.9 46.4	39.0 46.9
Centerline Distance		•			.2.0		00			70.5
Jenterinie Distant	e to Noise CO	mour (mrieet)		70 di	BA	65	dBA	60 dB/	1	55 dBA
	Ldn:			2		4 9 19		19		
		CI	VEL:	2			4	9		20

	FHV	/A-RD-77-108	HIGH	1 YAW	IOISE P	REDICTI	ON MO	DDEL			
Road Nam	io: Year 2019 \ne: Stetson Av. nt: e/o SR-79 \	(S.)	t				Name: umber:		o Diamant	е	
SITE Highway Data	SPECIFIC IN	PUT DATA			Cito Cos	N ditions			L INPUT	S	
Average Daily	Traffic (Adt):	100 vehicle	3					Autos:	15		
	Percentage: lour Volume:	10% 10 vehicle	8			dium Tru avy Truc		,			
	hicle Speed: ne Distance:	50 mph 84 feet			Vehicle	Mix icleType		Dav	Evening	Night	Daily
Site Data							lutos:	77.5%	12.9%	9.6%	97.42%
Ba. Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr		84.8% 86.5%		10.3% 10.8%	
Centerline Di Centerline Dist. Barrier Distance	to Observer: to Observer:	70.0 feet 70.0 feet 0.0 feet				Autos M Trucks	s: 0	ns (in f	eet)		
	(Above Pad): ad Elevation: ad Elevation:	5.0 feet 0.0 feet 0.0 feet				vy Trucks uivalent		.006 nce (in	Grade Adj	iustment	: 0.0
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks yy Trucks	s: 56	5.223 5.065 5.081			
FHWA Noise Mod											
VehicleType Autos:	REMEL 70.20	Traffic Flow -22.41	Dis	tance -0.8		Road -1.20	Fres	-4.72	Barrier Att	en Ber 000	m Atten 0,000
Medium Trucks: Heavy Trucks:	81.00 85.38	-39.65 -43.60		-0.8		-1.20 -1.20		-4.88 -5.28	0.0	000	0.000
Unmitigated Nois			_					_			
VehicleType	Leq Peak Hou		_	Leq E		Leq	Night		Ldn		NEL 45.0
Autos: Medium Trucks:	45. 39.		43.8 37.8		42.1 31.4		36. 29.	-	44.6 38.4	-	45.2 38.6
Heavy Trucks:	39.	7	38.3		29.3		30.	.5	38.9	9	39.0
Vehicle Noise:	47.	4	45.7		42.6		37.	.8	46.4	1	46.9
Centerline Distant	ce to Noise Co	ntour (in feet)	70		05		_	20 -104		-10.4

Monday, January 25, 2016

Oi V 221211			NOISE PI	LEDIOTI	JIV IVI	JUEL			
Scenario: Year 2019 Wit Road Name: Stetson Av. (S Road Segment: e/o California	S.)			Project I Job Nu			no Diamant	е	
SITE SPECIFIC INPU	UT DATA		Site Con	N ditions (L INPUT	S	
* '	100 vehicles 10% 10 vehicles 50 mph 84 feet		Me He Vehicle i	dium Tru avy Truc	cks (2	Autos Axles)	15	Night	Dailv
Site Data			ven		utos:	77.5%		9.6%	. ,
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			edium Tri Heavy Tri		84.89 86.59	4.9%	10.3%	1.84%
	70.0 feet	Ì	Noise So	ource Ele	evatio	ns (in t	eet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet		Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0						t: 0.0
Road Elevation:	0.0 feet	l	Lane Eq	uivalent	Dista	nce (in	feet)		
	0.0% -90.0 degrees 90.0 degrees			Autos m Trucks ry Trucks	: 56	5.223 5.065 5.081			
FHWA Noise Model Calculations									
	raffic Flow D	istance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos: 70.20	-22.41	-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks: 81.00	-39.65	-0.8		-1.20		-4.88		000	0.000
Heavy Trucks: 85.38	-43.60	-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Levels (withou								1 -	
VehicleType Leq Peak Hour Autos: 45.7	Leq Day 43.8		ening 42.1	Leq N	light 36	^	Ldn 44.6		NEL 45.2
Medium Trucks: 39.3	43.6 37.8		31.4		29	-	38.4	-	38.6
Heavy Trucks: 39.7	38.3		29.3		30	-	38.9		39.0
Vehicle Noise: 47.4	45.7		42.6		37	.8	46.4	4	46.9
Centerline Distance to Noise Cont	tour (in feet)								
			dBA	65 d	IBA		60 dBA	55	dBA
	Ldn:						19		
	CNFL:		2	4			9		20

	FHW	/A-RD-77-108	HIGH	IWAY I	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Year 2019 V ne: Stetson Av. nt: e/o Street "C	(S.)	t				Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	600 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2 .	Axles):	15		
Peak H	lour Volume:	60 vehicle	S		He	avy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	50 mph		ŀ	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		ŀ		icleType		Dav	Evenina	Niaht	Dailv
Site Data					V C/		utos:	77.5%		9.6%	
		0.0 feet		-	М	edium Tr		84.8%		10.3%	
	rrier Height:	0.0 reet 0.0				Heavy Tr		86.5%		10.8%	
Barrier Type (0-W Centerline Di:		70.0 feet		L						10.07	0.1 170
Centerline Dist.		70.0 feet		L	Noise S	ource El	evation	ıs (in fe	eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height (5.0 feet				m Trucks		297			
	ad Elevation:	0.0 feet			Hear	vy Trucks	8: 8.	.006	Grade Adj	iustmen	t: 0.0
	ad Elevation: ad Flevation:	0.0 feet		ŀ	Lane Eo	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%		f		Autos		223	,		
•	Left View:	-90.0 degre	29		Mediu	m Trucks		.065			
	Right View:	90.0 degree			Hear	vy Trucks	: 56	.081			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-14.63		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-31.87		-0.8	15	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-35.82		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	(NEL
Autos:	53.	5	51.6		49.8		43.	8	52.4	1	53.0
Medium Trucks:	47.	1	45.6		39.2		37.	7	46.1		46.4
Heavy Trucks:	47.	5	46.1		37.0		38.	3	46.7	7	46.8
Vehicle Noise:	55.	2	53.5		50.4		45.	6	54.2	2	54.6
Centerline Distant	ce to Noise Co	ntour (in feet)								
			L		dBA	65 (6	60 dBA	55	5 dBA
			Ldn:		6	1	-		29		62
		CI	VEL:		7	1	4		31		66

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MO	DEL			
	e: Stetson Av		t				t Name: Number:		o Diamante	Э	
	PECIFIC IN	IPUT DATA							L INPUT	5	
Average Daily 1 Peak Hour I	Percentage:	2,400 vehicle 10%			Ме	dium Ti	rucks (2)	Autos: Axles):	15 15		
	our Volume: nicle Speed: ne Distance:	240 vehicle 50 mph 84 feet	S	١	/ehicle		e (3+)	Axies): Dav	15 Evening	Night	Daily
Site Data Barrier Type (0-Wa	rier Height:	0.0 feet			М		Autos: rucks:	77.5% 84.8% 86.5%	12.9%	9.6% 10.3% 10.8%	97.42%
Centerline Dist. to	t. to Barrier: o Observer:	70.0 feet 70.0 feet		٨			levation				
Barrier Distance to Observer Height (A Pa		0.0 feet 5.0 feet 0.0 feet				m Truck vy Truck	ks: 2.	297 006	Grade Adj	ustmen	t: 0.0
R	d Elevation: Poad Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre		L	Lane Equivalent Distance (in feet) Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081						
FHWA Noise Mode	I Calculation	s									
VehicleType Autos: Medium Trucks:	70.20 81.00	-8.61 -25.84		-0.87 -0.85		-1.20 -1.20	Fresr	-4.72 -4.88	0.0 0.0	100	0.000 0.000
Heavy Trucks:	85.38	-29.80		-0.85		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise							A.CLet	1	I do		A I E I
VehicleType Autos:	Leq Peak Hou		57.6	Leq Ev	ening 55.9	Leq	Night 49.8	1	Ldn 58.4		NEL 59.0
Medium Trucks:	53		51.6		45.2		43.7		52.2		52.4
Heavy Trucks:	53	.5	52.1		43.1		44.3	3	52.7	,	52.8
Vehicle Noise:	61	.2	59.5		56.4		51.6	6	60.2	2	60.7
Centerline Distanc	e to Noise C	ontour (in feet)								
			Ldn:	70 a			33	6	72		155
		C	NEL:	17	7		36		78		167

	FH'	WA-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION MC	DEL			
	: Stetson Av		t				t Name: lumber:		no Diamant	е	
SITE S Highway Data	PECIFIC II	IPUT DATA			ito Cor				L INPUT: oft = 15)	S	
Average Daily T Peak Hour F Peak Ho	. ,	1,800 vehicle 10% 180 vehicle 50 mph			Ме Не	edium Tr eavy Tru	•	Autos: Axles):	15		
Near/Far Lan		84 feet		V	ehicle			Dav	Evening	Minht	Doile
Site Data					ven	icleType	Autos:	77.5%	Ü	Night 9.6%	Daily 6 97.42%
Barrier Type (0-Wa	ier Height: II, 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks: rucks:	84.8% 86.5%		10.39 10.89	
Centerline Dist		70.0 feet		٨	loise S	ource E	levation	ıs (in f	eet)		
Road	o Observer: lbove Pad): d Elevation: d Elevation: oad Grade:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		L	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustmen Lane Equivalent Distance (in feet) Autos: 56.223 Medium Trucks: 56.065					t: 0.0	
ı	Left View: Right View:	-90.0 degre				m Truck /y Truck		.081			
FHWA Noise Model											
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	-27.09	Dist	-0.87 -0.85 -0.85		-1.20 -1.20 -1.20	Fresi	-4.72 -4.88 -5.28	0.0	en Be 000 000 000	0.000 0.000 0.000
			f			-1.20		0.20	0.0	,00	0.000
VehicleType L	Leveis (with Leg Peak Ho			Leg Ev		Lea	Night	Т	Ldn	-	CNEL
Autos:			56.4	Log Lv	54.6		48.	6	57.2		57.8
Medium Trucks:	51	.9	50.3		44.0		42.	4	50.9	9	51.1
Heavy Trucks:	52	2.3	50.9		41.8		43.	1	51.4	1	51.6
Vehicle Noise:	60	0.0	58.2		55.2		50.	4	58.9	9	59.4
Centerline Distance	e to Noise C	ontour (in feet)								
				70 di			dBA		60 dBA	5	5 dBA
			Ldn:	13			28		60		128
		C	NEL:	14		;	30		64		138

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	NAY N	OISE PI	REDICT	ION M	DDEL			
Road Name	o: Year 2019 e: Stetson Av nt: e/o Warren		!				Name: lumber:		no Diamant	е	
SITE S	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3					Autos	15		
Peak Hour	Percentage:	10%				dium Tri		,			
Peak H	our Volume:	10 vehicles	3		He	avy Truc	cks (3+	Axles)	15		
Vel	hicle Speed:	50 mph		١	ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data						-	Autos:	77.5%	6 12.9%	9.6%	97.42%
Rar	rier Height:	0.0 feet			M	edium Ti	rucks:	84.89	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		٨	loise So	ource El	levatio	ns (in t	eet)		
Centerline Dist.		70.0 feet				Auto	s: C	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (,	5.0 feet			Heav	y Truck	s: 8	.006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet					. D!	/!	f4)		
	d Elevation:	0.0 feet		L	.ane ⊑q	uivalen: Auto:		ice (in 5.223	reet)		
F	Road Grade:	0.0%			Modius	Auto: m Truck:		6.065			
	Right View:	-90.0 degree				y Truck		5.081			
FHWA Noise Mode	l Calculation										
VehicleType	REMEI	Traffic Flow	Diet	ance	Finito	Road	Fres	nel	Barrier Att	on Ro	rm Atten
Autos:	70.20	-22.41	Dist	-0.87		-1.20	7700	-4.72		000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	45		43.8		42.1		36		44.6	-	45.2
Medium Trucks:	39		37.8		31.4		29	-	38.4		38.6
Heavy Trucks:	39		38.3		29.3		30		38.9		39.0
Vehicle Noise:	47		45.7		42.6		37	.8	46.4	1	46.9
Centerline Distanc	e to Noise Co	ontour (in feet)	70 d	DΛ	65	dBA		60 dBA		5 dBA
			l dn:	70 a	DA		ава 4		9 9	00	19
			IFI:	2			4	-			20
		Ci		_					9		

	FHV	VA-RD-77-108	HIG	HWAY N	IOISE PI	REDICT	ION MO	DEL				
Road Nan	io: Year 2019 ine: Stetson Av. nt: e/o Fisher S	(S.)	t		Project Name: Rancho Diamante Job Number: 9792							
	SPECIFIC IN	IPUT DATA							L INPUT	S		
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15			
Peak F	lour Volume:	10 vehicle	S		He	avy Tru	cks (3+ A	(xles	15			
Ve	hicle Speed:	50 mph			Vehicle	Mix						
Near/Far La	ne Distance:	84 feet		-		icleType		Dav	Evening	Night	Daily	
Site Data							Autos:	77.5%		9.6%	97.42%	
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-VI		0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Di		70.0 feet		Η.	Noise S			- /! 6	41			
Centerline Dist.	to Observer:	70.0 feet		Ľ	Noise S				eet)			
Barrier Distance	to Observer:	0.0 feet			A deceller	Auto m Truck		000 297				
Observer Height	(Above Pad):	5.0 feet						297	Grade Adj	ustmont	. 0.0	
P	ad Elevation:	0.0 feet			пеач	ry Truck	s. o.t	JU6	Grade Auj	usunent	0.0	
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	Distant	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 56.	223				
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.0	065				
	Right View:	90.0 degre	es		Heav	y Truck	s: 56.0	081				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten	
Autos:	70.20	-22.41		-0.8	7	-1.20		-4.72	0.0	100	0.000	
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		-4.88	0.0	00	0.000	
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	00	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)							
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	CI	VEL	
Autos:	45	.7	43.8		42.1		36.0		44.6	6	45.2	
Medium Trucks:	39	.3	37.8		31.4		29.9		38.4	ļ	38.6	
Heavy Trucks:	39	.7	38.3		29.3		30.5		38.9)	39.0	
Vehicle Noise:	47	.4	45.7		42.6		37.8	3	46.4		46.9	
Centerline Distan	ce to Noise Co	ontour (in feet)									
			Į	70 c			dBA	(0 dBA		dBA	
			I dn:	2)		4		9		19	

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MOI	EL			
	e: Stetson Av		et				t Name: F lumber: 9		Diamante	•	
SITE	SPECIFIC II	NPUT DATA				- 1	NOISE N	ODE	LINPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, So	ft = 15)		
	Traffic (Adt): Percentage: lour Volume:	12,200 vehicle 10% 1,220 vehicle					ucks (2 A cks (3+ A	,	15 15 15		
Ve	hicle Speed:	50 mph		1/	ehicle	Miv					
Near/Far Lai	ne Distance:	84 feet		-		icleType		Dav	Evening	Night	Daily
Site Data				+	*0			77.5%	12.9%	9.6%	97.42%
Par	rrier Heiaht:	0.0 feet			М	edium T	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			ı	leavy T	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist		70.0 feet		N	oise S	ource E	levations	(in fe	et)		
Barrier Distance Observer Height (: Pa Roa I	to Observer: Above Pad): ad Elevation: ad Elevation: Road Grade: Left View: Right View:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		Li	Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	s: 2.2 s: 8.0 t Distance s: 56.2 s: 56.0	97 06 e (in f 23 65	Grade Adji eet)	ustment	0.0
FHWA Noise Mode											
VehicleType Autos:	REMEL 70.20	Traffic Flow	Dista	nce -0.87	Finite	-1.20	Fresn	4.72	Barrier Atte 0.0		m Atten 0.000
Medium Trucks:	81.00			-0.85		-1.20		4.72	0.0		0.000
Heavy Trucks:	85.38			-0.85		-1.20		5.28	0.0		0.000
Unmitigated Noise	e Levels (with	hout Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	v L	eq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	66	6.6	64.7		62.9		56.9		65.5		66.1
Medium Trucks:	60	0.2	58.7		52.3		50.8		59.2		59.4
Heavy Trucks:	60	0.6	59.2		50.1		51.4		59.7		59.9
Vehicle Noise:	68	8.3	66.5		63.5		58.7		67.3		67.7
Centerline Distance	ce to Noise C	ontour (in fee	t)								
·		-	L	70 dE	BA	65	dBA	6	0 dBA	55	dBA
			Ldn:	46		(99		213	4	60
		С	NEL:	49		1	06		229	4	94

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TON MOI	DEL			
	e: Stetson Av	-	t				t Name: F Number: 9		o Diamante		
SITE	SPECIFIC IN	NPUT DATA					NOISE N	IODE	L INPUTS	;	
Highway Data				5	Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: our Volume:	9,500 vehicle 10% 950 vehicle					rucks (2 A rcks (3+ A	,			
Vei	hicle Speed:	50 mph		١.	/-1-1-1-						
Near/Far Lai	ne Distance:	84 feet		١	/ehicle			Dav	Evenina	Minht	Doilu
Site Data					ven	icleTyp		Day 77.5%	Evening 12.9%	Night 9.6%	Daily 97.42%
						edium 7		84.8%		10.3%	
	rier Height:	0.0 feet				Heavy 7		86.5%		10.8%	
Barrier Type (0-W	. ,	0.0				icavy i	rucks.	00.5 /0	2.170	10.07	0.7470
Centerline Dis		70.0 feet		٨	loise S	ource E	levations	s (in fe	eet)		
Centerline Dist.		70.0 feet				Auto	os: 0.0	000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2.2	297			
Observer Height (Above Pad): ad Flevation:	5.0 feet 0.0 feet			Heav	y Truck	rs: 8.0	006	Grade Adju	ıstmen	t: 0.0
	ad Elevation: ad Flevation:	0.0 feet		,	ano Eo	uivalor	t Distanc	o (in	foot)		
	Road Grade:	0.0 reet 0.0%		<u>-</u>	ane Ly	Auto			ieei)		
,	l eft View:	-90.0 degre			Modiu	m Truck					
	Right View:	90.0 degre				y Truck					
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	-2.63		-0.87	,	-1.20		4.72	0.0	00	0.000
Medium Trucks:	81.00	-19.87		-0.85	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-23.83		-0.85	i	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atteni	uation)						
	Leq Peak Ho		_	Leq Ev		Leq	Night		Ldn	C	NEL
Autos:		5.5	63.6		61.8		55.8		64.4		65.0
Medium Trucks:		9.1	57.6		51.2		49.7		58.1		58.4
Heavy Trucks:	59	9.5	58.1		49.0		50.3		58.6		58.8
Vehicle Noise:	67	7.2	65.5		62.4		57.6		66.2		66.6
Centerline Distance	e to Noise C	ontour (in fee	t)								
			L	70 d			dBA	6	60 dBA		5 dBA
			Ldn:	39			84		181		389
		С	NEL:	42	2		90		194		418

Monday, January 25, 2016

	FH	WA-RD-77-	108 HIGH	1 YAWH	NOISE PF	REDICTION	ON MC	DEL			
Road Nam	io: Year 2019 ne: Stetson Av nt: e/o Sande	/.	oject			Project I Job Nu			o Diamant	е	
	SPECIFIC II	NPUT DAT	ГА						L INPUT	s	
Highway Data					Site Con	ditions (Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	33,200 veh	nicles					Autos:			
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 .	Axles):	15		
Peak H	lour Volume:	3,320 veh	nicles		He	avy Truci	ks (3+.	Axles):	15		
Ve	hicle Speed:	45 mp	h	-	Vehicle I	Mix					
Near/Far La	ne Distance:	84 fee	t			icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.42%
Ra	rrier Height:	0.0 fe	ot		Me	edium Tru	ıcks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0	O.		F	leavy Tru	ıcks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di	. ,	70.0 fe	et	-	Noise Sc	uraa Ele	tio	o (in f	0.041		
Centerline Dist.	to Observer:	70.0 fe	et	-	Noise Sc			.000	eet)		
Barrier Distance	to Observer:	0.0 fe	et		A deceller	Autos. n Trucks		.000			
Observer Height	(Above Pad):	5.0 fe	et					.006	Grade Ad	iuetmor	o+: 0.0
P	ad Elevation:	0.0 fe	et		Heav	y Trucks	. 8.	.006	Grade Au	Jusurier	2. 0.0
Ro	ad Elevation:	0.0 fe	et		Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos.	56	.223			
	Left View:	-90.0 de	grees		Mediur	n Trucks	56	.065			
	Right View:	90.0 de	grees		Heav	y Trucks	56	.081			
FHWA Noise Mod	el Calculation	าร									
VehicleType	REMEL	Traffic Flo	ow Dis	stance	Finite		Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	68.46		3.26	-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	79.45		1.98	-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-17	.93	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Topo a	and barri	er atter	nuation)						
VehicleType	Leq Peak Ho		Day	Leq E	vening	Leq N			Ldn		CNEL
Autos:	-	9.7	67.8		66.0		59.	-	68.6		69.2
Medium Trucks:	-	3.4	61.9		55.6		54.	-	62.5	-	62.7
Heavy Trucks:		4.3	62.8		53.8		55.		63.4		63.5
Vehicle Noise:	7	1.5	69.8		66.6		61.	9	70.	5	70.9
Centerline Distan	ce to Noise C	ontour (in	feet)								-
			L		dBA	65 d		(60 dBA	5	5 dBA
			Ldn:		5	16	_		349		752
			CNEL:	8	1	17	4		374		807

	FHV	VA-RD-77-108	HIGH	I YAWI	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: Year 2019 \ ne: 9th St. nt: w/o Winche	,	t				Name: lumber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	500 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%				edium Tr			15		
Peak H	lour Volume:	50 vehicle	S		He	eavy True	cks (3+	Axles):	15		
Ve	hicle Speed:	25 mph		ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		F	Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	70.0 feet		ŀ	Noise S	ource E	levation	ns (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet		ŀ		Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		L		•					
Roi	ad Elevation:	0.0 feet		L	Lane Eq				feet)		
	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mod	el Calculation:										
VehicleType	REMEL	Traffic Flow	Dis	tance	_	Road	Fres		Barrier Att		rm Atten
Autos:		-12.41		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:		-29.65		-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	77.97	-33.60		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois			barrie	er atter	nuation)			_		,	
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn		NEL
Autos:	44.	-	42.4		40.6		34.	-	43.2	-	43.8
Medium Trucks:			37.6		31.2		29.		38.1		38.4
Heavy Trucks: Vehicle Noise:	42.	-	40.9 45.5		31.9 41.6		33.		41.5		41.6
					41.0		31.	-	40.2	-	40.0
Centerline Distant	ce to Noise Co	incour (in feet	,	70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		2		4		8	'	18
		Ci	NEL:		2		4		9		19

	FH\	WA-RD-77-108	HIGHW	AY N	DISE PI	REDICT	ION MOD	EL			
	o: Year 2019 e: Winchester ht: s/o Florida	r Rd.					t Name: R lumber: 9		Diamante	•	
	SPECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard = 1	10, Sc	ft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	16,200 vehicle 10% 1,620 vehicle 55 mph				avy Tru	A rucks (2 A. rcks (3+ A.		15 15 15		
Near/Far Lar	ne Distance:	36 feet		V		icleType		Dav	Evening	Night	Daily
Site Data							Autos: 7	7.5% 34.8%	12.9%	9.69	% 97.42%
Bar Barrier Type (0-W	rier Height:	0.0 feet 0.0				Heavy T		36.5%		10.8	
Centerline Dis		47.0 feet				,					
Centerline Dist. t		47.0 feet		Ν	loise S		levations	•	et)		
Barrier Distance t Observer Height (A	to Observer:	0.0 feet 5.0 feet 0.0 feet 0.0 feet		1	Heav	Auto m Truck ry Truck	s: 2.2	97 06	Grade Adji	ustmei	nt: 0.0
	Road Grade:	0.0%		F	u = 4	Auto		_	001)		
,	Left View: Right View:	-90.0 degree				m Truck y Truck	s: 43.5	01			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresne		Barrier Atte		erm Atten
Autos:	71.78	-0.73		0.77		-1.20		4.63	0.0		0.000
Medium Trucks: Heavy Trucks:	82.40 86.40	-17.97 -21.92		0.80		-1.20 -1.20		4.87 5.46	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ıation)						
VehicleType	Leq Peak Hou	ır Leq Day	/ L	.eq Ev	ening	Leq	Night		Ldn		CNEL
Autos:	70		68.7		67.0		60.9		69.5		70.1
Medium Trucks:	64		62.5		56.2		54.6		63.1		63.3
Heavy Trucks:	64		62.7		53.6		54.9		63.2		63.3
Vehicle Noise:	72	2.2	70.5		67.5		62.6		71.2		71.7
Centerline Distance	e to Noise Co	ontour (in feet)								
				70 di			dBA	6	0 dBA	5	5 dBA
			Ldn:	56			21		261		563
		Ci	NEL:	61		1	30		281		606

	FH\	WA-RD-77-108	B HIGH	WAY N	IOISE P	REDICT	ION MC	DEL			
Road Nan	rio: Year 2019 ne: 9th St. ent: e/o Winche	,	ct				t Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA			04- 0				L INPUT	S	
Highway Data				,	Site Cor	aitions	•		oft = 15)		
Average Daily	Traffic (Adt):	400 vehicle	es					Autos:			
	Percentage:	10%					ucks (2	,			
	Hour Volume:	40 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	25 mph		,	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		Ī		icleType	Э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet			Noise S	E	lovotion	o (in f	0041		
Centerline Dist.	to Observer:	70.0 feet		Ľ	voise 3	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet				Auto m Truck		000			
Observer Height	(Above Pad):	5.0 feet						297	0		
P	ad Elevation:	0.0 feet			Heat	/y Truck	S: 8	006	Grade Ad	jusimeni	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%		Г		Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	ees		Heav	y Truck	s: 56	.081			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	58.73	-13.38	3	-0.87	7	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	70.80	-30.62	2	-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	77.97	-34.57	,	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barri	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	y	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	43	3.3	41.4		39.6		33.	6	42.2	2	42.8
Medium Trucks:	38	3.1	36.6		30.3		28.	7	37.2	2	37.4
Heavy Trucks:	41	.3	39.9		30.9		32.	1	40.5	5	40.0
Vehicle Noise:	46	5.2	44.5		40.6		36.	7	45.2	2	45.6
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 c	dBA	65	dBA		60 dBA	55	dBA

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	HWAY N	OISE P	REDICTION	ON MO	DDEL			
Road Nam	io: Year 2019 ne: Wincheste nt: n/o 9th St.					Project I Job Nu			io Diamant	e	
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard:				
Average Daily	Traffic (Adt):	18,100 vehicle	:S					Autos:			
Peak Hour	Percentage:	10%				dium Trud		,			
Peak H	lour Volume:	1,810 vehicle	:S		He	avy Truck	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle I	Wix					
Near/Far La	ne Distance:	36 feet		H		icleType	П	Day	Evening	Night	Daily
Site Data							ıtos:	77.5%		9.6%	,
Pa Pa	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet		L.							
Centerline Dist.		47.0 feet		1	Voise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		0.000			
Observer Height		5.0 feet				m Trucks:		2.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	. 8	3.006	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 feet		- 1	Lane Ea	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos		3.704	,		
	Left View:	-90.0 degre	es		Mediui	m Trucks:	43	3.501			
	Right View:	90.0 degre			Heav	y Trucks:	43	3.521			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier At	ten Bei	m Atten
Autos:	68.46			0.77		-1.20		-4.63		000	0.000
Medium Trucks:	79.45			0.80	-	-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-20.57		0.80)	-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V	Leq E	/ening	Leq N	light		Ldn	С	NEL
Autos:	68	3.7	66.8		65.0		58	.9	67.	6	68.2
Medium Trucks:	62	2.4	60.9		54.6		53	.0	61.	5	61.7
Heavy Trucks:	60	3.3	61.9		52.8		54	.1	62.	4	62.6
Vehicle Noise:	70).5	68.8		65.6		60	.9	69.	5	69.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 c	iBA	65 d	BA	(60 dBA	55	dBA
			Ldn:	4:	3	93	}		201	4	134
		C	NEL:	4	7	10	n		216	4	165

	FHW	/A-RD-77-108	HIGH	WAY	NOISE P	REDICTI	ON MC	DEL			
Road Nan	io: Year 2019 V ne: Patterson A nt: s/o Grand A	v. ,					Name: umber:		o Diamante	9	
	SPECIFIC IN	PUT DATA							L INPUT	3	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	10 vehicle	S		He	eavy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		F	Vehicle	Miv					
Near/Far La	ne Distance:	12 feet		-		icleType		Dav	Evenina	Niaht	Dailv
Site Data					101		lutos:	77.5%		9.6%	. ,
	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%		10.3%	
Barrier Type (0-W		0.0 1661				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		22.0 feet		ļ							
Centerline Dist.		22.0 feet		l l	Noise S			٠,	eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height		5.0 feet				m Trucks	–	.297			
	ad Elevation:	0.0 feet			Hear	vy Trucks	s: 8	.006	Grade Ad	ustmen	t: 0.0
	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%		Ī		Autos	s: 21	.749			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 21	.338			
	Right View:	90.0 degree	es		Hear	vy Trucks	s: 21	.378			
FHWA Noise Mod	el Calculations	3									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-21.44		5.3	32	-1.20		-4.34	0.0	00	0.000
Medium Trucks:	77.72	-38.68		5.4	14	-1.20		-4.85	0.0	00	0.000
Heavy Trucks:	82.99	-42.63		5.4	13	-1.20		-6.07	0.0	00	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barrie	r atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	49.	_	47.3		45.5		39.	-	48.1		48.7
Medium Trucks:	43.	-	41.8		35.4		33.	-	42.3		42.6
Heavy Trucks:	44.	*	43.2		34.1		35.		43.7		43.9
Vehicle Noise:			49.5		46.2		41.	7	50.2	!	50.7
Centerline Distan	ce to Noise Co	ntour (in feet)	70	dBA	65	dBA	1 4	60 dBA		i dBA
			l dn:		aba 1		DBA		5 5) 50	11
			VEL:		1	-	2		5		11
		0.			•		-		-		

	FH	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MOI	DEL			
	o: Year 2019 e: California / nt: s/o Stowe	Av.					t Name: I Number: 9		o Diamante		
	SPECIFIC II	NPUT DATA							L INPUTS		
Highway Data					Site Co	nditions	(Hard =	10, S	oft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	400 vehicle 10% 40 vehicle 40 mph		1		eavy Tru	rucks (2 A Icks (3+ A		15		
Near/Far La	ne Distance:	36 feet		F		hicleTyp	e	Dav	Evening	Night Da	aily
Site Data Bar Barrier Type (0-W	rier Height: 'all, 1-Berm):	0.0 feet 0.0				fedium 1 Heavy 1	rucks:	77.5% 84.8% 86.5%	4.9%	10.3% 1.	42% 84% 74%
Centerline Dis		47.0 feet		^	loise S	ource E	levation	(in f	eet)		
Ros	to Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		L	Hea ane Ed Mediu	Auto um Truck vy Truck quivaler Auto um Truck vy Truck	ks: 2.2 ks: 8.0 ht Distand os: 43.5 ks: 43.5	704 501		stment: 0.0	
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	n Berm At	ten
Autos:	66.51	-15.42		0.77	•	-1.20		4.63	0.00	0 0	.000
Medium Trucks: Heavy Trucks:	77.72 82.99			0.80		-1.20 -1.20		-4.87 -5.46	0.00		.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	<i>y</i>	Leq Ev	ening	Leq	Night		Ldn	CNEL	
Autos:	50).7	48.8		47.0)	40.9		49.6		50.
Medium Trucks:		1.7	43.2		36.8		35.2		43.7		43.
Heavy Trucks:		6.0	44.6		35.5		36.8		45.1		45.
Vehicle Noise:		2.7	51.0		47.7	7	43.1		51.7		52.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70			10.4			ee /- ·	
			Late	70 a		65	dBA		60 dBA	55 dBA	_
		_	Ldn:	3			6		13	28	
		C	NEL:	3			6		14	30	

FH\	WA-RD-77-108 I	HIGHWA	ΥN	OISE PF	REDICT	ION MO	DEL			
Scenario: Year 2019 Road Name: California A Road Segment: n/o Stowe	Av.					Name: umber:		o Diamante	9	
SITE SPECIFIC IN	IPUT DATA							L INPUT:	S	
Highway Data			3	nte Con	aitions	•				
Average Daily Traffic (Adt):	4,100 vehicles						Autos:			
Peak Hour Percentage:	10%					ucks (2)	,			
Peak Hour Volume:	410 vehicles			He	avy iruo	cks (3+)	4xies):	15		
Vehicle Speed:	40 mph		ν	'ehicle l	Vlix					
Near/Far Lane Distance:	36 feet			Vehi	icleType	,	Day	Evening	Night	Daily
Site Data					-	Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet			loise Sc	urce F	lovation	e (in f	oof)		
Centerline Dist. to Observer:	47.0 feet		-	10/36 00	Auto		000	JUL)		
Barrier Distance to Observer:	0.0 feet			Modiur	n Truck		297			
Observer Height (Above Pad):	5.0 feet				y Truck		006	Grade Ad	iustment	0.0
Pad Elevation:	0.0 feet		L							
Road Elevation:	0.0 feet		L	ane Eq				feet)		
Road Grade:	0.0%				Auto		704			
Left View:	-90.0 degree				n Truck		501			
Right View:	90.0 degree	8		Heav	y Truck	s: 43.	521			
FHWA Noise Model Calculation										
VehicleType REMEL	Traffic Flow	Distanc		Finite		Fresi		Barrier Att		rm Atten
Autos: 66.51	-5.31		0.77		-1.20		-4.63	0.0		0.000
Medium Trucks: 77.72			0.80		-1.20		-4.87		000	0.000
Heavy Trucks: 82.99			0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise Levels (with		_								
VehicleType Leq Peak Hot		_	q Ev	ening	Leq	Night		Ldn		NEL
Autos: 60		8.9		57.1		51.1		59.7		60.3
Medium Trucks: 54		3.3		46.9		45.4		53.8		54.0
Heavy Trucks: 56		4.7		45.6		46.9		55.2		55.4
		1.1		57.8		53.2		61.8	3	62.2
Centerline Distance to Noise C	ontour (in feet)		70 d		0.5	dBA		60 dBA		dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTI	ION M	DDEL			
	o: Year 2019 \ e: California A at: s/o Stetson	v. ,					Name: umber:		no Diamant	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	. ,	200 vehicles	3					Autos.			
	Percentage:	10%				dium Tru		,			
	our Volume:	20 vehicles			He	avy Truc	cks (3+	Axles)	15		
	nicle Speed:	40 mph		ν	ehicle	Mix					
Near/Far Lar	ne Distance:	36 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	6 12.9%	9.69	6 97.42%
Bar	rier Height:	0.0 feet			M	edium Tı	rucks:	84.89	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0			I	Heavy Tr	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	t. to Barrier:	47.0 feet		٨	loise So	ource El	evatio	ns (in t	eet)		
Centerline Dist.	to Observer:	47.0 feet		-	.0,00 0	Auto:		.000	001/		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (,	5.0 feet				y Trucks		.006	Grade Ad	justmer	nt: 0.0
	d Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		3.704			
	Left View:	-90.0 degree				m Trucks		3.501			
	Right View:	90.0 degree	!S		Heav	y Trucks	s: 43	3.521			
FHWA Noise Mode	el Calculation:										
VehicleType	REMEL	Traffic Flow	Distar			Road	Fres		Barrier At		erm Atten
Autos:	66.51	-18.43		0.77		-1.20		-4.63		000	0.000
Medium Trucks:	77.72	-35.67		0.80		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-39.62		0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise						1	h li mla t	_	Ldn		ONEL
VehicleType Autos:	Leq Peak Hou 47		15.8	ey Ev	ening 44.0	Leq	Night 37	0	46.0		47.2
Medium Trucks:	41.		10.1		33.8		32		40.	-	40.9
Heavy Trucks:	43.		11.5		32.5		33	_	42.		42.2
Vehicle Noise:	49	-	17.9		44.7		40		48.		49.1
Centerline Distanc	e to Noise Co	ontour (in feet)	1								
				70 d	BA	65	dBA		60 dBA	5	5 dBA
			_dn:	2			4		8		18
		CN	IFI:	2			4		9		19

	FH\	WA-RD-77-108	HIGH\	1 YAW	NOISE P	REDICT	ION M	DDEL			
Road Nam	io: Year 2019 ne: California A nt: n/o Simpso	۱۷.				.,	Name: lumber:		o Diamant	е	
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	200 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	20 vehicles	3		He	eavy True	cks (3+	Axles):	15		
Ve	hicle Speed:	25 mph		H	Vehicle	Miv					
Near/Far La	ne Distance:	36 feet		H		nicleType	,	Dav	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	6 97.42%
Bai	rrier Height:	0.0 feet			М	ledium T	rucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Dis	st. to Barrier:	47.0 feet		-	Noise S	ourco E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	47.0 feet		H	NOISE S	Auto.		.000	cei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet						.006	Grade Ad	iustmon	# O O
Pa	ad Elevation:	0.0 feet			Hea	vy Truck	S: 6	.006	Grade Ad	usunen	i. 0.0
Roa	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distai	nce (in	feet)		
1	Road Grade:	0.0%		ſ		Auto	s: 43	.704			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	.501			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 43	3.521			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	58.73	-16.39		0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	70.80	-33.63		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	77.97	-37.58		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	41	.9	40.0		38.3		32	.2	40.8	3	41.4
Medium Trucks:	36	.8	35.3		28.9		27	.4	35.8	3	36.1
Heavy Trucks:	40	.0	38.6		29.5		30	.8	39.		39.3
Vehicle Noise:	44	.8	43.1		39.2		35	.3	43.8	3	44.2
Centerline Distant	ce to Noise C	ontour (in feet,)								
					dBA		dBA	6	60 dBA	55	5 dBA
			Ldn:		1		2		4		8
		CI	VEL:		1		2		4		9

	FHW.	A-RD-77-108	HIGH	WAY N	OISE PI	REDICT	ION MODEL		
Scenario: Yeal Road Name: War Road Segment: s/o E	ren Rd.	•					t Name: Ran lumber: 979	cho Diamanto 2	e
SITE SPECI	FIC INF	UT DATA						EL INPUT	S
Highway Data				S	ite Cor	ditions	(Hard = 10,		
Average Daily Traffic (Peak Hour Percen Peak Hour Vol	tage:	2,800 vehicle: 10% 2,280 vehicle:					Auto rucks (2 Axle rcks (3+ Axle	s): 15	
Vehicle Sp		55 mph		ν	ehicle	Mix			
Near/Far Lane Dista	ance:	84 feet			Veh	icleTyp	e Day	Evening	Night Dail
Site Data							Autos: 77.	5% 12.9%	9.6% 97.42
Barrier He	iaht:	0.0 feet			М	edium 7	rucks: 84.8	3% 4.9%	10.3% 1.84
Barrier Type (0-Wall, 1-Be	•	0.0			- 1	leavy 7	rucks: 86.	5% 2.7%	10.8% 0.74
Centerline Dist. to Ba	rrier:	70.0 feet		۸	loise Si	nurce F	levations (in	r feet)	
Centerline Dist. to Obse	erver:	70.0 feet			10/36 0	Auto		11001)	
Barrier Distance to Obse	erver:	0.0 feet			Madiu	m Truck			
Observer Height (Above I	Pad):	5.0 feet				y Truck		Grade Ad	iustment: 0.0
Pad Eleva		0.0 feet		_					
Road Eleva		0.0 feet		L	ane Eq		t Distance (in feet)	
Road G		0.0%				Auto			
	View:	-90.0 degree				m Truck			
Right \	view:	90.0 degree	es		Heav	ry Truck	s: 56.081		
FHWA Noise Model Calcu									
VehicleType REM		Traffic Flow	Dis	tance		Road	Fresnel	Barrier Att	
Autos:	71.78	0.76		-0.87		-1.20	-4.7		0.0
Medium Trucks:	82.40	-16.48		-0.85		-1.20	-4.8		0.0
Heavy Trucks:	86.40	-20.44		-0.85		-1.20	-5.2	8 0.0	0.0
Unmitigated Noise Level	•								01/5/
VehicleType Leq Pe	ak Hour 70.5		68.6	Leq Ev	ening 66.8	Leq	Night 60.8	Ldn 69.4	CNEL 7
Medium Trucks:	63.9	-	62.4		56.0		54.5	62.9	
Heavy Trucks:	63.9		62.5		53.5		54.5	63.1	
Vehicle Noise:	72.1		70.3		67.3		62.5	71.0	-
Centerline Distance to No	oise Cor	ntour (in feet)						
		, 1001	_	70.	-		10.4	60 dBA	55 dBA
				70 d	BA	65	dBA		
			Ldn:	70 a			76	380	818

	FHV	VA-RD-77-108	HIGH	HWAY N	IOISE PI	REDICT	ION M	ODEL			
Road Nan	rio: Year 2019 ne: California A nt: s/o Simpso	v.					Name lumber		o Diamant	е	
SITE Highway Data	SPECIFIC IN	PUT DATA			Cito Cor				L INPUT	S	
				,	site Cor	laitions	(паги				
Average Daily	. ,	100 vehicle	S					Autos:			
	Percentage:	10%				dium Tri		,			
	lour Volume:	10 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
	ehicle Speed:	25 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data						-	Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			1	Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	47.0 feet		-	Voise S	ourco El	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	47.0 feet		l'	V UISE SI	Auto:		0.000	bei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.006	Grade Ad	iuetmant	
P	ad Elevation:	0.0 feet			rica	ry Truck	s. c	5.000	Orade Au	Justinoni	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	3.704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	3.501			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	3.521			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:		-19.40		0.77		-1.20		-4.63		000	0.000
Medium Trucks:		-36.64		0.80	-	-1.20		-4.87		000	0.000
Heavy Trucks:	77.97	-40.59		0.80)	-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	/ening	Leq	Night		Ldn	C	NEL
Autos:	38	.9	37.0		35.2		29	.2	37.8	3	38.4
Medium Trucks:			32.3		25.9		24		32.8		33.0
Heavy Trucks:	37	.0	35.6		26.5		27	.8	36.	1	36.3
Vehicle Noise:	41	.8	40.1	,	36.2	,	32	.3	40.8	3	41.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70.0	·IRΔ	65	dRA	1 6	SO dRA	55	dBA

Monday, January 25, 2016

			7-108 HIGH		TOIOL III						
	io: Year 2019		ect						o Diamant	е	
	e: Warren Re					Job Nu	mber:	9792			
Road Segme	nt: n/o Tres C	Cerritos Av									
	SPECIFIC I	NPUT D	ATA		Cito Con	NC ditions (I			L INPUT	S	
Highway Data					Site Con	uitions (i	naru =				
Average Daily	. ,		ehicles					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	,			He	avy Truck	s (3+	Axles):	15		
	hicle Speed:	55 m		ı	Vehicle I	Viix					
Near/Far La	ne Distance:	84 fe	eet	ŀ	Vehi	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.42%
Pa	rrier Heiaht:	0.0 1	iont		Me	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0	CCL		F	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 1	oot	-							
Centerline Dist.		70.0 1		-	Noise Sc	ource Ele			eet)		
Barrier Distance		0.0 1				Autos:		.000			
Observer Height (5.0 1				m Trucks:		.297			
	ad Flevation:	0.0 1			Heav	y Trucks:	8	.006	Grade Ad	justment	0.0
	ad Elevation:	0.0 1		f	Lane Eq	uivalent l	Distar	ce (in	feet)		
	Road Grade:	0.0%		f		Autos:		.223	,		
	Left View:		degrees		Mediur	n Trucks:		.065			
	Right View:		degrees			y Trucks:		.081			
	rugin vion.	30.0	acgrees		77007	y maono.	00	.001			
FHWA Noise Mod											
VehicleType	REMEL	Traffic I		stance	Finite		Fres		Barrier Att		m Atten
Autos:	71.78		0.76	-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	82.40		16.48	-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40) -:	20.44	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (wit	hout Topo	and barri	er atter	nuation)						
VehicleType	Leq Peak Ho	our Le	q Day	Leq E	vening	Leq N	ight		Ldn	C	VEL
Autos:	7	0.5	68.6		66.8		60.	8	69.4	4	70.0
Medium Trucks:	6	3.9	62.4		56.0		54.	5	62.9	9	63.2
Heavy Trucks:	6	3.9	62.5		53.5		54.	7	63.	1	63.2
Vehicle Noise:	7	2.1	70.3		67.3		62.	5	71.0)	71.5
Centerline Distan	ce to Noise C	ontour (i	n feet)								
				70	dBA	65 di	BA	6	60 dBA	55	dBA
			Ldn:	8	2	176	3		380	8	18
			CNFI:		8	190)		408	9	80

Monday, January 25, 2016

	FHW	A-RD-77-108	HIGHV	WAY N	IOISE PI	REDICTI	ON MO	DEL			
Road Nam	io: Year 2019 V ne: Warren Rd. nt: n/o Devonsh	,					Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				5	Site Cor	nditions (Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	2,800 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2 i	4xles):	15		
Peak H	lour Volume:	2,280 vehicles	S		He	eavy Truc	ks (3+)	4xles):	15		
Ve	hicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		- F		icleType		Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%		9.6%	,
Po-	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 feet		1	Voise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		70.0 feet				Autos	: 0.	000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2.	297			
Observer Height (5.0 feet			Heav	vy Trucks	: 8.	006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		I	ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degree	es			m Trucks		065			
	Right View:	90.0 degree	es		Heav	vy Trucks	: 56.	.081			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	0.76		-0.87	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	82.40	-16.48		-0.85	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-20.44		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (witho	ut Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hour	Leq Day		Leq Ev	ening/	Leq I	Vight		Ldn	C	NEL
Autos:	70.	5	68.6		66.8		60.8	3	69.4	1	70.0
Medium Trucks:	63.9	9	62.4		56.0		54.	5	62.9	9	63.2
Heavy Trucks:	63.	9	62.5		53.5		54.7	7	63.1		63.2
Vehicle Noise:	72.	1	70.3		67.3		62.	5	71.0)	71.5
Centerline Distant	ce to Noise Co.	ntour (in feet)	70 c	ND A	65 (IDA		60 dBA		5 dBA
			l dn:	70 0		17		1 0	380		818
			VFI:	88	_	19	-		408		880
		Ci	VLL.	00		18	10		400		000

FH	WA-RD-77-108	HIGHWA	Y NOISE P	REDICT	TION MODEL		
Scenario: Year 2019 Road Name: Warren R Road Segment: s/o Florida	d.				t Name: Rand Number: 9792		
SITE SPECIFIC I	NPUT DATA				NOISE MOD		
Highway Data Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	24,800 vehicles 10% 2.480 vehicles		Me	edium Ti	Autos Autos rucks (2 Axles icks (3+ Axles	s: 15): 15	
Vehicle Speed: Near/Far Lane Distance:	55 mph 84 feet		Vehicle				Night Daily
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0		M		Autos: 77.5 rucks: 84.8	% 12.9% % 4.9%	9.6% 97.42% 10.3% 1.84% 10.8% 0.74%
Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	70.0 feet 70.0 feet 0.0 feet 5.0 feet		Mediu	Auto m Truck	ks: 2.297	•	stment: 0.0
Pad Elevation: Road Elevation: Road Grade: Left View:	0.0 feet 0.0 feet 0.0% -90.0 degree	:S	Lane Eq	vy Truck juivaler Auto im Truck	ot Distance (in		Sanche. 0.0
Right View:	90.0 degree	s .	Hea	vy Truci	ks: 56.081		
VehicleType REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte	
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40	-16.12	-(0.87 0.85 0.85	-1.20 -1.20 -1.20	-4.72 -4.88 -5.28	0.00	0.000
Unmitigated Noise Levels (with	hout Topo and I	barrier at	tenuation)				
VehicleType Leq Peak Ho			g Evening		Night	Ldn	CNEL
Medium Trucks: 6	4.2	88.9 82.7 82.9	67.2 56.4 53.8		61.1 54.8 55.1	69.7 63.3 63.4	70.3 63.5 63.5
		70.7	67.7		62.8	71.4	71.9
Centerline Distance to Noise C	ontour (in feet)	1					
	-	; _dn: IEL:	70 dBA 87 93	1	186 201	60 dBA 402 432	55 dBA 865 931

	FH	WA-RD-77-108	HIGHW	AY NOISE F	PREDICT	ION MODE	-	
Scenario: Road Name: Road Segment:	Warren Ro					t Name: Rar lumber: 979	icho Diamante 2	е
SITE SP Highway Data	PECIFIC II	NPUT DATA		Site Co		NOISE MO	DEL INPUT	S
Average Daily Tra Peak Hour Pe Peak Hou	ercentage: ur Volume:	10% 1,910 vehicle		М	ledium Ti	Auto rucks (2 Axle rcks (3+ Axle	os: 15 s): 15	
	cle Speed:	55 mph		Vehicle	Mix			
Near/Far Lane	Distance:	84 feet		Ve	hicleTyp	e Daj	/ Evening	Night Dai
Site Data Barrie Barrier Type (0-Wall	er Height:	0.0 feet 0.0		٨	Medium 1 Heavy 1		8% 4.9%	9.6% 97.4 10.3% 1.8 10.8% 0.7
Centerline Dist.		70.0 feet		Noise S	Sourco E	levations (i	n foot)	
Road Ro	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		Lane E	Auto avy Truck quivalen Auto um Truck avy Truck	ss: 2.297 ss: 8.006 t Distance (ss: 56.223 ss: 56.065	in feet)	iustment: 0.0
FHWA Noise Model	Calculation	ie .						
VehicleType	REMEI	Traffic Flow	Distar	nce Finite	e Road	Fresnel	Barrier Att	en Berm Att
Autos:	71.78	-0.01		-0.87	-1.20	-4.7		
Medium Trucks:	82.40	-17.25		-0.85	-1.20	-4.8	38 0.0	000 0.
Heavy Trucks:	86.40	-21.21		-0.85	-1.20	-5.2	28 0.0	000 0.
Unmitigated Noise L	evels (with	out Topo and	barrier a	attenuation))			
	eq Peak Ho			eq Evening	Leq	Night	Ldn	CNEL
Autos:		9.7	67.8	66.0	-	60.0	68.6	
Medium Trucks:		3.1	61.6	55.2	_	53.7	62.2	
Heavy Trucks:		3.1 1.3	61.7 69.5	52.7 66.0		53.9 61.7	62.3 70.2	
Vehicle Noise:			55.5	00.1	•	01.7	70.2	- '
Vehicle Noise:	to Noine O	antaur (in f	-1					
Vehicle Noise: Centerline Distance	to Noise C	ontour (in fee	t)	70 dBA	65	dBA	60 dBA	55 dBA
	to Noise C	ontour (in fee	t) Ldn:	70 dBA 73		dBA 57	60 dBA 337	55 dBA 727

Monday, January 25, 2016

	FH	IWA-RD-	-77-108 H	IGHWAY	NOISE PI	REDICTIO	ON MC	DEL			
	io: Year 2019 ie: Warren R nt: n/o Whittie	d.	oject			Project N Job Nu			o Diamant	e	
	SPECIFIC I	NPUT [DATA						L INPUT	s	
Highway Data					Site Con	ditions (
Average Daily	. ,							Autos:			
	Percentage:	109	-			dium Truc					
Peak H	lour Volume:	2,280	vehicles		He	avy Truck	ks (3+.	Axles):	15		
Ve	hicle Speed:	55	mph		Vehicle	Mix					
Near/Far La	ne Distance:	84	feet			icleType		Day	Evening	Night	Daily
Site Data						Αι	ıtos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0	feet		M	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,		feet						-1		
Centerline Dist.	to Observer:	70.0	feet		Noise S	ource Ele			eet)		
Barrier Distance	to Observer:	0.0	feet			Autos:		.000			
Observer Height (Above Pad):	5.0	feet			m Trucks:		.297	0	E	
	ad Elevation:		feet		Heav	y Trucks:	8.	.006	Grade Ad	justmen	: 0.0
Roa	ad Elevation:	0.0	feet		Lane Eq	uivalent l	Distan	ce (in	feet)		
	Road Grade:	0.0	%			Autos:	56	.223			
	Left View:	-90.0	degrees		Mediu	m Trucks:	56	.065			
	Right View:		degrees		Heav	y Trucks:	56	.081			
FHWA Noise Mod	el Calculatio	ns									
VehicleType	REMEL	Traffic		Distance	Finite		Fresi		Barrier At		rm Atten
Autos:	71.78	-	0.76	-0.		-1.20		-4.72		000	0.000
Medium Trucks:	82.40	-	-16.48	-0.		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40)	-20.44	-0.	85	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (wit	hout Top	po and ba	arrier atte	nuation)						
VehicleType	Leq Peak Ho	our L	eq Day	Leq	Evening	Leq N	light		Ldn	С	NEL
Autos:	7	0.5	68	3.6	66.8		60.	8	69.	4	70.0
Medium Trucks:	6	3.9	62		56.0		54.	5	62.	9	63.2
Heavy Trucks:	6	3.9	62	2.5	53.5		54.	7	63.	1	63.2
Vehicle Noise:	7	2.1	70).3	67.3		62.	5	71.	0	71.5
Centerline Distan	ce to Noise C	Contour	(in feet)								
				70	dBA	65 d	BA	-	60 dBA	55	dBA
			La	dn:	82	176	6		380	8	318
			CNE	EL:	88	190	0		408		380

	FH\	WA-RD-77-10	8 HIGI	HWAY N	IOISE PI	REDICTI	ON MOI	DEL			
Road Na	rio: Year 2019 me: Warren Rd ent: s/o Whittie	l.					Name: I umber: 9		o Diamante	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions					
Average Daily	Traffic (Adt):	22,400 vehic	es					Autos:	15		
	r Percentage:	10%				dium Tru		,	15		
Peak	Hour Volume:	2,240 vehic	es		He	avy Truc	ks (3+ A	(xles	15		
V	ehicle Speed:	55 mph		1	Vehicle I	Mix					
Near/Far L	ane Distance:	84 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data								77.5%	- 5	9.6%	. ,
	arrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	
Barrier Type (0-1	-	0.0 reet			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
	ist to Barrier:	70.0 feet									• • • • • • • • • • • • • • • • • • • •
Centerline Dist		70.0 feet		1	Noise So				eet)		
Barrier Distance		0.0 feet				Autos	3: 0.0	000			
Observer Height		5.0 feet			Mediu	m Trucks	3: 2.2	297			
	Pad Elevation:	0.0 feet			Heav	y Trucks	8.0	006	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet		- 1	Lane Eq	uivalent	Distant	ce (in i	feet)		
N.	Road Grade:	0.0%		F	Luiio Lq	Autos			001)		
	Left View:	-90.0 dear	200		Mediu	m Trucks					
	Right View:	90.0 degr				y Trucks					
			003		77007	y muone	. 00.0				
FHWA Noise Mod			_								
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn		Barrier Att		m Atten
Autos			-	-0.87		-1.20		-4.72		000	0.000
Medium Trucks				-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks				-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou		,	Leq E	_	Leq	Night ==		Ldn		NEL
Autos Medium Trucks		1.4	68.5		66.7		60.7		69.3		69.9
		8.8	62.3		55.9		54.4		62.8		63.1
	: 63	1.8	62.4 70.2		53.4 67.3		54.6 62.4		63.0 70.9		63.1 71.4
Heavy Trucks Vehicle Noise	. 72				0				. 0.0		
Heavy Trucks Vehicle Noise			of)								
Heavy Trucks			et)	70 d	dBA	65 (dBA	6	i0 dBA	55	dBA
Heavy Trucks Vehicle Noise			et) Ldn:	70 d			dBA 74	6	0 dBA 375		dBA 809

	FHV	VA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	ION MOI	DEL			
	: Year 2019 \ : Warren Rd. : s/o Stetson						t Name: F lumber: 9		o Diamante	•	
	PECIFIC IN	PUT DATA							L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
		17,700 vehicle: 10% 1,770 vehicle: 45 mph			He	avy Tru	ucks (2 A cks (3+ A				
Near/Far Lane		84 feet		V	ehicle	icleType		Dav	Evening	Night	Daily
	ier Height:	0.0 feet			М	edium 7	Autos:	77.5% 34.8%	12.9% 4.9%	9.69	% 97.42% % 1.84%
Barrier Type (0-Wa		0.0			,	Heavy T	rucks:	36.5%	2.7%	10.89	% 0.74%
Centerline Dist.		70.0 feet 70.0 feet		Ν	loise S	ource E	levations	(in fe	eet)		
Barrier Distance to Observer Height (A Pac Road Ro	Observer:	0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		L	Hear ane Eq Mediu	Auto m Truck yy Truck uivalen Auto m Truck yy Truck	(s: 2.2 (s: 8.0 (t Distance) (s: 56.2 (s: 56.0	97 06 e (in 1 223 065	Grade Adji feet)	ustmei	nt: 0.0
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresn		Barrier Atte		erm Atten
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	0.53 -16.71 -20.67		-0.87 -0.85 -0.85		-1.20 -1.20 -1.20		-4.72 -4.88 -5.28	0.0 0.0 0.0	00	0.000 0.000 0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ıation)						
VehicleType L	.eq Peak Hou	ır Leq Day	, I	Leq Ev	ening	Leq	Night		Ldn		CNEL
Autos:	66		65.0		63.3		57.2		65.8	•	66.4
Medium Trucks:	60		59.2		52.8		51.3		59.7		60.0
Heavy Trucks:	61		60.1		51.1		52.3		60.7		60.8
Vehicle Noise:	68	.8	67.0		63.9		59.2		67.7		68.2
Centerline Distance	to Noise Co	ontour (in feet)								
			L	70 dl			dBA	ϵ	0 dBA	5	5 dBA
			Ldn:	49			07		229		494
		CI	VEL:	53		1	14		246		530

	FH	WA-RD-77-108	HIGH	WAY N	DISE P	REDICTIO	ON MOE	EL			
	e: Warren Ro					Project N Job Nui			Diamante	9	
SITE S	SPECIFIC II	NPUT DATA				NC	DISE M	ODE	L INPUTS	3	
Highway Data				S	ite Cor	nditions (l	Hard =	10, So	ft = 15)		
	Traffic (Adt): Percentage: our Volume:	16,900 vehicle 10%				edium Truc eavy Truck	cks (2 A	,	15 15 15		
	nicle Speed:	45 mph	:5			,	13 (5+71	AICS).	10		
Near/Far Lar		84 feet		ν	ehicle Vet	Mix nicleType		Day	Evening	Night	Daily
Site Data					•0,			77.5%	12.9%	9.69	
	ulau Halulat.	0.0 feet			N	ledium Tru		34.8%	4.9%	10.39	
Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet				Heavy Tru	icks: 8	36.5%	2.7%	10.89	
Centerline Dis	t. to Barrier:	70.0 feet			loise S	ource Ele	vations	(in fe	et)		
Centerline Dist. t	to Observer:	70.0 feet		-		Autos:		•	/		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:					
Observer Height (/	,	5.0 feet				vy Trucks:			Grade Adj	ustmei	nt: 0.0
	d Elevation:	0.0 feet		_		·					
	d Elevation:	0.0 feet		L	ane Ec	uivalent l			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View: Right View:	-90.0 degre				ım Trucks: vy Trucks:					
FHWA Noise Mode	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Atte	en B	erm Atten
Autos:	68.46	0.33		-0.87		-1.20		4.72	0.0	00	0.000
Medium Trucks:	79.45	-16.91		-0.85		-1.20		4.88	0.0	00	0.000
Heavy Trucks:	84.25	-20.87		-0.85		-1.20		5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	nout Topo and	barrie	r attenu	ıation)						
VehicleType	Leq Peak Ho	ur Leq Da	<i>y</i>	Leq Ev	ening	Leq N	light		Ldn	- (CNEL
Autos:	-	6.7	64.8		63.1		57.0		65.6		66.2
Medium Trucks:		0.5	59.0		52.6		51.1		59.5		59.8
Heavy Trucks:		1.3	59.9		50.9		52.1		60.5		60.6
Vehicle Noise:	-	3.6	66.8		63.7	'	59.0		67.5	i	68.0
Centerline Distanc	e to Noise C	ontour (in fee	t)	70.		05.0					- D.
			L	70 d		65 dl		6	0 dBA	5	5 dBA
			Ldn: NFI:	48 51		103			222		479 514
		C	NEL:	51		111	I		239		514

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION M	DDEL			
	o: Year 2019 e: Warren Rd at: s/o Mustan	l.					Name: lumber:		no Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily T Peak Hour I	. ,	19,400 vehicles 10% 1,940 vehicles				dium Tru		,	15		
	nicle Speed:	40 mph	,	L			ono (0 i	7 151100).			
Near/Far Lar		84 feet		1	/ehicle						
	ic Distance.	04 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet				edium Ti		84.8%		10.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		1	loise S	ource El	levatio	ns (in f	eet)		
Centerline Dist. t	to Observer:	70.0 feet		Ė		Auto		.000	,		
Barrier Distance t	o Observer:	0.0 feet			Madiu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustmen	t: 0.0
Pa	d Elevation:	0.0 feet				•					
Roa	d Elevation:	0.0 feet		I	.ane Eq	uivalen			feet)		
F	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degree	es		Heav	y Truck	s: 56	3.081			
FHWA Noise Mode	el Calculation	ıs		-							
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	1.44		-0.87	,	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	77.72	-15.80		-0.85	,	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-19.76		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
	Leq Peak Ho			Leq E		,	Night		Ldn		NEL
Autos:			64.0		62.2		56	_	64.8		65.4
Medium Trucks:			58.4		52.0		50	-	58.9		59.1
Heavy Trucks:	-		59.8		50.7		52		60.3		60.5
Vehicle Noise:	67	7.9	66.2		62.9		58	.3	66.9)	67.3
Centerline Distanc	e to Noise C	ontour (in feet)		70		05	"			-	- 10.4
			, _L	70 c			dBA 3		60 dBA 201		5 dBA 433
			Ldn:		-	_					
		CI	VEL:	46)	10	00		215		464

	FHV	VA-RD-77-108	HIGH	1 YAW	NOISE PI	REDICTI	ON MC	DEL			
Road Nan	io: Year 2019 \ ne: Warren Rd. nt: s/o Simpson	,					Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	4,000 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	1,400 vehicle	S		He	avy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	40 mph		H	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		H		icleType		Dav	Evenina	Niaht	Dailv
Site Data					VC//		utos:	77.5%		9.6%	
		0.0 feet			М	edium Tr		84.8%		10.3%	
Barrier Type (0-W	rrier Height:	0.0 1661			,	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 feet		L							
Centerline Dist.		70.0 feet		-	Noise S	ource El			eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height		5.0 feet				m Trucks		297			
	ad Elevation:	0.0 feet			Heav	vy Trucks	8: 8.	.006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	.065			
	Right View:	90.0 degre	es		Heav	vy Trucks	s: 56	.081			
FHWA Noise Mod	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	0.02		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	77.72	-17.22		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-21.17		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq	Night		Ldn	(NEL
Autos:	64.	5	62.6		60.8		54.	7	63.4	1	64.0
Medium Trucks:	58.	4	56.9		50.6		49.	0	57.5	5	57.7
Heavy Trucks:	59.	-	58.3		49.3		50.	-	58.9		59.0
Vehicle Noise:	66.	.5	64.7		61.5		56.	9	65.5	5	65.9
Centerline Distan	ce to Noise Co	ntour (in feet)								
			L		dBA	65 0		6	0 dBA		5 dBA
			Ldn:	-	5	7	-		162		349
		Ci	VEL:	3	7	8	U		173		373

	FHWA-F	RD-77-108 HIG	HWAY N	DISE PR	EDICT	ION MODE	L	
Scenario: Year Road Name: Sand Road Segment: n/o S	erson Av.	,				Name: Ra lumber: 97	incho Diamante 92	•
SITE SPECIF	IC INPU	T DATA					DEL INPUT	5
Highway Data Average Daily Traffic (A Peak Hour Percents Peak Hour Volu Vehicle Spi	nge: me: 4,1	00 vehicles 10% 70 vehicles 45 mph		Med Hea	ium Tr vy Tru	•	/	
Near/Far Lane Dista		50 feet	V	ehicle M			[5	Nii-tri D-it-
Site Data Barrier Hei Barrier Type (0-Wall, 1-Be	,	0.0 feet 0.0		Med	dium T eavy T	Autos: 77 rucks: 84	7.5% 12.9% 1.8% 4.9% 5.5% 2.7%	Night Daily 9.6% 97.42% 10.3% 1.84% 10.8% 0.74%
Centerline Dist. to Bar		4.0 feet	^	loise Soi	ırce F	levations ((in feet)	
Centerline Dist. to Obsei Barrier Distance to Obsei Observer Height (Above F Pad Eleva Road Eleva Road Eleva Road Keft Left V	ver: ad): tion: tion: ade: iew: -9	4.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% 0.0 degrees 0.0 degrees	L	ane Equ	Truck ivalen Auto	s: 2.29 s: 8.00 t Distance s: 48.12 s: 47.94	Grade Adj (in feet) 5	ustment: 0.0
FHWA Noise Model Calcu								
VehicleType REM			stance	Finite F		Fresnel		
Medium Trucks:	68.46 79.45 84.25	4.25 -12.99 -16.94	0.15 0.17 0.17		-1.20 -1.20 -1.20	-4	.87 0.0	0.000 0.000 0.000 0.000
Unmitigated Noise Levels	(without	Topo and barr	ier attenu	ıation)				
VehicleType Leq Pea		Leq Day	Leq Ev		Leq	Night	Ldn	CNEL
Autos: Medium Trucks: Heavy Trucks:	71.7 65.4 66.3	69.8 63.9 64.9		68.0 57.6 55.8		61.9 56.0 57.1	70.6 64.5 65.4	64.7
Vehicle Noise:	73.5	71.8		68.6		63.9	72.5	72.9
Centerline Distance to No	ise Conto	ur (in feet)						
		Ldn:	70 d	1	1	dBA 70	60 dBA 366	55 dBA 789
		CNEL:	85		1	82	393	846

Barrier Height: 0.0 feet		FH\	WA-RD-77-108	HIGHWA	ΥN	OISE PE	REDICTI	ON MOI	DEL			
Average Daily Traffic (Adt): 34,400 vehicles Peak Hour Percentage: 10% Autos: 15 Autos: 15 Peak Hour Volume: 3,440 vehicles Vehicle Speed: Noise Trucks (34 Axles): 15 Autos: 15 Medium Trucks (34 Axles): 15 Wehicle Type Day Evening Night Daily Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Mix Vehicle Dix Noise Source Elevations (in feet) Night Daily Vehicle Type Day Evening Night Daily Night	Road Nan	ne: Sanderson	Av.							no Diamante	9	
Average Daily Traffic (Adt): 34,400 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Wehicle Speed: 30 mph Near/Far Lane Distance: 50 feet Wehicle Speed: 40 wehicle Speed: 30 mph Near/Far Lane Distance: 50 feet Wehicle Trucks (3+ Axles): 15 Wehicle Trucks (3+ Axles): 16 Wehicle Trucks (3+ Axles): 16 Wehicle Trucks (3+		SPECIFIC IN	IPUT DATA								3	
Peak Hour Percentage:	Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Peak Hour Volume:	Average Daily	Traffic (Adt):	34,400 vehicles					,	Autos.	15		
Vehicle Near/Far Lane Distance: 50 feet Vehicle Mix Vehicle Type Day Evening Night Daily			10%						/			
Near/Far Lane Distance: 50 feet VehicleType Day Evening Night Daily	Peak F	lour Volume:	3,440 vehicles			He	avy Truc	ks (3+ A	(xles	15		
Near/Far Lane Distance: 50 feet VehicleType Day Evening Night Daily	Ve	hicle Speed:	30 mph		ν	ehicle l	Wix					
Barrier Height: D.0 feet Medium Trucks: 84.8% 4.9% 10.3% 1.84% Leg Pasi Leg Pas	Near/Far La	ne Distance:	50 feet		F				Dav	Evenina	Niaht	Dailv
Barrier Type (0-Well, 1-Berm): 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.74%	Site Data				T			utos:	77.5%	-		97.42%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 0.74%	Ra	rrier Heiaht	0.0 feet			Me	edium Tr	ucks:	84.89	4.9%	10.3%	1.84%
Centerline Dist. to Observer: Barrier Distance to Observer: Barrier Distance to Observer: Dosever Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road 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 Right View: 90.0 degrees Reful View: -90.0 degrees Reful View: -90.0 degrees Road Grade Road Road Road Road Road Road Road Road						F	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	0.74%
Autos: 0.000	Centerline Di	st. to Barrier:	54.0 feet		٨	loise So	ource Ele	evation	s (in t	eet)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Grade	Centerline Dist.	to Observer:	54.0 feet		F				_	,		
Pad Elevation:	Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks					
Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet)	Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	. 8.0	006	Grade Adi	ustmen	t: 0.0
Road Grade:												
Left View:					L	ane Eq				feet)		
FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 61.75 5.18 0.15 -1.20 -4.67 0.000 0.000 0.000												
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Berm Atten												
VehicleType		Right View:	90.0 degree	S		Heav	y Trucks	: 47.5	959			
Autos: 61.75 5.18 0.15 -1.20 -4.67 0.000 0.000												
Medium Trucks: 73.48 -12.06 0.17 -1.20 -4.87 0.000 0.000 Heavy Trucks: 79.92 -16.02 0.17 -1.20 -5.39 0.000 0.000 Unmitigated Noise Levels (without Tropo and barrier attenution) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.9 64.0 62.2 56.2 64.8 65.4 Medium Trucks: 60.4 58.9 52.5 51.0 59.4 59.7 Heavy Trucks: 62.9 61.4 52.4 53.7 62.0 62.7 Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 36 78 168 361	,,										_	
Heavy Trucks: 79.92 -16.02 0.17 -1.20 -5.39 0.000 0.000												
Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.9 64.0 62.2 56.2 64.8 65.4 Medium Trucks: 60.4 58.9 52.5 51.0 59.4 59.9 Heavy Trucks: 62.9 61.4 52.4 53.7 62.0 62.1 Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 36 78 168 361							-1.20		-5.39	0.0	00	0.000
Autos: 65.9 64.0 62.2 56.2 64.8 65.4 Medium Trucks: 60.4 58.9 52.5 51.0 59.4 59.7 Heavy Trucks: 62.9 61.4 52.4 53.7 62.0 62.1 Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise: 0.0								Marie 1	_	Late		A 151
Medium Trucks: 60.4 58.9 52.5 51.0 59.4 59.7 Heavy Trucks: 62.9 61.4 52.4 53.7 62.0 62.1 Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise: Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 36 78 168 361	,,			_	q Ev		Leq					
Heavy Trucks: 62.9 61.4 52.4 53.7 62.0 62.1 Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise Contour (in feet)												
Vehicle Noise: 68.4 66.7 63.0 58.9 67.4 67.8 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 36 78 168 361												
70 dBA 65 dBA 60 dBA 55 dBA Lan: 36 78 168 361												67.8
70 dBA 65 dBA 60 dBA 55 dBA Lan: 36 78 168 361	Centerline Distan	ce to Noise C	ontour (in feet)									
			,		70 d	BA	65 (1BA		60 dBA	55	dBA
CNEL: 38 83 179 385			L	dn:	36	6	7	8	•	168		361
			CN	IEL:	38	3	8	3		179	:	385

Monday, January 25, 2016

	FH'	WA-RD-77-108	HIGH	YAW	NOISE P	REDICTI	ON M	ODEL			
Scenari	o: Year 2019	With Project							o Diamant	е	
	e: Florida Av.					Job No	ımber:	9792			
Road Segmen	nt: w/o Winch	ester Rd.									
SITE S	SPECIFIC II	NPUT DATA			Site Cor				L INPUT	S	
Average Daily	Traffic (Adt):	35 800 vehicle	e		One our	iantiono (, iai a	Autos			
	Percentage:	10%	3		Me	dium Tru	cks (2				
	our Volume:	3.580 vehicle	e			avy Truc		,			
	hicle Speed:	50 mph	3				(0 .	7 151100).	.0		
Near/Far I ar		78 feet			Vehicle						
	ic Distance.	70 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet				edium Tr		84.8%		10.3%	
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	st. to Barrier:	76.0 feet			Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Autos		0.000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks		.297			
Observer Height (A	Above Pad):	5.0 feet				v Trucks	-	3.006	Grade Ad	liustment	: 0.0
Pa	ad Elevation:	0.0 feet				•				,	
Roa	ad Elevation:	0.0 feet			Lane Eq				feet)		
F	Road Grade:	0.0%				Autos		5.422			
	Left View:	-90.0 degre	es			m Trucks		5.286			
	Right View:	90.0 degre	es		Heav	y Trucks	: 65	5.300			
FHWA Noise Mode					_						
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		m Atten
Autos:	70.20			-1.8		-1.20		-4.73		000	0.00
Medium Trucks:	81.00			-1.8		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			-1.8		-1.20		-5.25	0.0	000	0.00
Unmitigated Noise						1 1	E-de t	_	Ldn		NEL
VehicleType Autos:	Leq Peak Ho	ur Leq Day	68.4	Leq E	ening 66.6	Leq I	vignt 60	6	Lan 69.:		NEL 69.
Medium Trucks:		3.9	62.3		56.0		54		62.	_	63.
Heavy Trucks:		4.3	62.9		53.8		55		63.	-	63.
Vehicle Noise:		2.0	70.2		67.2		62		70.		71.
Centerline Distance	e to Noise C	ontour (in feet)								
		,		70	dBA	65 (1BA		60 dBA	55	dBA
			Ldn:		88	18	19		408	8	379
		C	NFI:		94	20	13		438	9	144

	FH	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICTI	ON MO	DEL			
Road Na	rio: Year 2019 me: Florida Av. ent: e/o Warrer						Name: umber:		o Diamante	е	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =		oft = 15)		
Average Daily	/ Traffic (Adt):	43,700 vehicle	S					Autos:	15		
Peak Hou	r Percentage:	10%				dium Tru					
Peak	Hour Volume:	4,370 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
ν	ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far L	ane Distance:	84 feet			Ver	icleType		Day	Evening	Night	Daily
Site Data							lutos:	77.5%		9.69	
R	arrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline E	ist. to Barrier:	70.0 feet			Noise S	ource El	evatio	ns (in f	eet)		
Centerline Dist	to Observer:	70.0 feet				Autos	s: 0	.000	,		
Barrier Distance	e to Observer:	0.0 feet			Mediu	m Trucks	3: 2	.297			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks		.006	Grade Ad	iustmer	t: 0.0
1	Pad Elevation:	0.0 feet									
R	oad Elevation:	0.0 feet			Lane Eq			_ •	feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degre	es			m Trucks		.065			
	Right View:	90.0 degree	es		Hear	y Trucks	s: 56	.081			
FHWA Noise Mo	del Calculation	18									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos	70.20	4.00		-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	: 81.00	-13.24		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	: 85.38	-17.20		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi			barri	ier atte	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	Evening	_	Night		Ldn		CNEL
Autos			70.2		68.5		62.		71.0		71.6
Medium Trucks	: 65	5.7	64.2		57.8		56.	3	64.8	3	65.0
Heavy Trucks			64.7		55.7		56.	-	65.3		65.4
Vehicle Noise	: 73	3.8	72.1		69.0		64.	3	72.8	3	73.3
Centerline Distar	nce to Noise C	ontour (in feet)								
			L		dBA		dBA	(60 dBA		5 dBA
			Ldn:		801	23			499		,076
		Ci	VEL:	1	16	24	19		536	1	,156

FH	WA-RD-77-108 HI	SHWAY NO	ISE PREDICTIO	N MODEL		
Scenario: Year 2019 Road Name: Stowe Rd Road Segment: w/o Califo				ame: Ranchonber: 9792	o Diamante	
SITE SPECIFIC I	NPUT DATA		NO	ISE MODE	L INPUTS	
Highway Data		Sit	e Conditions (H	lard = 10, Sc	ft = 15)	
Average Daily Traffic (Adt):	4,000 vehicles			Autos:	15	
Peak Hour Percentage:	10%		Medium Truck	ks (2 Axles):	15	
Peak Hour Volume:	400 vehicles		Heavy Trucks	(3+ Axles):	15	
Vehicle Speed:	40 mph	Ve	hicle Mix			
Near/Far Lane Distance:	36 feet		VehicleType	Day	Evening	Night Daily
Site Data			Au		-	9.6% 97.42%
Barrier Height:	0.0 feet		Medium Truc	ks: 84.8%	4.9%	10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Truc	ks: 86.5%	2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	47.0 feet	No	ise Source Elev	ations (in fe	pet)	
Centerline Dist. to Observer:	47.0 feet		Autos:	0.000	,01,	
Barrier Distance to Observer:	0.0 feet		Medium Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet	'	Heavy Trucks:	8.006	Grade Adiu	stment: 0.0
Pad Elevation:	0.0 feet					
Road Elevation:	0.0 feet	La	ne Equivalent D	•	feet)	
Road Grade:	0.0%		Autos:	43.704		
Left View:	-90.0 degrees	'	Medium Trucks:	43.501		
Right View:	90.0 degrees		Heavy Trucks:	43.521		
FHWA Noise Model Calculation	ns					
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Berm Atten
Autos: 66.5	-5.42	0.77	-1.20	-4.63	0.00	0.000
Medium Trucks: 77.72		0.80	-1.20	-4.87	0.00	
Heavy Trucks: 82.99	-26.61	0.80	-1.20	-5.46	0.00	0.000
Unmitigated Noise Levels (with	hout Topo and bar	rier attenua	ntion)			
VehicleType Leq Peak Ho		Leq Ever	, ,	-	Ldn	CNEL
	0.7 58.8		57.0	50.9	59.6	60.2
	4.7 53.2	_	46.8	45.2	53.7	53.9
,	6.0 54.0	*	45.5	46.8	55.1	55.3
Vehicle Noise: 6	2.7 61.0)	57.7	53.1	61.7	62.1
Centerline Distance to Noise C	Contour (in feet)					
		70 dB.	A 65 dE	A 6	0 dBA	55 dBA
	Ldr	: 13	28		61	131
	CNFI	: 14	30		65	140

F	HWA-R	D-77-108 H	HIGHV	VAY N	OISE P	REDICT	ION MOI	DEL			
Scenario: Year 20 Road Name: Florida A Road Segment: e/o Myer	V.	Project					t Name: I Number: S		o Diamante	e	
SITE SPECIFIC	INPUT	DATA					NOISE N	IODE	L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt) Peak Hour Percentage Peak Hour Volume	1	0 vehicles 0% 0 vehicles					rucks (2 A licks (3+ A		15		
Vehicle Speed		5 mph		ν	'ehicle	Mix					
Near/Far Lane Distance	8	4 feet			Veh	icleTyp	е	Dav	Evening	Night	Daily
Site Data								77.5%	-	9.6	
Barrier Height		0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-Wall, 1-Berm)		0.0				Heavy 7	rucks:	86.5%	2.7%	10.8	% 0.74%
Centerline Dist. to Barrier	70	0.0 feet		۸	loise S	ource E	levation	s (in f	eet)		
Centerline Dist. to Observer	: 70	0.0 feet		F		Auto		000	/		
Barrier Distance to Observer	: 0	0.0 feet			Mediu	m Truck		97			
Observer Height (Above Pad)	: 5	i.0 feet				/y Truck		006	Grade Adj	ustme	nt: 0.0
Pad Elevation	: 0	0.0 feet		L							
Road Elevation		0.0 feet		L	ane Eq		t Distand		feet)		
Road Grade	: 0	0.0%				Auto					
Left View	-90	0.0 degrees	3			m Truck					
Right View	90	0.0 degrees	8		Heav	y Truck	s: 56.0)81			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Traf	fic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en B	erm Atten
Autos: 64.	30	5.10		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks: 75.	75	-12.14		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks: 81.	57	-16.10		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise Levels (w	thout T	opo and b	arrier	attenu	ıation)						
VehicleType Leq Peak F		Leq Day	_	Leq Ev		Leq	Night		Ldn		CNEL
Autos:	67.3	-	5.4		63.7		57.6		66.2		66.8
Medium Trucks:	61.6		0.0		53.7		52.1		60.6		60.8
Heavy Trucks:	63.4		2.0		53.0		54.2		62.6		62.7
Vehicle Noise:	69.6		7.8		64.4		60.0		68.5	•	69.0
Centerline Distance to Noise	Contou	ır (in feet)		70 '	D.A	-	-IDA		00 -ID4		ID 4
				70 d			dBA	<u> </u>	60 dBA		55 dBA
			dn:	56			21		260		560
		CN	EL:	60)	1	29		278		598

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	MAY N	IOISE PE	REDICTI	ON MC	DDEL			
Road Name	o: Year 2019 ve: Grand Av. nt: e/o Patterso	,				Project i Job Ni			o Diamante	9	
SITES	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data					Site Con	ditions (Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2	Axles):	15		
Peak H	our Volume:	10 vehicles	3		He	avy Truc	ks (3+	Axles):	15		
Vel	hicle Speed:	40 mph		ŀ	Vehicle I	Miv					
Near/Far Lar	ne Distance:	84 feet		F		icleType		Dav	Evening	Night	Daily
Site Data				-			utos:	77.5%		9.6%	
Por	rier Height:	0.0 feet			Me	edium Tr		84.8%		10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		H	Noise So	ource Fle	evation	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet		ľ		Autos		.000	001)		
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Trucks		.297			
Observer Height (A	Above Pad):	5.0 feet				y Trucks	-	.006	Grade Ad	ustment	: 0.0
	ad Elevation:	0.0 feet		L		•					
	ad Elevation:	0.0 feet		-	Lane Eq				feet)		
F	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degree				m Trucks		.065			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56	.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		m Atten
Autos:	66.51	-21.44		-0.8		-1.20		-4.72	0.0		0.000
Medium Trucks:	77.72	-38.68		-0.8		-1.20		-4.88	0.0		0.000
Heavy Trucks:	82.99	-42.63		-0.8		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise								_			
	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos:	43		41.1		39.3		33.		41.9		42.5
Medium Trucks:	37		35.5		29.1		27.		36.0		36.3
Heavy Trucks: Vehicle Noise:	38 45		36.9 43.3		27.9 40.0		29. 35.		37.5 44.0		37.6 44.4
Centerline Distance)								
		(111 1001)		70	dBA	65 c	IBA	-	60 dBA	55	dBA
			Ldn:		ı	3			6		13
		CI	VEL:		1	3			6		14

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGI	I YAWH	NOISE PI	REDICTI	ION MC	DEL			
Road Nam	io: Year 2019 V le: Grand Av. nt: w/o Calvert	,					Name: umber:		o Diamant	е	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =				
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:			
Peak Hour	Percentage:	10%				dium Tru	,				
Peak H	lour Volume:	10 vehicles	S		He	avy Truc	cks (3+	Axles):	15		
	hicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	Autos:	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			М	edium Tr	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tr	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet		H	Noise S	ourco El	lovation	ne (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		F	NOISE S	Auto:		.000	cei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		.000			
Observer Height (Above Pad):	5.0 feet				vy Trucks		.006	Grade Ad	iustmont	. 0.0
Pa	ad Elevation:	0.0 feet			пеан	ry Trucks	s. o	.000	Grade Au	Justineni	. 0.0
Ros	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ice (in	feet)		
I	Road Grade:	0.0%				Autos	s: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56	.065			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 56	.081			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Bei	rm Atten
Autos:	66.51	-21.44		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	77.72	-38.68		-0.8	15	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise			barri								
VehicleType	Leq Peak Hou		_	Leq E	vening	_	Night		Ldn		NEL
Autos:	43.	-	41.1		39.3		33.		41.9	-	42.5
Medium Trucks:	37.	-	35.5		29.1		27.	-	36.0	-	36.3
Heavy Trucks: Vehicle Noise:	38. 45.	-	36.9 43.3		27.9		29. 35.		37.5 44.0		37.6 44.4
					0.0		55.		74.0		7-7-7-7
Centerline Distant	e to Noise Co	inour (in feet	,	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		1		3		6		13
		CI	NEL:		1	:	3		6		14

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	TION MC	DEL			
	e: Year 2019 e: Stetson Av t: e/o SR-79	. (S.)					t Name: Number:		o Diamante	е	
	PECIFIC IN	IPUT DATA							L INPUT	S	
	Percentage: our Volume:	100 vehicle 10% 10 vehicle		3	Ме	dium Ti	•	Autos. Axles).	15		
	icle Speed:	50 mph		٧	ehicle	Mix					
Near/Far Lan	e Distance:	84 feet			Veh	icleTyp		Day	Evening	Night	Daily
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1		77.59 84.89 86.59	4.9%	9.69 10.39 10.89	6 1.84%
Centerline Dis		70.0 feet		٨	loise S	ource E	levation	ıs (in f	eet)		
Road	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre	es	L	Hear ane Eq	Auto m Truck ry Truck uivaler Auto m Truck	ks: 2. ks: 8. at Distan ps: 56	000 297 006 ce (in .223	Grade Adj	iustmer	nt: 0.0
	Right View:	90.0 degre	es		Hear	ry Truck	ks: 56	.081			
FHWA Noise Mode											
VehicleType Autos:	REMEL 70.20	Traffic Flow -22.41	Dis	tance -0.87		Road -1.20	Fresi	nel -4.72	Barrier Att		erm Atten
Medium Trucks:	70.20 81.00	-22.41		-0.87		-1.20		-4.72 -4.88		000	0.000
Heavy Trucks:	85.38			-0.85		-1.20		-5.28		000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType I	Leq Peak Hou	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	(CNEL
Autos:	45		43.8		42.1		36.	-	44.6		45.2
Medium Trucks:	39		37.8		31.4		29.	-	38.4	-	38.6
Heavy Trucks:	39		38.3		29.3		30.		38.9		39.0
Vehicle Noise:	47	• •	45.7		42.6		37.	8	46.4	1	46.9
Centerline Distance	e to Noise Co	ontour (in feet)	70			10.4	1	00 104	_	- 10.4
			L	70 d	BA	65	dBA		60 dBA	5	5 dBA
		_	Ldn:	2			4		9		19
		Ci	NEL:	2			4		9		20

	FHV	VA-RD-77-108	HIGI	HWAY I	NOISE P	REDICTI	ON MC	DEL			
Road Nan	rio: Year 2019 ne: Grand Av.	,					Name: umber:		no Diamant	е	
	SPECIFIC IN	PUT DATA			04- 0-				L INPUT	s	
Highway Data					Site Cor	iaitions	•		oft = 15)		
Average Daily	. ,	100 vehicles	3					Autos:			
	Percentage:	10%				edium Tru					
	lour Volume:	10 vehicles	3		He	eavy Truc	cks (3+.	Axles).	15		
	ehicle Speed:	40 mph		f	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		•	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	6 12.9%	9.6%	97.42%
Ва	rrier Height:	0.0 feet			M	ledium Ti	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-VI		0.0				Heavy Tr	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet		F	Noise S	ource El	evation	ne (in f	oot)		
Centerline Dist.	to Observer:	70.0 feet		-	110/30 0	Auto		.000	001)		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Truck		.297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		.006	Grade Ad	iustmeni	. 0.0
P	ad Elevation:	0.0 feet								Juoumom	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56	.065			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	66.51	-21.44		-0.8	37	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	77.72	-38.68		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	43	.0	41.1		39.3		33.	3	41.9	9	42.
Medium Trucks:	37	.0	35.5		29.1		27.	6	36.0)	36.3
Heavy Trucks:	38	.3	36.9		27.9		29.	1	37.5	5	37.0
Vehicle Noise:	45	.0	43.3		40.0		35.	5	44.0)	44.4
Centerline Distan	ce to Noise Co	ntour (in feet)								
				70	ADA	65	AD A	1 .	SO ADA	1 55	ADA

Monday, January 25, 2016

FH	WA-RD-77-108 H	IGHWAY	NOISE P	REDICT	ION MODEL		
Scenario: Year 2019 Road Name: Stetson A Road Segment: e/o SR-79	r. (S.)				Name: Ran lumber: 979	cho Diamante 2	
SITE SPECIFIC I	NPUT DATA					DEL INPUTS	
Highway Data			Site Cor	nditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	100 vehicles				Auto		
Peak Hour Percentage:	10%				ucks (2 Axle	-,	
Peak Hour Volume:	10 vehicles		He	avy Tru	cks (3+ Axle	s): 15	
Vehicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lane Distance:	84 feet		Veh	icleType	e Day	/ Evening	Night Daily
Site Data				,	Autos: 77.	5% 12.9%	9.6% 97.42%
Barrier Height:	0.0 feet		М	edium T	rucks: 84.	3% 4.9%	10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 86.	5% 2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource E	levations (ii	r feet)	
Centerline Dist. to Observer:	70.0 feet			Auto		,	
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck			
Observer Height (Above Pad):	5.0 feet		Heav	/y Truck	s: 8.006	Grade Adju	stment: 0.0
Pad Elevation:	0.0 feet			•			
Road Elevation:	0.0 feet		Lane Eq		t Distance (in feet)	
Road Grade:	0.0%			Auto			
Left View:	-90.0 degrees			m Truck			
Right View:	90.0 degrees		Heav	y Truck	s: 56.081		
FHWA Noise Model Calculation			1				
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atte	
Autos: 70.20		-	.87	-1.20	-4.7		
Medium Trucks: 81.00		-	.85	-1.20	-4.8		
Heavy Trucks: 85.38	-43.60	-0	.85	-1.20	-5.2	8 0.00	0.000
Unmitigated Noise Levels (with							
VehicleType Leq Peak Ho			Evening	Leq	Night	Ldn	CNEL
	5.7 43 9.3 37		42.1 31.4		36.0 29.9	44.6 38.4	45.2 38.6
	9.3 37 9.7 38		31.4 29.3		29.9 30.5	38.4	38.6
		5.7	42.6		37.8	38.9 46.4	46.9
Centerline Distance to Noise C	ontour (in feet)						
contormic biotalice to Horse C	omour (m reet)	70) dBA	65	dBA	60 dBA	55 dBA
	La	in:	2		4	9	19
	CNE		2		4	9	

	FHV	VA-RD-77-108	HIG	HWAY N	DISE PI	REDICTIO	ON MO	DEL			
Road Nar	rio: Year 2019 \ ne: Stetson Av. ent: w/o Califorr	(S.)				Project N Job Nu			o Diamante	Э	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				S	ite Cor	iditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%				dium Truc			15		
Peak I	Hour Volume:	10 vehicles	S		He	avy Truck	is (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ane Distance:	84 feet				icleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	77.5%	12.9%	9.6%	97.42%
Ва	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			- 1	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet			laina C	ource Ele	tion	o (in f	2041		
Centerline Dist.	to Observer:	70.0 feet		^	orse s	Autos:		000	ei)		
Barrier Distance	to Observer:	0.0 feet			A 4 15 - 1	Autos: m Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				n Trucks. v Trucks:		297	Grade Adj	ustmont	. 0.0
F	ad Elevation:	0.0 feet			rica	ry Trucks.	0.0	000	Orace Au	usunon	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos:	56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks:	56.	065			
	Right View:	90.0 degree	es		Heav	y Trucks:	56.	081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	100	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	100	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier attenu	ıation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	45	.7	43.8		42.1		36.0		44.6	6	45.2
Medium Trucks:			37.8		31.4		29.9		38.4		38.6
Heavy Trucks:	39	.7 :	38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47	.4	45.7		42.6		37.8	3	46.4		46.9
Centerline Distan	ce to Noise Co	ontour (in feet,)					,		ı	
				70 d	BA	65 di	BA	6	60 dBA		dBA
			Ldn:	2		4			9		19

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICT	ION MOI	DEL			
Road Nan	io: Year 2019 \ ne: Stetson Av. nt: e/o Street "0	(S.)					Name: I umber: 9		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2 A	(xles	15		
Peak F	lour Volume:	10 vehicles	3		He	avy Truc	cks (3+ A	(xies	15		
Ve	hicle Speed:	50 mph		ı	ehicle	Mix					
Near/Far La	ne Distance:	84 feet		H.		icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
., .	st. to Barrier:	70.0 feet		١.					-1		
Centerline Dist.		70.0 feet		^	ioise S		evations		eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297			
	ad Flevation:	0.0 feet			Hear	y Truck	s: 8.0	006	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degree	25		Mediu	m Truck	s: 56.0	065			
	Right View:	90.0 degree			Hear	y Truck	s: 56.0	081			
FHWA Noise Mod	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	45.	7	43.8		42.1		36.0)	44.6	3	45.2
Medium Trucks:	39.	3	37.8		31.4		29.9)	38.4	1	38.6
Heavy Trucks:	39.	7	38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47.	4	45.7		42.6		37.8		46.4	1	46.9
Centerline Distan	ce to Noise Co	ntour (in feet)								
			Į	70 d	BA	65	dBA	6	60 dBA	55	dBA

	FHV	VA-RD-77-108 F	IIGHWAY	NOISE P	REDICTI	ON MO	DEL			
Road Nan	rio: Year 2019 ne: Stetson Av.	(S.)				Name: I umber: 9		o Diamante	•	
				ı			_			
SITE Highway Data	SPECIFIC IN	PUT DATA		Site Con				L INPUTS	3	
Average Daily	Traffic (Adt):	100 vehicles					Autos:			
	Percentage:	10%		Me	dium Tru					
	Hour Volume:	10 vehicles		1	avy Truc	,	,			
	ehicle Speed:	50 mph								
	ane Distance:	84 feet		Vehicle			_			1 5 "
a				ven	icleType		Day 77.5%	Evening	Night 9.6%	Daily
Site Data					ء edium Tr		77.5% 84.8%		10.39	
	rrier Height:	0.0 feet					04.0% 86.5%			
Barrier Type (0-V	. ,	0.0		· /	Heavy Tr	ucks.	00.5%	2.170	10.07	0.7470
	ist. to Barrier:	70.0 feet		Noise So	ource El	evation	s (in f	eet)		
Centerline Dist.		70.0 feet			Autos	s: 0.0	000			
Barrier Distance		0.0 feet		Mediu	m Trucks	3: 2.2	297			
Observer Height		5.0 feet		Heav	y Trucks	8: 8.0	006	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet		Lane Eq	uhaloni	Diotone	no (in	footl		
	ad Elevation: Road Grade:	0.0 feet 0.0%		Lane Eq	Autos			ieei)		
	Left View:	-90.0 degrees		Modiu	m Trucks					
	Right View:	90.0 degrees			y Trucks					
	Rigitt view.	90.0 degrees	•	ricas	ry Trucks	s. 30.v	JO 1			
FHWA Noise Mod										
VehicleType	REMEL	Traffic Flow	Distance	_	Road	Fresn		Barrier Atte		rm Atten
Autos:		-22.41	-0.8		-1.20		-4.72	0.0		0.000
Medium Trucks:		-39.65	-0.8		-1.20		-4.88	0.0		0.000
Heavy Trucks:		-43.60	-0.8		-1.20		-5.28	0.0	00	0.000
Unmitigated Nois										
VehicleType	Leq Peak Hou			Evening	Leq	Night		Ldn		NEL
Autos:			3.8	42.1		36.0		44.6		45.2
Medium Trucks:			7.8	31.4		29.9		38.4		38.6
Heavy Trucks:			3.3	29.3		30.5		38.9		39.0
Vehicle Noise:	47	.4 4	5.7	42.6		37.8		46.4		46.9
Centerline Distan	ce to Noise Co	ontour (in feet)								
				-10.4	0.5			00 -ID 4		10 4

Monday, January 25, 2016

	FHW	A-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	N MOI	DEL			
Scenario: Y Road Name: S Road Segment: e.	tetson Av.	(S.)				Project N Job Nui			no Diamante	•	
SITE SPE	CIFIC IN	PUT DATA				NC	ISE N	IODE	L INPUTS	;	
Highway Data				S	Site Con	ditions (l	lard =	10, S	oft = 15)		
Average Daily Traff	. ,	100 vehicles						Autos:			
Peak Hour Perd	entage:	10%			Me	dium Truc	ks (2 A	xles).	15		
Peak Hour 1	Volume:	10 vehicles			He	avy Truck	s (3+ A	xles).	15		
Vehicle	Speed:	50 mph		ν	/ehicle	Mix					
Near/Far Lane D	istance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data						Αι	tos:	77.5%	6 12.9%	9.6%	97.42%
Barrier	Heiaht:	0.0 feet			M	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1	1-Berm):	0.0			I	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to	Barrier:	70.0 feet		٨	loise So	ource Ele	vations	s (in f	eet)		
Centerline Dist. to Oi	bserver:	70.0 feet				Autos:	0.0	_	,		
Barrier Distance to Oi	bserver:	0.0 feet			Madiu	m Trucks:		297			
Observer Height (Abov	ve Pad):	5.0 feet				vy Trucks:	8.0		Grade Adju	ıstment	0.0
Pad El	levation:	0.0 feet									
Road El	levation:	0.0 feet		L	.ane Eq	uivalent l	Distanc	e (in	feet)		
Road	d Grade:	0.0%				Autos:	56.2	223			
Le	eft View:	-90.0 degree	S		Mediu	m Trucks:	56.0	065			
Rig	ht View:	90.0 degree	S		Heav	y Trucks:	56.0)81			
FHWA Noise Model Ca	alculations	i									
VehicleType R	EMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	el	Barrier Atte	en Bei	m Atten
Autos:	70.20	-22.41		-0.87	,	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	81.00	-39.65		-0.85	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.85	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise Lev											
., ,	Peak Hour			eq Ev	rening	Leq N			Ldn		NEL
Autos:	45.7		3.8		42.1		36.0		44.6		45.2
Medium Trucks:	39.3		7.8		31.4		29.9		38.4		38.6
Heavy Trucks:	39.7		8.3		29.3		30.5		38.9		39.0
Vehicle Noise:	47.4	4 4	5.7		42.6		37.8		46.4		46.9
Centerline Distance to	Noise Co	ntour (in feet)									
				70 d		65 di	BA .	- 1	60 dBA		dBA
		-	.dn:	2		4			9		19
		CN	IEL:	2		4			9		20

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICTION	ON M	DDEL			
Road Nari	rio: Year 2019 ' ne: Stetson Av. ent: w/o Warrer	(S.)				Project I Job Nu			o Diamant	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				5	Site Cor	ditions (Hard:	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak I	Hour Volume:	10 vehicles	S		He	avy Truc	ks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ane Distance:	84 feet				icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet			Inisa S	ource Ele	ovatio	ne (in f	oot)		
Centerline Dist.	to Observer:	70.0 feet		F.	10/30 0	Autos		.000	001)		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Trucks		.297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks	-	.006	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degree	es			m Trucks		.065			
	Right View:	90.0 degree	es		Hear	y Trucks	: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq Ev	ening	Leq I	Vight		Ldn	C	NEL
Autos:	45	.7	43.8		42.1		36	.0	44.6	3	45.2
Medium Trucks:	39	.3	37.8		31.4		29	.9	38.4	4	38.6
Heavy Trucks:	39	.7	38.3		29.3		30	.5	38.9	9	39.0
Vehicle Noise:	47	.4	45.7		42.6		37	.8	46.4	1	46.9
Centerline Distant	ce to Noise Co	ontour (in feet)								
				70 a	BA .	65 c		(60 dBA		dBA
			Ldn:	2		4	ļ		9		19

	FHW	A-RD-77-108	HIG	HWAY N	IOISE P	REDICT	ION MOI	DEL			
Road Nan	rio: Year 2019 W ne: Stetson Av. I nt: e/o Fisher St	(S.)					t Name: I lumber: S		o Diamante	9	
SITE	SPECIFIC IN	PUT DATA					NOISE N	/IODE	L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tı	rucks (2 A	(xles	15		
Peak F	lour Volume:	10 vehicles	3		He	eavy Tru	icks (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph		-	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			М	edium 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 Di		70.0 feet			Maiaa C	ouroo E	levations	o (in f	2041		
Centerline Dist.	to Observer:	70.0 feet	<u> </u>	voise 3				eet)			
Barrier Distance	to Observer:	0.0 feet		A 4 15 -	Auto m Truck		000 297				
Observer Height	(Above Pad):	5.0 feet				m Truck vy Truck		297	Grade Adj	isetmant	. 0.0
P	ad Elevation:	0.0 feet			пеа	vy Truck	is. 0.0	JU6	Orace Au	usunon	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distanc	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degree	es		Mediu	m Truck	rs: 56.0	065			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 56.0	081			
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:		-22.41		-0.87		-1.20		-4.72	0.0		0.000
Medium Trucks:		-39.65		-0.8	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	85.38	-43.60		-0.85	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barr	ier atten	uation)						
VehicleType	Leq Peak Hour	Leq Day	'	Leq E	vening	Leq	Night		Ldn	CI	VEL
Autos:	45.7	7 4	43.8		42.1		36.0		44.6	i	45.2
Medium Trucks:			37.8		31.4		29.9		38.4		38.6
Heavy Trucks: Vehicle Noise:	39.7		38.3 45.7		29.3 42.6		30.5 37.8		38.9 46.4		39.0 46.9
	***				42.6	1	37.8	•	46.4	,	46.8
Centerline Distan	ce to Noise Cor	ntour (in feet))	70 -	-(D.4		-/D4		20 -(D4		-/0.4
			Į	70 C	0 dBA		dBA		60 dBA	55	dBA

Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 Get Heavy Trucks: 84.8% 4.9% 10.3% 1.84% Heavy Trucks: 86.5% 2.7% 10.8% 0.74% Heavy Trucks: 86.5% 2.7% 10.8% 0.74% Noise Source Elevations (in feet)		FHV	VA-RD-77-108	HIGH	NAY N	OISE P	REDICTI	ION M	ODEL			
	Road Nan	ne: Stetson Av.	(S.)							o Diamant	е	
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Wehicle Speed: 50 mph Near/Far Lane Distance: 84 feet Wehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Night Daily Night Daily Near/Far Lane Distance: 84 feet Wehicle Type Day Evening Night Daily Night N		SPECIFIC IN	PUT DATA								S	
Peak Hour Percentage:	• •				٥	site Coi	naitions	(Hard				
Peak Hour Volume: Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Vehicle Type Day Evening Night Daily Night Daily Night Day Day Night Daily Night Day Night Day Night Night Day Night Day Night Night Day Night Night Night Night Day Night N	,	. ,		S								
Vehicle Speed: 50 mph 84 feet Vehicle Mix Vehicle Type Day Evening Night Daily Site Data Autos: 77.5% 12.9% 9.6% 97.4%									,			
Near/Far Lane Distance: 84 feet VehicleType Day Evening Night Daily				S		He	eavy Truc	cks (3+	Axles):	15		
Site Data Site Data Sarrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 feet Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Centerline Dist. for Distance to Observer: 70.0 feet Centerline Dist. for Distance to Observer: 70.0 feet Centerline Dist. for Distance to Observer: 70.0 feet Centerline Dist. for Distance to Observer: 70.0 feet Centerline Dist. for Distance to Observer: 70.0 feet Centerline Distance Centerlin		,	50 mph		١	/ehicle	Mix					
Barrier Height: 0.0 feet	Near/Far La	ne Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Barrier Type (D-Wall, 1-Berm): 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.74%	Site Data						A	Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):	Ba	rrier Heiaht:	0.0 feet			M	ledium Tr	rucks:	84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer: Barrier Distance to Observer: Barrier Distance to Observer: Dose of Centerline Distance to Observer: Dose of Centerline Distance to Observer: Dose of Centerline Distance to Observer: Dose of Centerline Distance to Noise Contour (in feet) Autos: 2.297							Heavy Tr	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 7.0 of feet Barrier Distance to Observer: 7.0 of feet Barrier Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance to Observer: 7.0 of feet Distance Observer: 7.0 of fe	Centerline Di	st. to Barrier:	70.0 feet			loico S	ourco El	lovatio	ne (in f	oot)		
Autos: 70	Centerline Dist.	to Observer:	70.0 feet		-	10/36 3				eet)		
Diserver Height (Above Pad):	Barrier Distance	to Observer:	0.0 feet			Modiu						
Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0 feet Left View: 90.0 degrees Autos: 56.223 Right View: 90.0 degrees Heavy Trucks: 56.081 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 70.20 -22.41 -0.87 -1.20 -4.72 0.000 0.000 Heavy Trucks: 85.38 -43.60 -0.85 -1.20 -5.28 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEL Autos: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 33.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.8 Centerline Distance to Noise Contour (in feet) 45.7 42.6 <td>Observer Height</td> <td>(Above Pad):</td> <td>5.0 feet</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Grade Ad</td> <td>iuetmant</td> <td></td>	Observer Height	(Above Pad):	5.0 feet							Grade Ad	iuetmant	
Road Grade:	P	ad Elevation:	0.0 feet			rica	vy Trucks	s. c	5.000	Orade Au	Justinoni	0.0
Left View:	Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	t Dista	nce (in	feet)		
		Road Grade:	0.0%				Autos	s: 56	5.223			
FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 70.20 -22.41 -0.87 -1.20 -4.72 0.000		Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56	6.065			
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 70.20 -22.41 -0.87 -1.20 -4.72 0.000 0.000 Medium Trucks: 81.00 -39.65 -0.85 -1.20 -4.88 0.000 0.000 Heavy Trucks: 85.38 -43.60 -0.85 -1.20 -5.28 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Dey Leq Night Ldn CNEL Autos: 45.7 43.8 42.1 36.0 44.6 45.2 Medium Trucks: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.8		Right View:	90.0 degree	es		Hea	vy Trucks	s: 56	6.081			
Autos: 70.20	FHWA Noise Mod	el Calculation	s									
Medium Trucks: 81.00 -39.65 -0.85 -1.20 -4.88 0.000 0.000 Heavy Trucks: 85.38 -43.60 -0.85 -1.20 -5.28 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Howr Leq Dey Leq Evening Leq Night Ldn CNEL Autos: 45.7 43.8 42.1 36.0 44.6 45.2 Medium Trucks: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.8	VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Heavy Trucks: 85.38	Autos:	70.20	-22.41		-0.87	,	-1.20		-4.72	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL	Medium Trucks:	81.00	-39.65		-0.85	5	-1.20		-4.88	0.0	000	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 45.7 43.8 42.1 36.0 44.6 45.2 Medium Trucks: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.9 Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	85.38	-43.60		-0.85	5	-1.20		-5.28	0.0	000	0.000
Autos: 45.7 43.8 42.1 36.0 44.6 45.2 Medium Trucks: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.5 Centerline Distance to Noise Contour (in feet) 47.4 45.7 42.6 37.8 46.4 46.5	Unmitigated Nois	e Levels (with	out Topo and	barrie	r atteni	uation)						
Medium Trucks: 39.3 37.8 31.4 29.9 38.4 38.6 Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.5 Centerline Distance to Noise Contour (in feet)	VehicleType	Leq Peak Hou	ır Leq Day		Leq Ev	rening	Leq	Night		Ldn	C	NEL
Heavy Trucks: 39.7 38.3 29.3 30.5 38.9 39.0 Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.8 Centerline Distance to Noise Contour (in feet)	Autos:	45.	.7	43.8		42.1		36	.0	44.6	6	45.2
Vehicle Noise: 47.4 45.7 42.6 37.8 46.4 46.9 Centerline Distance to Noise Contour (in feet)	Medium Trucks:	39.	.3	37.8		31.4		29	.9	38.4	4	38.6
Centerline Distance to Noise Contour (in feet)			.7	38.3		29.3		30	.5	38.9	9	39.0
	Vehicle Noise:	47.	.4	45.7		42.6		37	.8	46.4	4	46.9
	Centerline Distan	ce to Noise Co	ontour (in feet)								

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHW#	AY NO	OISE PI	REDICTIO	N MC	DEL				
	o: Year 2019 e: Stetson Av nt: e/o New St					Project N Job Nui			no Diamante	•		
SITES	SPECIFIC IN	IPUT DATA				NC	ISE	MODE	L INPUTS	3		
Highway Data				S	ite Con	ditions (l	Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	9,900 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10%				dium Truc						
Peak H	our Volume:	990 vehicle	s		He	avy Truck	s (3+	Axles).	: 15			
Vel	hicle Speed:	50 mph		ν	ehicle	Wix						
Near/Far Lar	ne Distance:	84 feet		F	Veh	icleType		Day	Evening	Night	Daily	
Site Data				T		AL	itos:	77.5%	6 12.9%	9.6%	97.42%	
Rar	rier Height:	0.0 feet			M	edium Tru	cks:	84.8%	6 4.9%	10.3%	1.84%	
Barrier Type (0-W		0.0			I	leavy Tru	cks:	86.5%	6 2.7%	10.8%	0.74%	
Centerline Dis	st. to Barrier:	70.0 feet		۸	loise So	ource Ele	vatio	ıs (in f	eet)			
Centerline Dist.	to Observer:	70.0 feet		-		Autos:		.000	,			
Barrier Distance t	larrier Distance to Observer: 0.0 feet bserver Height (Above Pad): 5.0 feet					Medium Trucks: 2.297						
Observer Height (,			Heavy Trucks: 8.006 Grade Adjustment:						0.0		
	ad Elevation:	0.0 feet		L	Lane Equivalent Distance (in feet)							
	ad Elevation:	0.0 feet		L	ane Eq				feet)			
F	Road Grade:	0.0%				Autos:		.223				
	Left View:	-90.0 degre				n Trucks:		.065				
	Right View:	90.0 degre	es		Heav	y Trucks:	56	.081				
FHWA Noise Mode	el Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier Atte	en Bei	m Atten	
Autos:	70.20	-2.45		-0.87		-1.20		-4.72	0.0		0.000	
Medium Trucks:	81.00			-0.85		-1.20		-4.88	0.0		0.000	
Heavy Trucks:	85.38	-23.65	-	-0.85		-1.20		-5.28	0.0	00	0.000	
Unmitigated Noise												
	Leq Peak Hou			g Ev	ening	Leq N	_		Ldn		NEL	
Autos:	65		63.8		62.0		56.		64.6		65.2	
Medium Trucks:	59		57.8		51.4		49.		58.3		58.5	
Heavy Trucks: Vehicle Noise:	59 67		58.3 65.6		49.2 62.6		50. 57.		58.8 66.4		59.0 66.8	
					02.0		51.		00.4		00.0	
Centerline Distanc	e to Noise C	ontour (in fee	,	70 di	'BA	65 di	BA	Т.	60 dBA	55	dBA	
	Ldn:					86		1	186		100	
		С	NEL:	43	3	93 199 429				129		
		С	NEL:	43	43 93 199 429						129	

	FHV	VA-RD-77-108	HIGHV	VAY N	NOISE PI	REDICTI	ON MC	DEL			
Road Nam	io: Year 2019 \ ne: Stetson Av. nt: e/o Cawsto	,					Name: ımber:		o Diamant	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions (Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	2,900 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 .	Axles):	15		
Peak H	lour Volume:	1,290 vehicle	S		He	avy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	50 mph		-	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet				icleType		Dav	Evenina	Niaht	Dailv
Site Data					*0,,		utos:	77.5%		9.69	
Pa	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Di		70.0 feet		L							
Centerline Dist.		70.0 feet		- 4	Noise S	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height	(Above Pad):	5.0 feet				m Trucks		297			
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.	006	Grade Ad	ustmer	it: 0.0
Roi	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 56	223			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 56	065			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56	.081			
FHWA Noise Mod	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	70.20	-1.30		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-18.54		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-22.50		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		CNEL
Autos:	66.	-	64.9		63.2		57.		65.7		66.3
Medium Trucks:	60.		58.9		52.5		51.	-	59.5		59.7
Heavy Trucks:	60.		59.4		50.4		51.	_	60.0		60.1
Vehicle Noise:	68.		66.8		63.7		59.	ט	67.5	Ď	68.0
Centerline Distant	ce to Noise Co	ntour (in feet)	70.4	dBA	65 (AD A		60 dBA	-	5 dBA
			I dn:		.8 .8	10		1 0	221		477
			VFI:		1	11	-		238		512
		Ci		3	•		-		200		0.2

	FHW	A-RD-77-108 H	IGHWAY	NOISE P	REDICT	TION MODE	-	
Scenario Road Name Road Segment		,				t Name: Rar Number: 979	icho Diamanto 2	e
SITE S	PECIFIC IN	PUT DATA				NOISE MO	DEL INPUT	S
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	. ,	1,600 vehicles 10% 160 vehicles 25 mph			eavy Tru	Autorucks (2 Axle rucks (3+ Axle	s): 15	
Near/Far Lan	e Distance:	84 feet			nicleTyp	e Da	/ Evening	Night Daily
Site Data Barr Barrier Type (0-Wa	ier Height:	0.0 feet 0.0		M		Autos: 77.	5% 12.9% 8% 4.9%	9.6% 97.42% 10.3% 1.84% 10.8% 0.74%
Centerline Dist	to Barrier:	70.0 feet		Noise S	ource E	levations (i	n feet)	
Road R	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees		Hea	Auto m Truck vy Truck juivaler Auto m Truck vy Truck	(s: 2.297 (s: 8.006 (s: 56.223 (s: 56.065	Grade Adj in feet)	iustment: 0.0
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berm Atten
Autos:	58.73	-7.36	-0.8		-1.20	-4.1		0.000
Medium Trucks: Heavy Trucks:	70.80 77.97	-24.60 -28.55	-0.8 -0.8		-1.20 -1.20	-4.8 -5.2		0.000 0.000 0.000
Unmitigated Noise	Levels (witho	ut Topo and ba	arrier atte	nuation)				
VehicleType L	eq Peak Hour	Leq Day	Leq E	vening	Leq	Night	Ldn	CNEL
Autos:	49.3	3 47	.4	45.6	i	39.6	48.2	48.8
Medium Trucks:	44.2			36.3		34.7	43.2	
Heavy Trucks:	47.4			36.9		38.2	46.5	
Vehicle Noise:	52.2		1.5	46.6	i	42.7	51.2	2 51.6
Centerline Distance	to Noise Co	ntour (in feet)	_					T
				dBA	65	dBA	60 dBA	55 dBA
		La		4		8	18	39
		CNE	:L:	4		9	19	42

	FH	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION MODEL	-	
		With Project						cho Diamante	
	e: Stetson Av					Job №	lumber: 979	2	
Road Segmen	t: e/o Sande	rson Av.							
SITE S Highway Data	PECIFIC II	NPUT DATA			Site Cor		(Hard = 10,	Soft = 15)	<u> </u>
Average Daily	Fraffic (Adt):	40.100 vehicle	s				Auto	os: 15	
	Percentage:	10%			Me	dium Tr	ucks (2 Axle	s): 15	
	our Volume:	4.010 vehicle	s		He	avy Tru	cks (3+ Axle	s): 15	
Vel	nicle Speed:	45 mph		١.	/- t-!-!-				
Near/Far Lar	ne Distance:	84 feet		- 1	Vehicle	icleType	e Day	Evening	Night Daily
Site Data					ven		Autos: 77.5	-	9.6% 97.42%
					M	edium T			10.3% 1.84%
	rier Height:	0.0 feet					rucks: 86.		10.8% 0.74%
Barrier Type (0-Wa	. ,	0.0				leavy I	rucks. 00.0	376 2.176	10.0% 0.74%
Centerline Dis		70.0 feet		1	Voise S	ource E	levations (ir	ı feet)	
Centerline Dist. t		70.0 feet				Auto	s: 0.000		
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2.297		
Observer Height (/	,	5.0 feet			Heav	y Truck	s: 8.006	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet		-	one Fe	ivolon	t Distance (in foot)	
	d Elevation: Road Grade:	0.0 feet 0.0%		-	Lane Eq	Auto		iii ieel)	
r	l eft View:	-90.0 degree			Modiu	m Truck			
						n Truck v Truck			
	Right View:	90.0 degree	es		пеа	/y ITUCK	8. 56.061		
FHWA Noise Mode					1				
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fresnel	Barrier Atte	
Autos:	68.46			-0.87		-1.20	-4.7		
Medium Trucks:	79.45			-0.85		-1.20	-4.8		
Heavy Trucks:	84.25			-0.85		-1.20	-5.2	8 0.0	0.000
Unmitigated Noise									
	Leq Peak Ho		_	Leg Ev			Night	Ldn	CNEL
Autos:			68.6		66.8		60.8	69.4	70.0
Medium Trucks:	-		62.7		56.4		54.8	63.3	63.5
Heavy Trucks:			63.7		54.6		55.9	64.2	64.4
Vehicle Noise:			70.6		67.4		62.7	71.3	71.
Centerline Distanc	e to Noise C	ontour (in feet)	70 c	4D A	65	dBA	60 dBA	55 dBA
			Ldn:	85			84	396	853
			VFI:	9			97	425	915
		Ci	VLL.	9		'	31	423	313

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGHV	WAY N	OISE PE	REDICTION	ON MC	DDEL			
Road Nam	io: Year 2019 V ie: 9th St. nt: e/o Winches	,				Project I Job Nu			no Diamar	ite	
	SPECIFIC IN					N	OISE	MODE	L INPU	rs	
Highway Data				S	ite Con	ditions (Hard:	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	500 vehicles						Autos:	15		
	Percentage:	10%			Me	dium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	50 vehicles			He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	25 mph		,	ehicle l	Miss					
Near/Far La	ne Distance:	84 feet				icleType		Day	Evening	Nigl	nt Daily
Site Data				-	Ven		utos:	77.5%			6% 97.429
					1.4	edium Tri		84.8%			
	rrier Height:	0.0 feet				leavy Tri		86.5%			
Barrier Type (0-W	. ,	0.0				icavy in	JUNG.	00.07	0 2.770	10.	0.147
Centerline Di		70.0 feet		٨	loise So	urce Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance		70.0 feet				Autos	: 0	.000			
		0.0 feet			Mediui	n Trucks	: 2	.297			
Observer Height (ad Flevation:	5.0 feet			Heav	y Trucks	: 8	.006	Grade A	djustm	ent: 0.0
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		,	ano Fa	uivalent	Dietai	nce (in	foot)		
	Road Grade:	0.0 reet 0.0%		-	ane Ly	Autos		.223	1001)		
	Left View:	-90.0 degree			Mediuu	n Trucks		.065			
	Right View:	90.0 degree				y Trucks		.081			
		ou.o dogroo				,					
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite		Fres		Barrier A		Berm Atten
Autos:	58.73	-12.41		-0.87		-1.20		-4.72	-	.000	0.00
Medium Trucks:	70.80	-29.65		-0.85		-1.20		-4.88		.000	0.00
Heavy Trucks:	77.97	-33.60		-0.85		-1.20		-5.28	0	.000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou		_	Leq Ev		Leq N	_		Ldn		CNEL
Autos:	44.3	-	2.4		40.6		34		43		43.
Medium Trucks:	39.		7.6		31.2		29		38		38.
Heavy Trucks:	42.		0.9		31.9		33.		41		41.
Vehicle Noise:	47.		5.5		41.6		37	.6	46	.2	46.
Centerline Distant	ce to Noise Co	ntour (in feet)		70							55 154
			-	70 d	BA	65 d			60 dBA 8		55 dBA 18
		_	.dn: FI:	2		4			8		18 19

	FH\	WA-RD-77-108	HIGH	I YAW	NOISE P	REDICT	ION M	DDEL			
	e: Wincheste		t				Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Co	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,300 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%				edium Tr	,				
Peak H	our Volume:	1,630 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Vei	hicle Speed:	55 mph		ŀ	Vehicle	Mix					
Near/Far Lai	ne Distance:	36 feet		ŀ	Vel	nicleType	,	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%		9.6%	97.42%
Rar	rier Height:	0.0 feet			N.	ledium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	47.0 feet		-	Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	47.0 feet		ŀ		Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Medii	ım Truck		297			
Observer Height (Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	liustmen	t: 0.0
Pa	d Elevation:	0.0 feet		L						,	
Roa	d Elevation:	0.0 feet		L	Lane Ed	quivalen			feet)		
F	Road Grade:	0.0%				Auto		3.704			
	Left View:	-90.0 degre				ım Truck		3.501			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 43	3.521			
FHWA Noise Mode	el Calculation	s		1							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-0.70		0.7	7	-1.20		-4.63		000	0.000
Medium Trucks:	82.40	-17.94		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	86.40	-21.89		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atter	nuation)						
,,	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos:	70		68.8		67.0		60	-	69.	-	70.2
Medium Trucks:	64		62.6		56.2		54		63.		63.3
Heavy Trucks:	64	• •	62.7		53.6		54	-	63.:		63.4
Vehicle Noise:	72		70.5		67.5	5	62	.6	71.:	2	71.7
Centerline Distance	e to Noise C	ontour (in feet)					_		_	
			L		dBA		dBA	(60 dBA		dBA
		_	Ldn:	_	57		22		262		565
		C	NEL:	6	51	1	31		282	(808

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICT	ION MO	DEL			
Road Nan	io: Year 2023 \ ne: Patterson A nt: s/o Grand A	v.	ı				Name: lumber:		o Diamante	e	
SITE	SPECIFIC IN	PUT DATA					IOISE I	ИODE	L INPUT	5	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	Axles):	15		
Peak H	lour Volume:	10 vehicles	3		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	40 mph			ehicle	Miv					
Near/Far La	ne Distance:	12 feet		F.		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		22.0 feet		L							
Centerline Dist.		22.0 feet		^	loise S		levation		eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297	Crodo Ad	undennnen	4 0 0
P	ad Elevation:	0.0 feet			Hear	y Truck	s: 8.	006	Grade Ad,	usunen	<i>i.</i> 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 21.	749			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 21.	338			
	Right View:	90.0 degree	es		Hear	y Truck	s: 21.	378			
FHWA Noise Mod	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:		-21.44		5.32		-1.20		-4.34	0.0		0.000
Medium Trucks:	77.72	-38.68		5.44		-1.20		-4.85		00	0.000
Heavy Trucks:	82.99	-42.63		5.43		-1.20		-6.07	0.0	100	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day	'	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	49.	2 .	47.3		45.5		39.5	5	48.1		48.7
Medium Trucks:	43.	3	41.8		35.4		33.9	9	42.3	3	42.6
Heavy Trucks: Vehicle Noise:	44. 51.		43.2 49.5		34.1 46.2		35.4 41.7		43.7		43.9
		-			46.2		41.7		50.2		50.
Centerline Distan	ce to Noise Co	ntour (in feet,)	70			10.4		00 104	-	- 10.4
					BA	65 dBA		60 dBA		55	5 dBA

	FH\	WA-RD-77-108	HIGH	NAY NO	DISE P	REDICT	TION MODE	EL		
	: Winchester	Without Project r Rd.	t				t Name: Ra Number: 97	ancho Diamar '92	ite	
SITE S	PECIFIC IN	NPUT DATA					NOISE MO	DEL INPU	ΓS	
Highway Data				S	ite Cor	ditions	(Hard = 1	0, Soft = 15)		
Veh	Percentage: our Volume: icle Speed:	10% 1,820 vehicle 45 mph		V		avy Tru	Au rucks (2 Ax icks (3+ Ax	/		
Near/Far Lan	e Distance:	36 feet			Veh	icleTyp	e D	ay Evening	Nig	ht Daily
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1	rucks: 84	7.5% 12.9% 1.8% 4.9% 3.5% 2.7%	10.	6% 97.42% 3% 1.84% 8% 0.74%
Centerline Dis	t. to Barrier:	47.0 feet		N	loise S	ource E	levations	(in feet)		
Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2.29 (s: 8.00 (s: 43.70 (s: 43.50	7 6 Grade A (in feet)	djustm	ent: 0.0
FHWA Noise Mode	l Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier A	tten	Berm Atten
Autos:	68.46	0.65		0.77		-1.20	-4	.63 0	.000	0.000
Medium Trucks:	79.45	-16.59		0.80		-1.20	-4	.87 0	.000	0.000
Heavy Trucks:	84.25	-20.54		0.80		-1.20	-5	i.46 0	.000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	iation)					
VehicleType I	Leq Peak Hou	ur Leq Daj	y .	Leq Eve	ening	Leq	Night	Ldn		CNEL
Autos:	68	3.7	66.8		65.0		59.0	67	.6	68.2
Medium Trucks:	62		61.0		54.6		53.1	61		61.7
Heavy Trucks:	63		61.9		52.9		54.1	62		62.6
Vehicle Noise:	70).5	68.8		65.6		61.0	69	.5	70.0
Centerline Distance	e to Noise C	ontour (in fee	t)							
				70 dl	BA	65	dBA	60 dBA		55 dBA
			Ldn:	44	*			435		
		С	NEL:	47		1	01	217		467

Monday, January 25, 2016

	FH\	WA-RD-77-10	8 HIGI	HWAY I	NOISE PI	REDICTION	ON MC	DDEL			
Road Nam	io: Year 2023 ne: California A nt: n/o Stowe I	۸v.	ct			Project I Job Nu			o Diamant	e	
	SPECIFIC IN	IPUT DATA			0'' 0				L INPUT	S	
Highway Data					Site Con	ditions (Hard :				
Average Daily	. ,	4,100 vehicle	es					Autos:			
	Percentage:	10%				dium Tru					
Peak H	lour Volume:	410 vehicle	es		He	avy Truci	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		-		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Rai	rrier Heiaht:	0.0 feet			M	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tru	ıcks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet									
Centerline Dist.		47.0 feet			Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height ((Above Pad):	5.0 feet				m Trucks		.297			
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8	.006	Grade Ad	justment	0.0
Roa	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalent	Distar	ice (in	feet)		
	Road Grade:	0.0%		Ī		Autos	: 43	.704			
	Left View:	-90.0 degre	ees		Mediu	m Trucks	: 43	.501			
	Right View:	90.0 degre			Heav	y Trucks	: 43	.521			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	ten Bei	rm Atten
Autos:	66.51	-5.3		0.7		-1.20		-4.63		000	0.000
Medium Trucks:	77.72		-	0.8	-	-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-26.5	1	0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	d barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Da	ay .	Leq E	vening	Leq N	light		Ldn	С	NEL
Autos:	60	.8	58.9		57.1		51.	1	59.7	7	60.3
Medium Trucks:	54	.8	53.3		46.9		45.	4	53.8	В	54.0
Heavy Trucks:	56	.1	54.7		45.6		46.	9	55.2	2	55.4
Vehicle Noise:	62	1.8	61.1		57.8		53.	2	61.8	В	62.2
Centerline Distan	ce to Noise C	ontour (in fee	et)								
				70	dBA	65 d	BA		60 dBA	55	dBA
			Ldn:	1	3	29)		62	1	133
		(NEL:	1	4	31	1		66	1	142

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGH	WAY I	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Year 2023 V ne: California A nt: s/o Stowe R	v. ,	t				Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	400 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	40 vehicle	S		He	eavy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		ŀ	Vehicle	Miv					
Near/Far La	ne Distance:	36 feet		ŀ		nicleType		Dav	Evenina	Niaht	Dailv
Site Data					*07		lutos:	77.5%		9.6%	
	rrier Heiaht:	0.0 feet			M	ledium Tr	ucks:	84.8%		10.3%	
Barrier Type (0-W		0.0 reet				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		47.0 feet									
Centerline Dist.		47.0 feet			Noise S	ource El			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		.000			
Observer Height	(Above Pad):	5.0 feet				m Trucks	–	.297			
	ad Elevation:	0.0 feet			Hea	vy Trucks	s: 8	.006	Grade Ad	ustmen	t: 0.0
Roi	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 43	.704			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 43	.501			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 43	.521			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	-15.42		0.7	77	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	77.72	-32.66		0.8	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-36.61		0.8	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Hou	Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	50.	7	48.8		47.0	1	40.	9	49.6	3	50.2
Medium Trucks:	44.	7	43.2		36.8		35.	2	43.7	7	43.9
Heavy Trucks:	46.	0	44.6		35.5	i	36.	8	45.1		45.3
Vehicle Noise:	52.	7	51.0		47.7		43.	1	51.7	7	52.1
Centerline Distant	ce to Noise Co	ntour (in feet)								
					dBA		dBA	6	0 dBA	55	5 dBA
			Ldn:		3		3		13		28
		Ci	VEL:		3	6	6		14		30

	FHV	/A-RD-77-108	HIGH	WAY N	OISE PI	REDICT	ION M	ODEL			
	o: Year 2023 \ e: California A t: n/o Simpso	v. ,	t				t Name. lumber.		o Diamant	В	
SITE S Highway Data	PECIFIC IN	PUT DATA			ita Car				L INPUT:	S	
- ·	F	000	_	-	ille Coi	aitions	(паги	Autos			
Average Daily 1 Peak Hour F	. ,	200 vehicle:	5		Mo	dium Tr	uoko (2				
	our Volume:	20 vehicle:				avy Tru	,				
	nicle Speed:	25 mph	5				CAS (OT	ANICS).	10		
Near/Far I an		36 feet		ν	ehicle!						
	ic Distance.	30 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	
Barr	rier Height:	0.0 feet				edium T		84.89		10.3%	1.84%
Barrier Type (0-Wa	. ,	0.0			- 1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		47.0 feet		٨	loise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		47.0 feet				Auto	s: (0.000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8	3.006	Grade Adj	iustment	0.0
	d Elevation: d Elevation:	0.0 feet		,	ano Eo	uivalen	t Dicta	nco (in	foot)		
	a ⊑ievation: Road Grade:	0.0 feet			ane Ly	Auto		3.704	ieei)		
	Left View:	0.0% -90.0 degree			Madiu	m Truck		3.501			
	Right View:	90.0 degree				y Truck		3.521			
			#5		rical	y ITUCK		J.JZ I			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten
Autos:	58.73	-16.39		0.77		-1.20		-4.63		000	0.000
Medium Trucks:	70.80 77.97	-33.63 -37.58		0.80		-1.20 -1.20		-4.87 -5.46		000	0.000
Heavy Trucks:						-1.20		-5.46	0.0	000	0.000
Unmitigated Noise											
,,, .	Leq Peak Hou	- 1 - 7		Leq Ev		Leq	Night		Ldn		VEL
Autos:	41.	-	40.0		38.3		32		40.8		41.4
Medium Trucks:	36.		35.3		28.9		27		35.8		36.1
Heavy Trucks:	40.		38.6		29.5		30		39.1		39.3 44.2
Vehicle Noise:	44.		43.1		39.2		35	.3	43.8	5	44.2
Centerline Distance	e to Noise Co	ntour (in feet)	70 d			ADA		eo aba		AD A

FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICTION	ON MODEL			
Scenario: Year 2023 \	Nithout Project			Project I	Name: Rand	ho Diamante)	
Road Name: California A	V.			Job Nu	ımber: 9792			
Road Segment: s/o Stetson	Av. (S.)							
SITE SPECIFIC IN	PUT DATA		04-0-			EL INPUTS	3	
Highway Data			Site Cor	iaitions (Hard = 10, 3			
Average Daily Traffic (Adt):	200 vehicles	3			Auto			
Peak Hour Percentage:	10%				cks (2 Axles			
Peak Hour Volume:	20 vehicles	3	He	avy Truc	ks (3+ Axles): 15		
Vehicle Speed:	40 mph		Vehicle	Mix				
Near/Far Lane Distance:	36 feet			icleType	Day	Evening	Night	Daily
Site Data				Α	utos: 77.5	% 12.9%	9.6%	97.42%
Barrier Height:	0.0 feet		M	edium Tru	ucks: 84.8	% 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	ucks: 86.5	% 2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet		Noise S	ource Ele	evations (in	feet)		
Centerline Dist. to Observer:	47.0 feet			Autos		,		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks				
Observer Height (Above Pad):	5.0 feet			vy Trucks		Grade Adj	ustment	0.0
Pad Elevation:	0.0 feet							
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distance (ii	ı feet)		
Road Grade:	0.0%			Autos				
Left View:	-90.0 degree	es	Mediu	m Trucks	: 43.501			
Right View:	90.0 degree	es	Hea	y Trucks	43.521			
FHWA Noise Model Calculation:	s		1					
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos: 66.51	-18.43	0	.77	-1.20	-4.63	0.0	00	0.000
Medium Trucks: 77.72	-35.67	0	.80	-1.20	-4.87	7 0.0	00	0.000
Heavy Trucks: 82.99	-39.62	0	.80	-1.20	-5.46	0.0	00	0.000
Unmitigated Noise Levels (with	out Topo and	barrier atte	enuation)					
VehicleType Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	light	Ldn	CI	VEL
Autos: 47.	.7 4	45.8	44.0		37.9	46.6		47.2
Medium Trucks: 41.	.7 4	40.1	33.8		32.2	40.7		40.9
Heavy Trucks: 43.	.0 4	41.5	32.5		33.8	42.1		42.2
Vehicle Noise: 49	.7	47.9	44.7		40.1	48.7		49.1
Centerline Distance to Noise Co	ntour (in feet))						

Monday, January 25, 2016

	FHWA	-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	OM MOI	DEL			
Scenario: Year Road Name: Califo Road Segment: s/o S	ornia Av.	,				Project N Job Nui			o Diamante		
SITE SPECIF	IC INP	UT DATA				NC	DISE N	IODE	L INPUTS	;	
Highway Data				S	ite Con	ditions (l	Hard =	10, S	oft = 15)		
Average Daily Traffic (/ Peak Hour Percent Peak Hour Volu	age:	100 vehicles 10% 10 vehicles				dium Truc avy Truck	ks (2 A	,	15		
Vehicle Spi	eed:	25 mph		_							
Near/Far Lane Dista		36 feet		V	ehicle I Vehi	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	97.42%
Barrier Hei Barrier Type (0-Wall, 1-Be	erm):	0.0 feet 0.0				edium Tru Heavy Tru		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dist. to Bar		47.0 feet		٨	loise Sc	urce Ele	vations	(in f	eet)		
Centerline Dist. to Obser Barrier Distance to Obser Observer Height (Above F Pad Eleva	rver: Pad):	47.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos: n Trucks: y Trucks:	2.2	97	Grade Adju	ıstment	: 0.0
Road Eleva	tion:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in	feet)		
Road Gr	ade:	0.0%				Autos:	43.7	'04			
Left V Right V		-90.0 degree 90.0 degree				n Trucks: y Trucks:					
FHWA Noise Model Calcu	lations										
VehicleType REM	EL T	raffic Flow	Distar	псе	Finite	Road	Fresn	e/	Barrier Atte	n Ber	m Atten
Autos:	58.73	-19.40		0.77		-1.20		4.63	0.00	00	0.000
Medium Trucks:	70.80	-36.64		0.80		-1.20		4.87	0.00	00	0.000
Heavy Trucks:	77.97	-40.59		0.80		-1.20		-5.46	0.00	00	0.000
Unmitigated Noise Levels	<u> </u>										
VehicleType Leq Pea		Leq Day		eq Ev		Leq N	_		Ldn	C	NEL
Autos:	38.9		7.0		35.2		29.2		37.8		38.4
Medium Trucks:	33.8	-	2.3		25.9		24.3		32.8		33.0
Heavy Trucks: Vehicle Noise:	37.0 41.8		5.6 0.1		26.5 36.2		27.8		36.1 40.8		36.3 41.2
Centerline Distance to No					30.2		52.0		10.0		
Jones Distance to No	.56 0011	(111 1001)		70 d	'BA	65 di	BA	(60 dBA	55	dBA
		L	dn:	1		1			2		5
		CN	IEL:	1		1			3		6

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHV	1 YAW	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Year 2023 ' ne: Warren Rd nt: s/o Esplana		t			.,	Name: umber:		o Diamant	е	
SITE :	SPECIFIC IN	IPUT DATA			Sito Cor	N nditions			L INPUT	S	
• •	- m (* !)				Site Coi	luluons	(I lai u =				
Average Daily			S					Autos:	15		
	Percentage:	10%				edium Tru					
	lour Volume:	2,320 vehicle	S		He	eavy Truc	KS (3+	Axies):	15		
	hicle Speed:	55 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.6	% 97.42%
Rai	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8	% 0.74%
Centerline Dis	st. to Barrier:	70.0 feet			Maina C	ource El	o rotio	o (in f	0041		
Centerline Dist.	to Observer:	70.0 feet			Noise 3	Auto:		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				vy Trucks	–	.006	Grade Ad	iuotmo	nt: 0.0
Pa	ad Elevation:	0.0 feet			пеа	vy Trucks	s. o	.000	Grade Au	Jusuiie	n. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ce (in	feet)		
I	Road Grade:	0.0%				Autos	s: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56	.065			
	Right View:	90.0 degre	es		Hea	vy Trucks	s: 56	.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres		Barrier Att	en B	erm Atten
Autos:	71.78	0.83		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	82.40	-16.41		-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-20.36		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	70		68.6		66.9		60.		69.4		70.1
Medium Trucks:	63		62.4		56.1		54.	-	63.0	-	63.2
Heavy Trucks:	64		62.6		53.5		54.		63.1		63.3
Vehicle Noise:	72	.1	70.4		67.4		62.	5	71.1	1	71.6
Centerline Distance	ce to Noise Co	ontour (in feet)					_		_	
			L		dBA		dBA	6	60 dBA	!	55 dBA
			Ldn:	-	13		78		384		828
		Ci	VEL:	8	19	19	92		413		890

	FHW	/A-RD-77-108 i	HIGHWAY	NOISE P	REDICT	TION MODEL		
	e: Warren Rd.					t Name: Ran Number: 9792	cho Diamante 2	
SITE S	PECIFIC IN	PUT DATA				NOISE MOD	EL INPUTS	3
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
	Percentage: our Volume:	10% 2,320 vehicles				Auto rucks (2 Axle: icks (3+ Axle:	s): 15	
	nicle Speed:	55 mph		Vehicle	Mix			
Near/Far Lan	ie Distance:	84 feet		Veh	nicleTyp	e Day	Evening	Night Daily
Site Data						Autos: 77.5	5% 12.9%	9.6% 97.42%
Barı	rier Height:	0.0 feet		M	ledium 7	rucks: 84.8	3% 4.9%	10.3% 1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy T	rucks: 86.5	5% 2.7%	10.8% 0.74%
Centerline Dis	t. to Barrier:	70.0 feet		Noise S	ource F	levations (ir	foot)	
Centerline Dist. t	o Observer:	70.0 feet		740/30 0	Auto		11001)	
Barrier Distance to	o Observer:	0.0 feet		Modis	m Truck			
Observer Height (A	Above Pad):	5.0 feet			vv Truci		Grade Adi	ustment: 0.0
Pa	d Elevation:	0.0 feet		1 ICa	vy much	13. 0.000	Orado riaji	300710711. 0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivaler	nt Distance (i	n feet)	
R	Road Grade:	0.0%			Auto	os: 56.223		
	Left View:	-90.0 degrees	S	Mediu	m Truck	ks: 56.065		
	Right View:	90.0 degrees	S	Hea	vy Truci	ks: 56.081		
FHWA Noise Mode	l Calculations	5						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	71.78	0.83	-	.87	-1.20	-4.7		
Medium Trucks:	82.40	-16.41	-	.85	-1.20	-4.8		
Heavy Trucks:	86.40	-20.36		.85	-1.20	-5.2	8 0.0	0.000
Unmitigated Noise								
	Leq Peak Hou			Evening		Night	Ldn	CNEL
Autos:	70.		8.6	66.9		60.8	69.4	
Medium Trucks:	63.		2.4	56.1		54.5	63.0	
Heavy Trucks:	64.		2.6	53.5		54.8	63.1	
Vehicle Noise:	72.		0.4	67.4		62.5	71.1	71.6
Centerline Distanc	e to Noise Co	ntour (in feet)						1
				0 dBA		dBA	60 dBA	55 dBA
			dn:	83		178	384	828
		CN	EL:	89	1	192	413	890

Site Data		FH\	WA-RD-77-108	HIGH	A YAW	IOISE P	REDICT	ION MO	DEL			
Autos: 71.78	Road Nam	e: Warren Rd	l.	ct						o Diamant	е	
Average Daily Traffic (Adt): 23,200 vehicles Peak Hour Porcentage: 10% Peak Hour Porcentage: 2,320 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet Vehicle Type Day Evening Night Day Eve		SPECIFIC IN	IPUT DATA								S	
Peak Hour Percentage: Peak Hour Volume: 2,320 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					,	Site Cor	aitions	•				
Peak Hour Volume: Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Vehicle Mix Vehicl	Average Daily	Traffic (Adt):	23,200 vehicle	es								
Vehicle Speed: S5 mph Near/Far Lane Distance: 84 feet Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day Step Day Evening Night Day												
Near/Far Lane Distance: 84 feet Near				es		He	avy Truc	cks (3+)	Axles):	15		
Site Data Autos: 71.78 Autos: 71.78 Autos: 71.70 Autos: 71.78 Autos: 72.74 Autos: 72.74 Autos: 72.74 Autos: 72.14 Autos: 72.15 Autos:		,				Vehicle	Mix					
Autos: 77.5% 12.9% 9.6% 97	Near/Far La	ne Distance:	84 feet		Ī	Veh	icleType		Day	Evening	Nigh	Daily
Barrier Type (D-Wall, 1-Berm):	Site Data								77.5%	12.9%	9.6	% 97.42
Barrier Type (0-Wall, 1-Berm):	Rai	rrier Heiaht	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3	% 1.849
Centerline Dist. to Observer: 70.0 feet Autos: 0.000							Heavy Ti	rucks:	86.5%	2.7%	10.8	% 0.74
Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Pad Elevation: 0.0 feet Canada Eleva	Centerline Dis	st. to Barrier:	70.0 feet			Noise S	ource El	evation	s (in f	eet)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 feet Road Elevation: 0.0 feet Road Glevation: 0.0 feet Road Glevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Medium Trucks: 56.065 Heavy Trucks: 56.065	Centerline Dist.	to Observer:	70.0 feet						_	,		
Diserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck					
Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 56.223 Right View: 90.0 degrees Heavy Trucks: 56.081 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten	Observer Height ((Above Pad):	5.0 feet							Grade Ad	iustme	nt: 0.0
Road Grade:	Pa	ad Elevation:	0.0 feet									
Left View:						Lane Eq				feet)		
Right View: 90.0 degrees Heavy Trucks: 56.081	1											
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Berm A Autos: 71.78 0.83 -0.87 -1.20 -4.72 0.000 Medium Trucks: 82.40 -16.41 -0.85 -1.20 -4.88 0.000 Medium Trucks: 86.40 -20.36 -0.85 -1.20 -5.28 0.000 Medium Trucks: 86.40 -20.36 -0.85 -1.20 -5.28 0.000 Medium Trucks: 86.40 -20.36 -0.85 -1.20 -5.28 0.000 Medium Trucks: 86.40 -20.36 -0.85 -1.20 -5.28 0.000 Medium Trucks: 63.9 62.4 66.9 60.8 69.4 69.4 Medium Trucks: 63.9 62.4 56.1 54.5 63.0 Medium Trucks: 64.0 62.6 53.5 54.8 63.1 Medium Trucks: 64.0 62.6 53.5 54.8 63.1 Medium Trucks: 64.0 62.6 53.5 54.8 63.1 Medium Trucks: 64.0 62.6 67.4 62.5 71.1 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 67.4 62.5 63.0 Medium Trucks: 64.0 62.6 63.0 63.0 Medium Trucks: 64.0 62.6 63.0 63												
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A		Right View:	90.0 degre	es		Hea	y Truck	s: 56	.081			
Autos: 71.78 0.83 -0.87 -1.20 -4.72 0.000	FHWA Noise Mod				· ·	,						
Medium Trucks: 82.40 -16.41 -0.85 -1.20 -4.88 0.000 -1.00 -4.88 0.000	,,							Fresi			_	erm Atter
Heavy Trucks: 86.40												0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)						-						0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.5 68.6 66.9 60.8 69.4 Medium Trucks: 63.9 62.4 56.1 54.5 63.0 Heavy Trucks: 64.0 62.6 53.5 54.8 63.1 Vehicle Noise: 72.1 70.4 67.4 62.5 71.1 Centerline Distance to Noise Contour (In feet)						-	-1.20		-5.28	0.0	000	0.00
Autos: 70.5 68.6 66.9 60.8 69.4 Medium Trucks: 63.9 62.4 56.1 54.5 63.0 Heavy Trucks: 64.0 62.6 53.5 54.8 63.1 Vehicle Noise: 72.1 70.4 67.4 62.5 71.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA		•										
Medium Trucks: 63.9 62.4 56.1 54.5 63.0 Heavy Trucks: 64.0 62.6 53.5 54.8 63.1 Vehicle Noise: 72.1 70.4 67.4 62.5 71.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA	,,			_	Leq E		_					
Heavy Trucks: 64.0 62.6 53.5 54.8 63.1 Vehicle Noise: 72.1 70.4 67.4 62.5 71.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA									-			70
Vehicle Noise: 72.1 70.4 67.4 62.5 71.1 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA									-			63
70 dBA 65 dBA 60 dBA 55 dB/												63 71
70 dBA 65 dBA 60 dBA 55 dB/	Centerline Distant	ce to Noise C	ontour (in fee	t)								
	Contonine Distant	00 10 1.0/36 0	omour (m rec	,	70 (dBA	65	dBA		60 dBA		55 dBA
<i>Ldn</i> : 83 178 384 828				Ldn:	8	3	1	78		384		828
CNEL: 89 192 413 890			С	NEL:	8	9	1	92		413		890

Monday, January 25, 2016

	FH	WA-RD-	77-108 HIG	HWAY I	NOISE PI	REDICTION	ON MC	DDEL			
	io: Year 2023		Project						o Diamant	te	
	e: Warren Ro					Job Nu	mber:	9792			
Road Segme	nt: n/o Florida	a Av.									
	SPECIFIC II	NPUT D	ATA		04- 0	No nditions (L INPUT	s	
Highway Data					Site Con	iaitions (Hara :				
Average Daily	. ,							Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	1,960 \	ehicles		He	avy Truck	rs (3+	Axles):	15		
Ve	hicle Speed:	55 r	nph		Vehicle	Mix					
Near/Far La	ne Distance:	84 f	eet	f	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	ıtos:	77.5%	12.9%	9.6%	97.42%
Pa	rrier Heiaht:	0.0	foot		M	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0	icci		- 1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	70.0	feet								
Centerline Dist.		70.0			Noise So	ource Ele			eet)		
Barrier Distance		0.0				Autos:		.000			
Observer Height		5.0				m Trucks:		.297			
	ad Flevation:	0.0			Heav	y Trucks:	8	.006	Grade Ac	djustmen	t: 0.0
	ad Elevation:	0.0			Lane Eq	uivalent	Distar	ice (in	feet)		
	Road Grade:	0.09		f		Autos		.223	,		
	Left View:		degrees		Mediu	m Trucks:		.065			
	Right View:		degrees			vy Trucks:		.081			
	rugin vion.	30.0	acgrees		77041	y muono.	- 00	.001			
FHWA Noise Mod											
VehicleType	REMEL	Traffic		istance		Road	Fres		Barrier At		rm Atten
Autos:	71.78		0.10	-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	82.40		17.14	-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40) .	21.09	-0.8	35	-1.20		-5.28	0.	000	0.000
Unmitigated Nois	e Levels (with	hout Top	o and barr	rier atte	nuation)						
VehicleType	Leq Peak Ho	our L	eq Day	Leq E	vening	Leq N	light		Ldn	C	NEL
Autos:	6	9.8	67.9		66.1		60.	1	68.	7	69.3
Medium Trucks:	6	3.2	61.7		55.3		53.	8	62.	3	62.5
Heavy Trucks:	6	3.3	61.8		52.8		54.	0	62.	4	62.5
Vehicle Noise:	7	1.4	69.6		66.7		61.	8	70.	4	70.8
Centerline Distan	ce to Noise C	Contour (in feet)								
				70	dBA	65 d	BA	-	60 dBA	55	5 dBA
			Ldn:	7	74	15	9		343		740
			CNEL:		30	17	1		369		796

	FH	IWA-RD-77-10	08 HIG	HWAY N	IOISE P	REDICT	ION MO	DDEL						
Road Na	ario: Year 2023 me: Warren R ent: s/o Florida	d.	ect		Project Name: Rancho Diamante Job Number: 9792									
	SPECIFIC I	NPUT DATA	١		04- 0				L INPUT	S				
Highway Data				,	Site Cor	iaitions	(Hara :							
	y Traffic (Adt):		les					Autos:	15					
	ır Percentage:	10%				dium Tr								
	Hour Volume:	_,	les		He	avy Tru	cks (3+	Axles):	15					
	ehicle Speed:	55 mph		-	Vehicle	Mix								
Near/Far L	ane Distance:	84 feet		-	Ver	icleType	9	Dav	Evening	Night	Dailv			
Site Data							Autos:	77.5%	- 0		97.42%			
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline L	Dist. to Barrier:	70.0 feet		- 1	Noise S	nurce F	levatio	ne (in fa	not)					
Centerline Dis	t. to Observer:	70.0 feet		F.	10/36 0	Auto		.000	,,,,					
Barrier Distance	e to Observer:	0.0 feet			Medium Trucks: 2.297									
Observer Height	t (Above Pad):	5.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.									
- 1	Pad Elevation:	0.0 feet			пеа	ry Truck	.s. o	.006	Grade Au	Justineni	0.0			
R	oad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distai	nce (in i	feet)					
	Road Grade:	0.0%				Auto	s: 56	.223						
	Left View:	-90.0 degr	ees		Mediu	m Truck	s: 56	.065						
	Right View:	90.0 degr	ees		Hear	y Truck	s: 56	.081						
FHWA Noise Mo	del Calculatio	ns												
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten			
Autos	: 71.78	3 1.3	4	-0.8	7	-1.20		-4.72	0.0	000	0.000			
Medium Trucks	82.40	-15.8	9	-0.8	5	-1.20		-4.88	0.0	000	0.000			
Heavy Trucks	86.40	-19.8	5	-0.8	5	-1.20		-5.28	0.0	000	0.000			
Unmitigated Noi	se Levels (wit	hout Topo an	d barr	ier atten	uation)									
VehicleType	Leq Peak Ho		_	Leq E			Night		Ldn	_	VEL			
Autos		1.1	69.2		67.4		61.		70.0		70.6			
Medium Trucks	: 6	4.5	63.0		56.6		55.	.0	63.5	5	63.7			
Heavy Trucks		4.5	63.1		54.0		55.		63.6		63.8			
Vehicle Noise	e: 7	2.6	70.9		67.9		63	.0	71.6	3	72.1			
Centerline Dista	nce to Noise C	Contour (in fe	et)											
			!	70 0			dBA	1 6	0 dBA		dBA			
			Ldn:	9	-		93		416	-	95			
			CNEL:	9	6	2	07		447	9	63			

	FHWA	-RD-77-108 HIG	HWAY N	OISE P	REDICT	ION MODEL	-	
Road Name	o: Year 2023 Wir e: Warren Rd. at: s/o Whittier A	•				t Name: Ran lumber: 979.	cho Diamante 2	•
SITE S	SPECIFIC INP	UT DATA				NOISE MOI	DEL INPUT	5
Highway Data			S	Site Cor	nditions	(Hard = 10,	Soft = 15)	
Peak Hour I Peak H		800 vehicles 10% 380 vehicles 55 mph			avy Tru	Auto rucks (2 Axle rcks (3+ Axle	s): 15	
Near/Far Lar	ne Distance:	84 feet	F.		icleTyp	e Dav	/ Evening	Night Daily
Site Data Barrier Type (0-W	rier Height:	0.0 feet 0.0		М		Autos: 77.	5% 12.9% 8% 4.9%	9.6% 97.42% 10.3% 1.84% 10.8% 0.74%
Centerline Dis	. ,	70.0 feet	L					
Roa	o Observer: Above Pad): Id Elevation: Id Elevation: Road Grade: Left View:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% 990.0 degrees 90.0 degrees		Mediu Hea .ane Eq Mediu	Auto m Truck vy Truck	(s: 2.297 (s: 8.006 (t Distance ((s: 56.223 (s: 56.065	Grade Adj	iustment: 0.0
FHWA Noise Mode				T == 1.			T	
VehicleType Autos:	REMEL T	raffic Flow D	istance -0.87		Road -1.20	Fresnel -4.7	Barrier Atte	
Medium Trucks:	82.40	-16.30	-0.85		-1.20	-4.7		
Heavy Trucks:	86.40	-20.25	-0.85		-1.20	-5.2		
Unmitigated Noise	Levels (withou	t Topo and barr	ier atteni	uation)				
	Leq Peak Hour	Leq Day	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos:	70.7	68.8		67.0		60.9	69.6	
Medium Trucks:	64.1	62.6		56.2		54.6	63.1	
Heavy Trucks:	64.1	62.7		53.6		54.9	63.2	
Vehicle Noise:	72.2	70.5		67.5		62.6	71.2	? 71.7
Centerline Distance	e to Noise Cont	tour (in feet)						, ,
			70 d			dBA	60 dBA	55 dBA
		Ldn:	84			81	391	842
		CNEL:	91		1	95	420	906

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICT	TION MOI	DEL			
	e: Warren Rd	-	t				t Name: F Number: 9		o Diamante	•	
SITE S	PECIFIC IN	IPUT DATA					NOISE N	IODE	L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	24,200 vehicle 10% 2,420 vehicle					rucks (2 A icks (3+ A	,			
	icle Speed:	55 mph		v	ehicle	Mix					
Near/Far Lan	e Distance:	84 feet		Ė		icleTyp	e	Dav	Evening	Night	Daily
Site Data								77.5%	-	9.6%	
Pari	ier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	-	0.0			1	Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		N	oise S	ource E	levations	s (in fe	eet)		
Centerline Dist. to	Observer:	70.0 feet				Auto		000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (A	,	5.0 feet				vy Truck		006	Grade Adju	ıstmen	t: 0.0
	d Elevation:	0.0 feet						-			
	d Elevation:	0.0 feet		L	ane Eq		nt Distanc		feet)		
R	oad Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck vy Truck					
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Diet	ance	Finito	Road	Fresn	اه	Barrier Atte	n Ro	rm Atten
Autos:	71.78		Dist	-0.87		-1.20		-4.72	0.0	_	0.000
Medium Trucks:	82.40	-16.22		-0.85		-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-20.18		-0.85		-1.20		-5.28	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	iation)						
VehicleType I	Leq Peak Ho	ur Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	С	NEL
Autos:	70).7	68.8		67.1		61.0		69.6		70.2
Medium Trucks:	64	l.1	62.6		56.3		54.7		63.2		63.4
Heavy Trucks:	64	1.2	62.7		53.7		55.0		63.3		63.4
Vehicle Noise:	72	2.3	70.6		67.6		62.7		71.3		71.8
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dl	BA	65	dBA	6	60 dBA	55	i dBA
			Ldn:	85		1	183		395		351
		C	NEL:	92		1	197		425		916

Monday, January 25, 2016

Scenario: Year 2023 Without Project	AY NOISE PREDICTION MODEL
Road Name: Warren Rd. Road Segment: s/o Stetson Av. (N.)	Project Name: Rancho Diamante Job Number: 9792
SITE SPECIFIC INPUT DATA Highway Data	NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 18,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,890 vehicles Vehicle Speed: 45 mph	Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Vehicle Mix
Near/Far Lane Distance: 84 feet	VehicleType Day Evening Night Daily
Site Data Barrier Height: 0.0 feet	Autos: 77.5% 12.9% 9.6% 97.42% Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet	Heavy Trucks: 86.5% 2.7% 10.8% 0.74% Noise Source Elevations (in feet)
Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees	Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance	ce Finite Road Fresnel Barrier Atten Berm Atten
	-0.87 -1.20 -4.72 0.000 0.000
	-0.85 -1.20 -4.88 0.000 0.000 -0.85 -1.20 -5.28 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier at	ttenuation)
	eq Evening Leq Night Ldn CNEL
Autos: 67.2 65.3	63.5 57.5 66.1 66.7
	53.1 51.6 60.0 60.3
Medium Trucks: 61.0 59.5	51.4 52.6 61.0 61.
Heavy Trucks: 61.8 60.4	
Heavy Trucks: 61.8 60.4 Vehicle Noise: 69.0 67.3	64.2 59.5 68.0 68.5
Heavy Trucks: 61.8 60.4 Vehicle Noise: 69.0 67.3 Centerline Distance to Noise Contour (in feet)	
Heavy Trucks: 61.8 60.4 Vehicle Noise: 69.0 67.3 Centerline Distance to Noise Contour (in feet)	64.2 59.5 68.0 68.1 70 dBA 65 dBA 60 dBA 55 dBA 52 111 240 516

Monday, January 25, 2016

FHV	VA-RD-77-108	HIGHW	AY NC	DISE PI	REDICTI	ON MO	DEL			
Scenario: Year 2023 \ Road Name: Warren Rd. Road Segment: s/o Stetson	,	t				Name: ımber:		o Diamanto	9	
SITE SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data			Si	ite Cor	ditions (Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt): 1	9,100 vehicles	S					Autos:	15		
Peak Hour Percentage:	10%			Me	dium Tru	icks (2 /	4xles):	15		
Peak Hour Volume:	1,910 vehicles	S		He	avy Truc	ks (3+ /	4xles):	15		
Vehicle Speed:	45 mph		Ve	ehicle	Mix					
Near/Far Lane Distance:	84 feet		-		icleType		Dav	Evenina	Niaht	Dailv
Site Data			_			utos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		N	oise S	ource Ele	evation	s (in f	eet)		
Centerline Dist. to Observer:	70.0 feet				Autos	: 0.	000			
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks	: 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	: 8.	006	Grade Ad	ustmen	: 0.0
Pad Elevation:	0.0 feet		-							
Road Elevation:	0.0 feet		Lá	ane Eq	uivalent			feet)		
Road Grade:	0.0%				Autos		223			
Left View:	-90.0 degree				m Trucks		065			
Right View:	90.0 degree	es		Heav	y Trucks	: 56.	081			
FHWA Noise Model Calculations	s									
VehicleType REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresr	_	Barrier Att	en Be	rm Atten
Autos: 68.46	0.86		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks: 79.45	-16.38		-0.85		-1.20		-4.88	0.0		0.000
Heavy Trucks: 84.25	-20.33		-0.85		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise Levels (with		barrier a	ttenu	ation)			,			
VehicleType Leq Peak Hou	, ,		eq Eve		Leq I			Ldn		NEL
Autos: 67.	-	65.4		63.6		57.5		66.2		66.8
Medium Trucks: 61.	-	59.5		53.2		51.6	-	60.1		60.3
Heavy Trucks: 61.		60.4 67.3		51.4 64.2		52.7 59.5		61.0 68.1		61.1 68.5
				04.2		59.5	,	08.1	1	06.5
Centerline Distance to Noise Co	intour (in reet	,	70 dE	BA	65 0	IBA	6	0 dBA	55	dBA
		Ldn:	52		11	2		241		520

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TION MOD	EL			
	e: Warren Ro		t				t Name: F Number: 9		Diamante	•	
SITE S	SPECIFIC IN	NPUT DATA					NOISE M			3	
Highway Data				S	Site Cor	nditions	(Hard =	10, Soi	t = 15)		
Peak H	Percentage: our Volume:	10% 1,460 vehicle					A rucks (2 A ıcks (3+ A		15 15 15		
	nicle Speed:	40 mph		V	/ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	e l	Day	Evening	Night	Daily
Site Data Bar	rier Height:	0.0 feet				edium 7	rucks: 8	77.5% 84.8%	12.9% 4.9%	9.6%	6 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 1	rucks: 8	36.5%	2.7%	10.8%	6 0.74%
Centerline Dis		70.0 feet		٨	loise S	ource E	levations	(in fee	et)		
	o Observer: Above Pad): d Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Hea	Auto m Truck vy Truck	ks: 2.2	97 06	Grade Adji	ustmen	t: 0.0
	d Elevation:	0.0 feet		L	ane Eq		t Distanc		eet)		
F	Road Grade:	0.0%				Auto					
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck vy Truck					
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	el E	Barrier Atte	en Be	rm Atten
Autos:	66.51	0.20		-0.87	•	-1.20		4.72	0.0	00	0.000
Medium Trucks:	77.72	-17.03		-0.85		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	82.99	-20.99		-0.85		-1.20		5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	(CNEL
Autos:	64	1.6	62.7		61.0		54.9		63.6		64.2
Medium Trucks:	58	3.6	57.1		50.8		49.2		57.7		57.9
Heavy Trucks:	60	0.0	58.5		49.5		50.7		59.1		59.2
Vehicle Noise:	66	6.7	64.9		61.7		57.1		65.6		66.1
Centerline Distance	e to Noise C	ontour (in feet	:)								
			L	70 d			dBA) dBA		5 dBA
			Ldn:	36			77		166		358
		C	NEL:	38	3		83		178		384

	FHV	WA-RD-77-108	HIGHWA	Y NOISE F	REDICT	TION MODEL		
	e: Warren Rd	-	1			t Name: Rand Number: 9792		
SITE S	PECIFIC IN	IPUT DATA				NOISE MOD		1
Highway Data				Site Co	nditions	(Hard = 10,	Soft = 15)	
	. ,	20,400 vehicles 10% 2,040 vehicles 40 mph				Auto rucks (2 Axles icks (3+ Axles): 15	
Near/Far Lar	,	84 feet		Vehicle	Mix			
iveai/rai Lai	ie Distance.	04 leet		Ve	hicleTyp	e Day	Evening	Night Daily
Site Data						Autos: 77.5		9.6% 97.42%
Bar	rier Height:	0.0 feet		٨	1edium 1	Frucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy T	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis	t. to Barrier:	70.0 feet		Noise S	Cource F	levations (in	feet)	
Roa	o Observer: Above Pad): d Elevation: d Elevation: Road Grade: Left View: Right View:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		Lane E	Auto um Truck vy Truck quivaler Auto um Truck vy Truck	ks: 2.297 ks: 8.006 at Distance (ii bs: 56.223 ks: 56.065		ustment: 0.0
VehicleType	REMEL	Traffic Flow	Distano	o Einit	e Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	66.51	1.66		0.87	-1.20			
Medium Trucks:	77.72	-15.58		0.85	-1.20			
Heavy Trucks:	82.99	-19.54		0.85	-1.20			
Unmitigated Noise	Levels (with	out Topo and	barrier at	tenuation)				
VehicleType	Leq Peak Hou	ır Leq Day	Le	g Evening	Leq	Night	Ldn	CNEL
Autos:	66	.1	64.2	62.4	1	56.4	65.0	65.6
Medium Trucks:	60	.1	58.6	52.2	2	50.7	59.1	59.4
Heavy Trucks:	61	.4	60.0	50.9	9	52.2	60.6	60.7
Vehicle Noise:	68	1.1	66.4	63.	1	58.6	67.1	67.5
Centerline Distance	e to Noise Co	ontour (in feet,						
		-		70 dBA	65	i dBA	60 dBA	55 dBA
			Ldn:	45		97	208	448
		CI	VEL:	48	1	103	223	480

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	NAY N	OISE PI	REDICTION	ON MO	ODEL			
	e: Sanderson					Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC IN	PUT DATA			Site Con	No ditions (L INPUT	S	
Average Daily i Peak Hour I Peak Ho	. ,	34,500 vehicles 10% 3,450 vehicles 30 mph			Ме	dium Tru avy Truci	cks (2	Autos: Axles):	15 15		
Near/Far Lar	ne Distance:	50 feet				icleType	Т	Day	Evening	Night	Dailv
	rier Height:	0.0 feet			М			77.5% 84.8% 86.5%	5 12.9% 5 4.9%	9.6% 10.3% 10.8%	97.42%
Barrier Type (0-Wa Centerline Dis	t. to Barrier:	0.0 54.0 feet		٨		ource Ele				10.076	0.747
Centerline Dist. t Barrier Distance t Observer Height (/ Pa	o Observer:	54.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks ry Trucks	: 2	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
F	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees				Autos m Trucks ry Trucks	47	3.125 7.941 7.959			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	61.75	5.19		0.15	5	-1.20		-4.67		000	0.000
Medium Trucks: Heavy Trucks:	73.48 79.92	-12.05 -16.01		0.17 0.17		-1.20 -1.20		-4.87 -5.39		000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	65	.9 (64.0		62.2		56	.2	64.	В	65.4
Medium Trucks:	60		58.9		52.5		51		59.		59.
Heavy Trucks:	62		31.5		52.4		53		62.		62.2
Vehicle Noise:	68	.4	66.7		63.1		58	.9	67.	4	67.
Centerline Distanc	e to Noise Co	ontour (in feet)		70		0.5		_	00 104	T ==	10.4
			L	70 d		65 d		(60 dBA		dBA
			Ldn: IFI :	36	-	78 83			168 179	_	62 86
		Cr	IEL:	35	,	83)		179	3	000

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	WAY I	NOISE P	REDICTI	ON MC	DEL						
Road Nan	io: Year 2023 vie: Sanderson nt: n/o Stetson	Av.	t		Project Name: Rancho Diamante Job Number: 9792									
	SPECIFIC IN	PUT DATA							L INPUT	S				
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)					
Average Daily	Traffic (Adt): 4	11,900 vehicle	S					Autos:	15					
Peak Hour	Percentage:	10%			Me	edium Tru	ıcks (2	Axles):	15					
Peak F	lour Volume:	4,190 vehicle	S		He	eavy Truc	ks (3+	Axles):	15					
Ve	hicle Speed:	45 mph		ŀ	Vehicle	Mix								
Near/Far La	ne Distance:	50 feet		f		nicleType		Dav	Evenina	Niaht	Dailv			
Site Data							lutos:	77.5%	- 3	9.6%				
Do.	rrier Height:	0.0 feet			M	ledium Tr	ucks:	84.8%	4.9%	10.3%	6 1.84%			
Barrier Type (0-W		0.0 1661				Heavy Tr	ucks:	86.5%	2.7%	10.8%	6 0.74%			
Centerline Di		54.0 feet		ŀ										
Centerline Dist.	to Observer:	54.0 feet		-	Noise S	ource El		٠,	eet)					
Barrier Distance	to Observer:	0.0 feet				Autos		000						
Observer Height	(Above Pad):	5.0 feet				m Trucks	–	297	0					
	ad Elevation:	0.0 feet			Hea	vy Trucks	s: 8	.006	Grade Ad	ustmen	it: 0.0			
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ce (in	feet)					
	Road Grade:	0.0%				Autos	s: 48	.125						
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 47	.941						
	Right View:	90.0 degre	es		Hea	vy Trucks	s: 47	.959						
FHWA Noise Mod	el Calculation	S												
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten			
Autos:		4.27		0.1	5	-1.20		-4.67	0.0	000	0.000			
Medium Trucks:	79.45	-12.97		0.1	7	-1.20		-4.87	0.0	000	0.000			
Heavy Trucks:	84.25	-16.92		0.1	7	-1.20		-5.39	0.0	000	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)									
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	(ONEL			
Autos:	71	.7	69.8		68.0		62.	0	70.6	6	71.2			
Medium Trucks:	65	.5	63.9		57.6		56.	0	64.5	5	64.7			
Heavy Trucks:	66		64.9		55.8		57.		65.4		65.6			
Vehicle Noise:	73	.5	71.8		68.6	i	63.	9	72.5	5	72.9			
Centerline Distan	ce to Noise Co	ontour (in feet)											
			L		dBA		dBA	(60 dBA		5 dBA			
			Ldn:		79		71		367		792			
		Ci	NEL:	8	35	18	33		394		849			

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DDEL						
	e: Florida Av.		t		Project Name: Rancho Diamante Job Number: 9792									
	PECIFIC II	NPUT DATA							L INPUT	S				
Highway Data				3	Site Cor	ditions	(Hard		oft = 15)					
Average Daily	. ,		:S					Autos:	15					
Peak Hour I		10%					rucks (2							
	our Volume:	4,440 vehicle	:S		He	avy iru	icks (3+	Axies):	15					
	nicle Speed:	50 mph		١	/ehicle	Mix								
Near/Far Lar	e Distance:	84 feet			Veh	icleTyp	е	Day	Evening	Night	Daily			
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%			
Bar	rier Height:	0.0 feet			М	edium 7	rucks:	84.8%		10.3%	1.84%			
Barrier Type (0-Wa	all, 1-Berm):	0.0			- 1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline Dis	t. to Barrier:	70.0 feet		,	Voise S	ource F	levatio	ns (in f	opt)					
Centerline Dist. t	o Observer:	70.0 feet		F	.0.00	Auto		0.000	,,,,					
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		.297						
Observer Height (/	,	5.0 feet				vy Truck		1.006	Grade Ad	iustment	0.0			
	d Elevation:	0.0 feet		L		•								
	d Elevation:	0.0 feet		L	.ane Eq				feet)					
F	Road Grade:	0.0%				Auto		5.223						
	Left View:	-90.0 degre				m Truck		6.065						
	Right View:	90.0 degre	es		Heav	ry Truck	is: 5t	5.081						
FHWA Noise Mode														
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		m Atten			
Autos:	70.20			-0.87		-1.20		-4.72		000	0.00			
Medium Trucks:	81.00			-0.85		-1.20		-4.88		000	0.00			
Heavy Trucks:	85.38			-0.85		-1.20		-5.28	0.0	000	0.00			
Unmitigated Noise VehicleType	Levels (with Leg Peak Ho			er atteni Leg Ev		100	Night	_	Ldn		NEL			
Autos:		ur Leq Day	70.3	Ley Ev	68.5	Leq	1vigrit 62	5	71.1		71.			
Medium Trucks:		5.8	64.3		57.9		56		64.8		65.			
Heavy Trucks:		5.2	64.8		55.7		57		65.3		65.			
Vehicle Noise:		3.9	72.1		69.1		64	_	72.9		73.			
Centerline Distanc	e to Noise C	ontour (in fee	t)											
		,		70 a	IBA .	65	dBA	(60 dBA	55	dBA			
			Ldn:	10	9	2	234		505	1,	087			

	FH'	WA-RD-77-10	HIGHW	AY NC	ISE PI	REDICTI	ON MO	DEL			
	: Florida Av.		ct				Name: umber:		o Diamani	e	
	PECIFIC II	NPUT DATA			4- 0				L INPUT	S	
Highway Data				31	te Con	ditions					
Average Daily 1			:S					Autos:			
Peak Hour I		10%				dium Tru		,			
	our Volume:	3,600 vehicle	:S		He	avy Truc	KS (3+ A	(xies	15		
	icle Speed:	50 mph		Ve	ehicle l	Mix					
Near/Far Lan	e Distance:	78 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.6	% 97.429
Barı	ier Heiaht:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3	% 1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			I	Heavy Tr	ucks:	86.5%	2.7%	10.8	% 0.749
Centerline Dis	t. to Barrier:	76.0 feet		N	oise So	ource El	evation.	s (in f	eet)		
Centerline Dist. t	Observer:	76.0 feet		- 1	0,00 0	Autos		000	001)		
Barrier Distance t	Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (A	lbove Pad):	5.0 feet				y Trucks		006	Grade Ad	liustme	nt: 0.0
Pa	d Elevation:	0.0 feet								,	
	d Elevation:	0.0 feet		Lá	ne Eq	uivalent			feet)		
R	oad Grade:	0.0%				Autos					
	Left View:	-90.0 degre				m Trucks					
	Right View:	90.0 degre	es		Heav	ry Trucks	65.	300			
FHWA Noise Mode	l Calculation	18									
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn		Barrier At		erm Atten
Autos:	70.20			-1.85		-1.20		-4.73		000	0.00
Medium Trucks:	81.00			-1.84		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			-1.84		-1.20		-5.25	0.	000	0.00
Unmitigated Noise										,	
	Leq Peak Ho			.eq Eve		Leq	Night		Ldn		CNEL
Autos:		0.3	68.4		66.6		60.6		69.	_	69.
Medium Trucks:		3.9	62.4		56.0		54.5		62.	-	63.
Heavy Trucks: Vehicle Noise:		4.3 2.0	62.9 70.2		53.8 67.2		55.1 62.4		63. 71.		63. 71.
					01.2		02.4		71.		71.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70 dF	RA.	65.	1BA		50 dBA		5 dBA
			I dn:	88	,,		90	<u> </u>	409		882

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	IWAY N	OISE PE	REDICTI	ON MO	DDEL						
Road Nam	io: Year 2023 ne: Florida Av nt: e/o Myers		t		Project Name: Rancho Diamante Job Number: 9792									
	SPECIFIC II	NPUT DATA							L INPU	TS				
Highway Data					site Con	ditions (Hard :							
,	. ,	40,700 vehicle	S					Autos:						
	Percentage:	10%				dium Tru		,						
	lour Volume:	4,070 vehicle	S		He	avy Truc	ks (3+	Axles).	15					
Ve	hicle Speed:	35 mph		1	/ehicle l	Wix								
Near/Far La	ne Distance:	84 feet		F		icleType		Day	Evening	Nic	aht	Daily		
Site Data						A	utos:	77.5%	12.9%	5 9	9.6%	97.42%		
Pa	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	5 10	0.3%	1.84%		
Barrier Type (0-W		0.0			F	leavy Tr	ucks:	86.5%	2.7%	5 10	0.8%	0.74%		
Centerline Di	. ,	70.0 feet												
Centerline Dist.		70.0 feet		,	loise So	ource Ele			eet)					
Barrier Distance		0.0 feet				Autos		.000						
Observer Height		5.0 feet			Medium Trucks: 2.297									
	ad Flevation:	0.0 feet			Heav	y Trucks	: 8	.006	Grade A	djustr	nent:	0.0		
	ad Elevation:	0.0 feet		1	ane Eq	uivalent	Distar	nce (in	feet)					
	Road Grade:	0.0%		F		Autos		.223	,					
	Left View:	-90.0 degre	20		Mediu	n Trucks		.065						
	Right View:	90.0 degre				y Trucks		.081						
FHWA Noise Mod	-1.0-111													
VehicleType	REMEL	Traffic Flow	Die	tance	Finito	Road	Fres	nel	Barrier A	tton	Rorn	n Atten		
Autos:	64.30		Dis	-0.87		-1.20	1100	-4.72		.000	Dom	0.00		
Medium Trucks:	75.75			-0.85		-1.20		-4.88	-	.000		0.00		
Heavy Trucks:	81.57			-0.85		-1.20		-5.28		.000		0.000		
Unmitigated Nois	e Levels (with	hout Topo and	barrie	er atten	uation)									
VehicleType	Leq Peak Ho	ur Leq Day	′	Leg Ev	ening	Leq I	Vight		Ldn		CN	EL		
Autos:	6	7.5	65.6		63.8		57.	8	66	6.4		67.0		
Medium Trucks:	6	1.7	60.2		53.8		52.	3	60	.7		61.0		
Heavy Trucks:	6	3.6	62.1		53.1		54.	4	62	2.7		62.8		
Vehicle Noise:	6	9.7	68.0		64.5		60.	2	68	3.7		69.		
Centerline Distan	ce to Noise C	ontour (in feet)					,						
			L	70 a		65 c			60 dBA		55 c			
			Ldn:	57		12	-		266		57	_		
		C	VEL:	61	1	13	2		284		61	1		

		WA-RD-77-10	B HIGI	YAW	NOISE PI	REDICT	ION MO	DEL			
Road Nar	rio: Year 2023 ' ne: Stowe Rd. ent: w/o Californ	,	ct				Name: I umber: !		o Diamante	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	4,000 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	10%			Me	dium Tri	ucks (2 A	(xles	15		
Peak I	Hour Volume:	400 vehicle	es		He	avy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	40 mph		1	Vehicle	Miv					
Near/Far La	ane Distance:	36 feet		-		icleType		Dav	Evenina	Niaht	Daily
Site Data					*011			77.5%	- 5	9.6%	
	arrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	-	0.0 feet			F	leavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist. to Barrier:	47.0 feet									
Centerline Dist.		47.0 feet		ļ	Noise So				eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height		5.0 feet				n Truck		297			
	Pad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet			Lane Eq	uivaleni	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 43.	704			
	Left View:	-90.0 degre	es		Mediu	n Truck	s: 43.	501			
	Right View:	90.0 degre	ees		Heav	y Truck	s: 43.	521			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:		-5.42	2	0.7		-1.20		-4.63	0.0	000	0.000
Medium Trucks.	77.72	-22.66	i	0.8	30	-1.20		-4.87	0.0	000	0.000
iviedium mucks.		-26.61		0.8	30	-1.20		-5.46	0.0	000	0.000
Heavy Trucks.	82.99	-26.61						0.40			
Heavy Trucks. Unmitigated Nois	e Levels (with	out Topo and						0.40		,	
Heavy Trucks. Unmitigated Nois VehicleType	se Levels (with Leq Peak Hou	out Topo and	y		vening	Leq	Night		Ldn		NEL
Heavy Trucks. Unmitigated Nois VehicleType Autos.	Leq Peak Hou	out Topo and ur Leq Da	y 58.8		vening 57.0	Leq	50.9		59.6	3	60.2
Heavy Trucks. Unmitigated Nois VehicleType Autos. Medium Trucks.	se Levels (with Leq Peak Hou	out Topo and ur Leq Da 1.7	58.8 53.2		vening 57.0 46.8	Leq	50.9 45.2		59.6 53.7	3	60.2 53.9
Heavy Trucks. Unmitigated Nois VehicleType Autos.	Leq Peak Hou 60 54	out Topo and ur Leq Da 0.7 1.7 1.0	y 58.8		vening 57.0	Leq	50.9		59.6	3	60.2 53.9 55.3
Heavy Trucks. Unmitigated Nois Vehicle Type Autos. Medium Trucks. Heavy Trucks. Vehicle Noise.	se Levels (with Leq Peak Hou 60 54 56	out Topo and ur Leq Da 1.7 1.7 1.0 2.7	58.8 53.2 54.6 61.0		57.0 46.8 45.5	Leq	50.9 45.2 46.8		59.6 53.7 55.1	3	60.2 53.9 55.3
Heavy Trucks. Unmitigated Nois Vehicle Type Autos. Medium Trucks. Heavy Trucks.	se Levels (with Leq Peak Hou 60 54 56	out Topo and ur Leq Da 1.7 1.7 1.0 2.7	58.8 53.2 54.6 61.0	Leq E	57.0 46.8 45.5		50.9 45.2 46.8		59.6 53.7 55.1	7	NEL 60.2 53.9 55.3 62.1
Heavy Trucks. Unmitigated Nois Vehicle Type Autos. Medium Trucks. Heavy Trucks. Vehicle Noise.	se Levels (with Leq Peak Hou 60 54 56	out Topo and ur Leq Da 1.7 1.7 1.0 2.7	58.8 53.2 54.6 61.0	Leq E	57.0 46.8 45.5 57.7	65	50.9 45.2 46.8 53.1		59.6 53.7 55.1 61.7	55	60.2 53.9 55.3 62.1

	FHV	VA-RD-77-108	HIGI	I YAWH	NOISE PI	REDICT	ION MO	DEL			
Road Nan	rio: Year 2023 one: Grand Av. ont: w/o Calvert	,	t				Name: lumber:		o Diamante	е	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	S	
					Site Con	iditions	•				
Average Daily	. ,	100 vehicle	S					Autos:			
	Percentage:	10%					ucks (2 A				
	lour Volume:	10 vehicle	S		He	avy Iru	cks (3+ A	(xies	15		
	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet			Noise S	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet				Auto		000	,		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck	o	006	Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet				•					
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.	065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56.	081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-21.44		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	77.72	-38.68		-0.8	15	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	43	.0	41.1		39.3		33.3	3	41.9	9	42.5
Medium Trucks:	37	.0	35.5		29.1		27.6	6	36.0)	36.3
Heavy Trucks:	38	.3	36.9		27.9		29.1		37.5	5	37.6
Vehicle Noise:	45	.0	43.3		40.0		35.5	5	44.0)	44.4
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70	dRΔ	e E	dRΔ	1 6	SO dRA	==	dRΔ

	FHV	VA-RD-77-108 H	HIGHWAY	NOISE P	REDICTIO	N MODE	L		
Road Nam	io: Year 2023 Vie: Grand Av. nt: e/o Patterso	Without Project on Av.				lame: Ra mber: 97	ncho Diamani 92	te	
	SPECIFIC IN	PUT DATA		0:: 0			DEL INPUT	s	
Highway Data				Site Co.	nditions (i	Hard = 10), Soft = 15)		
Average Daily	Traffic (Adt):	100 vehicles					tos: 15		
Peak Hour	Percentage:	10%			edium Truc		,		
Peak H	lour Volume:	10 vehicles		He	eavy Truck	is (3+ Axl	es): 15		
Ve	hicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ne Distance:	84 feet		Vel	nicleType	Da	ey Evening	Night	Daily
Site Data					AL	ıtos: 77	.5% 12.9%	9.6%	97.42%
Rai	rrier Heiaht:	0.0 feet		N	ledium Tru	cks: 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	st. to Barrier:	70.0 feet		Noise S	ource Ele	vations (in foot)		
Centerline Dist.	to Observer:	70.0 feet		710700 0	Autos:				
Barrier Distance	to Observer:	0.0 feet		Media	m Trucks:				
Observer Height (Above Pad):	5.0 feet			vy Trucks:			liustment	. 0.0
Pa	ad Elevation:	0.0 feet						juou mome	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Ed	uivalent l	Distance	(in feet)		
	Road Grade:	0.0%			Autos:	56.22	3		
	Left View:	-90.0 degrees	3	Mediu	ım Trucks:	56.06	5		
	Right View:	90.0 degrees	3	Hea	vy Trucks:	56.08	1		
FHWA Noise Mod	el Calculations	s		1					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	66.51	-21.44	-0	.87	-1.20	-4.	72 0.	000	0.000
Medium Trucks:	77.72	-38.68	-0	.85	-1.20	-4.	88 0.	000	0.000
Heavy Trucks:	82.99	-42.63	-0	.85	-1.20	-5.	28 0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	light	Ldn	C	NEL
Autos:	43.		1.1	39.3		33.3	41.	-	42.5
Medium Trucks:	37.		5.5	29.1		27.6	36.		36.3
Heavy Trucks:	38.		6.9	27.9		29.1	37.	5	37.6
Vehicle Noise:	45.	0	3.3	40.0	. —	35.5	44.	^	44.4

Monday, January 25, 2016

	FHWA	A-RD-77-108 I	HIGHWA	Y NO	DISE PE	REDICTIO	ON MC	DEL			
Scenario: Yea Road Name: Gra Road Segment: e/o	nd Av.	,				Project N Job Nu			no Diamante	1	
SITE SPEC	FIC INP	UT DATA				NO	DISE	MODE	L INPUTS	3	
Highway Data				S	ite Con	ditions (i	Hard =	: 10, S	oft = 15)		
Average Daily Traffic Peak Hour Percer Peak Hour Vo	ntage:	100 vehicles 10% 10 vehicles				dium Truc avy Truck	cks (2	/	15		
Vehicle S		40 mph					10 (01.	1000).			
Near/Far Lane Dist		84 feet		V	ehicle I Veh	Wix icleType		Day	Evening	Night	Daily
Site Data						Au	ıtos:	77.5%	6 12.9%	9.6%	97.42%
Barrier He Barrier Type (0-Wall, 1-E	Berm):	0.0 feet 0.0				edium Tru Heavy Tru		84.8% 86.5%		10.3% 10.8%	
Centerline Dist. to B		70.0 feet		N	loise Sc	ource Ele	vation	s (in f	eet)		
Centerline Dist. to Obs Barrier Distance to Obs Observer Height (Above Pad Elev	erver: Pad):	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos: m Trucks: ry Trucks:	2.	000 297 006	Grade Adju	ustmen	t: 0.0
Road Elev	ation:	0.0 feet		L	ane Eq	uivalent l	Distan	ce (in	feet)		
Road G	Grade:	0.0%				Autos:	56	.223			
Left Right		-90.0 degree 90.0 degree				m Trucks: ry Trucks:		.065 .081			
FHWA Noise Model Calc	ulations										
VehicleType REI	VEL 7	raffic Flow	Distant	ce	Finite	Road	Fresi	nel	Barrier Atte	en Be	rm Atten
Autos:	66.51	-21.44	-	0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks:	77.72	-38.68	-	0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	82.99	-42.63		0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise Leve											
	eak Hour	Leq Day		q Eve	ening	Leq N	_		Ldn	С	NEL
Autos:	43.0		1.1		39.3		33.		41.9		42.5
Medium Trucks:	37.0	-	5.5		29.1		27.	-	36.0		36.3
Heavy Trucks: Vehicle Noise:	38.3 45.0		6.9 3.3		27.9 40.0		29. 35.	_	37.5 44.0		37.6 44.4
Centerline Distance to N	loise Con	tour (in feet)									
		1		70 dl	BA	65 d	BA		60 dBA	55	i dBA
		L	.dn:	1		3			6		13
		CN	EL:	1		3			6		14

	FHV	VA-RD-77-108	HIG	HWAY N	OISE PI	REDICTI	ON MO	DEL			
Road Nari	rio: Year 2023 ne: Stetson Av. ent: e/o SR-79	(S.)	ı			Project . Job No			o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions (Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak F	lour Volume:	10 vehicles	3		He	avy Truc	ks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ane Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			I	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet		٨	Inisa Si	ource Ele	ovation	ne (in f	oof)		
Centerline Dist.	to Observer:	70.0 feet			10/30 0	Autos		.000	ccij		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Trucks		.297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		.006	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degree	es			m Trucks		.065			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	'	Leq Ev	ening	Leq I	Vight		Ldn	C	NEL
Autos:			43.8		42.1		36.	-	44.6		45.2
Medium Trucks:		-	37.8		31.4		29.	-	38.4		38.6
Heavy Trucks:		•	38.3		29.3		30.	_	38.9		39.0
Vehicle Noise:	47	.4	45.7		42.6		37.	8	46.4	1	46.9
Centerline Distant	ce to Noise Co	ontour (in feet)								
			Į	70 d	BA	65 ((60 dBA		dBA
			Ldn:	2		4	ļ		9		19

	FHV	VA-RD-77-108	HIGI	HWAY N	OISE P	REDICT	ION MOI	DEL			
Road Nan	io: Year 2023 \ ne: Stetson Av. nt: w/o Californ	(S.)	t				Name: I umber: 9		o Diamante	В	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =				
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:			
Peak Hour	Percentage:	10%					ucks (2 A				
Peak F	lour Volume:	10 vehicles	3		He	avy Truc	cks (3+ A	(xies	15		
Ve	hicle Speed:	50 mph		ı	ehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data						-	Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
., .	st. to Barrier:	70.0 feet		١.					-1		
Centerline Dist.		70.0 feet		^	ioise S		evations		eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297			
	ad Flevation:	0.0 feet			Hear	y Truck	s: 8.0	006	Grade Adj	ustment	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degree	25		Mediu	m Truck	s: 56.0	065			
	Right View:	90.0 degree			Hear	y Truck	s: 56.0	081			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	45.	.7	43.8		42.1		36.0)	44.6	3	45.2
Medium Trucks:	39.	.3	37.8		31.4		29.9)	38.4	1	38.6
Heavy Trucks:	39.		38.3		29.3		30.5		38.9)	39.0
Vehicle Noise:	47.	.4	45.7		42.6		37.8	}	46.4	1	46.9
Centerline Distan	ce to Noise Co	ontour (in feet)								
			L	70 d	BA	65	dBA	6	60 dBA	55	dBA

	FHV	VA-RD-77-108 H	IIGHWAY	NOISE PI	REDICTION	ON MOD	EL			
Scenar	rio: Year 2023 \	Nithout Project			Project I	Vame: Ra	ancho Dia	amante		
	ne: Stetson Av.				Job Nu	ımber: 97	792			
Road Segme	nt: e/o SR-79 N	NB Ramps								
	SPECIFIC IN	PUT DATA		0		OISE M				
Highway Data				Site Con	ditions (Hard = 1	0, Soft =	15)		
Average Daily	Traffic (Adt):	100 vehicles				AL	utos: 1	5		
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Ax	rles): 1	5		
Peak F	lour Volume:	10 vehicles		He	avy Truc	ks (3+ Ax	les): 1	5		
Ve	ehicle Speed:	50 mph		Vehicle	Miv					
Near/Far La	ne Distance:	84 feet			icleType	D	ay Eve	ening N	light	Daily
Site Data					A	utos: 7	7.5% 1	2.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet		M	edium Tru	ucks: 84	4.8%	4.9% 1	10.3%	1.84%
Barrier Type (0-V		0.0		1	Heavy Tru	ucks: 8	6.5%	2.7% 1	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet		Noise So	nurce Fle	evations	(in feet)			
Centerline Dist.	to Observer:	70.0 feet		110/30 00	Autos					
Barrier Distance	to Observer:	0.0 feet		Modius	m Trucks		-			
Observer Height	(Above Pad):	5.0 feet			vy Trucks			de Adjus	tment	0.0
P	ad Elevation:	0.0 feet		77001	y mucho	. 0.00	,o	ao 7 lajao		0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)			
	Road Grade:	0.0%			Autos	: 56.22	23			
	Left View:	-90.0 degrees	;	Mediu	m Trucks	: 56.06	35			
	Right View:	90.0 degrees		Heav	y Trucks	: 56.08	31			
FHWA Noise Mod	lel Calculation:	s		1						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	I Barr	ier Atten	Bern	n Atten
Autos:	70.20	-22.41	-0	.87	-1.20	-4	1.72	0.000)	0.000
Medium Trucks:	81.00	-39.65	-0	.85	-1.20	-4	1.88	0.000)	0.000
Heavy Trucks:	85.38	-43.60	-0	.85	-1.20	-5	5.28	0.000)	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier att	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	light	Ldn	1	CN	EL
Autos:	45.	.7 43	3.8	42.1		36.0		44.6		45.2
Medium Trucks:	39.	.3 3	7.8	31.4		29.9		38.4		38.6
Heavy Trucks:	39.	.7 3	3.3	29.3		30.5		38.9		39.0
Vehicle Noise:	47.	.4 4	5.7	42.6		37.8		46.4		46.9
Centerline Distan	ce to Noise Co	ntour (in feet)								
			7	V 4D V	65.0	IDA T	60 dE	2Λ T	55.4	AD A

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICT	ION MODEL	-	
	: Stetson Av.					Name: Ran lumber: 979	cho Diamante 2	е
SITE S	PECIFIC IN	PUT DATA					DEL INPUT	S
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
Average Daily T	raffic (Adt):	100 vehicles				Auto	os: 15	
Peak Hour F	Percentage:	10%		Me	edium Tr	ucks (2 Axle	s): 15	
Peak Ho	our Volume:	10 vehicles		He	eavy Tru	cks (3+ Axle	s): 15	
Veh	icle Speed:	50 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	84 feet			nicleType	e Day	Evening	Night Daily
Site Data						Autos: 77.	5% 12.9%	9.6% 97.42%
Barr	rier Heiaht:	0.0 feet		M	ledium T	rucks: 84.	3% 4.9%	10.3% 1.84%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 86.	5% 2.7%	10.8% 0.74%
Centerline Dist	t. to Barrier:	70.0 feet		Noise S	ource F	levations (ii	r feet)	
Centerline Dist. to	Observer:	70.0 feet		710,000	Auto		, , , , , ,	
Barrier Distance to	Observer:	0.0 feet		Media	ım Truck			
Observer Height (A	lbove Pad):	5.0 feet			vy Truck		Grade Adi	iustment: 0.0
	d Elevation:	0.0 feet						
	d Elevation:	0.0 feet		Lane Eq		t Distance (in feet)	
R	oad Grade:	0.0%			Auto			
	Left View:	-90.0 degree			ım Truck			
	Right View:	90.0 degree	S	Hea	vy Truck	s: 56.081		
FHWA Noise Mode	l Calculation:	s						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berm Atten
Autos:	70.20	-22.41	-0	.87	-1.20	-4.7	2 0.0	0.00
Medium Trucks:	81.00	-39.65	-	.85	-1.20	-4.8		0.00
Heavy Trucks:	85.38	-43.60	-0	.85	-1.20	-5.2	18 0.0	0.00
Unmitigated Noise				,				
	Leq Peak Hou			Evening		Night	Ldn	CNEL
Autos:	45.		13.8	42.1		36.0	44.6	
Medium Trucks:	39.		37.8	31.4		29.9	38.4	
Heavy Trucks:	39.		38.3	29.3		30.5	38.9	
Vehicle Noise:	47.		15.7	42.6	i	37.8	46.4	46.9
Centerline Distance	e to Noise Co	ntour (in feet)					00 104	EE 101
			dn:	0 dBA 2		dBA 4	60 dBA	55 dBA 19
		-	.an: IFI :	2		4	9	19 20
		CA	ILL.	4			9	20

	FH	WA-RD-77-108	HIGH	WAY N	OISE PI	REDICTION	ON MO	DEL			
Road Na	ario: Year 2023 nme: Stetson Av nent: e/o Street	/. (S.)	t			Project I Job Nu			o Diamante	е	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				S	Site Cor	ditions (Hard =	10, Sc	oft = 15)		
Average Dail	ly Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Ho	ır Percentage:	10%			Me	dium Tru	cks (2 A	Axles):	15		
Peak	Hour Volume:	10 vehicle	S		He	avy Truci	ks (3+ A	Axles):	15		
١	/ehicle Speed:	50 mph			/ehicle	Miv					
Near/Far L	ane Distance:	84 feet		F.		icleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%	-	9.6%	. ,
	arrier Height:	0.0 feet			М	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0			1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
	Dist. to Barrier:	70.0 feet			laina C	ouroo Ele	ucotion	o (in f	2041		
Centerline Dis	t. to Observer:	70.0 feet			ioise S	Autos		S (III TE	eet)		
Barrier Distanc	e to Observer:	0.0 feet					-				
Observer Heigh	t (Above Pad):	5.0 feet				m Trucks.		297	0		
	Pad Elevation:	0.0 feet			Heav	y Trucks.	8.0	006	Grade Ad	ustment	0.0
R	oad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Autos.	56.	223			
	Left View:	-90.0 degre	es		Mediu	m Trucks.	56.	065			
	Right View:	90.0 degree	es		Heav	y Trucks.	56.	081			
FHWA Noise Mo	del Calculation	18									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Auto	s: 70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks	s: 81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks	s: 85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated No.	ise Levels (with	nout Topo and	barrie	r atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	,	Leq Ev	ening	Leg N	light		Ldn	C	NEL
Auto	s: 4	5.7	43.8		42.1		36.0)	44.6	3	45.2
Medium Trucks	s: 3	9.3	37.8		31.4		29.9)	38.4	1	38.6
Heavy Trucks			38.3		29.3		30.5		38.9		39.0
Vehicle Noise	9: 4	7.4	45.7		42.6		37.8	3	46.4	1	46.9
Centerline Dista	nce to Noise C	ontour (in feet)								
		-		70 d		65 d		ϵ	0 dBA		dBA
			Ldn:	2		4			9		19
		CI	VEL:	2		4			9		20

Average Daily Traffic (Adt): 1,300 vehicles		FH\	WA-RD-77-108 H	IGHWAY	NOISE PI	REDICT	TON MOD	DEL			
Average Daily Traffic (Adt):	Road Nan	ne: Stetson Av	. (S.)						Diamante	е	
Average Daily Traffic (Adt): 1,300 vehicles Peak Hour Potentage: 10% Peak Hour Potenties: 130 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet Vehicle Type	SITE	SPECIFIC IN	IPUT DATA				NOISE M	ODE	LINPUT	S	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15	Highway Data				Site Con	ditions	(Hard =	10, So	ft = 15)		
Near/Far Lane Distance: 84 feet VehicleType Day Evening Night Daily	Peak Hour Peak F	Percentage: Hour Volume:	10% 130 vehicles				ucks (2 A	xles):	15		
Near/Far Lane Distance: 84 feet VehicleType Day Evening Night Daily	Ve	ehicle Speed:	50 mph		Vehicle I	Mix					
Site Data	Near/Far La	ne Distance:	84 feet				9 1	Dav	Evenina	Niaht	Daily
Barrier Trype (0-Wall, 1-Berm): 0.0 feet Heavy Trucks: 86.5% 2.7% 10.8% 0.749	Site Data							- /	0		,
Centerline Dist. to Darrier: 70.0 feet 70.0 feet											
Centerline Dist. to Observer: Autos: 0.000 Server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0	,, ,	. ,				icavy i	rauns. C	0.0 70	2.1 /0	10.070	0.7470
Barrier Distance to Observer: 0.00 feet					Noise So	ource E	levations	(in fe	et)		
VehicleType	Observer Height P Ro	(Above Pad): ad Elevation: ad Elevation: Road Grade: Left View:	5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees		Heav	m Truck ry Truck uivalen Auto m Truck	(s: 2.2 (s: 8.0 (st Distance) (s: 56.2 (s: 56.0	97 06 e (in f 23 65		iustment.	: 0.0
Autos: 70.20											
Medium Trucks: 81.00 -28.51 -0.85 -1.20 -4.88 0.000 0.00 Heavy Trucks: 85.38 -32.46 -0.85 -1.20 -5.28 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation)											
Heavy Trucks: 85.38											
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 56.9 55.0 53.2 47.1 55.8 56.9 Medium Trucks: 50.4 48.9 42.6 41.0 49.5 49. Heavy Trucks: 50.9 49.4 40.4 41.7 50.0 50. Vehicle Noise: 58.6 56.8 53.8 49.0 57.5 58. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103											0.000
Autos: 56.9 55.0 53.2 47.1 55.8 56. Medium Trucks: 50.4 48.9 42.6 41.0 49.5 49. Heavy Trucks: 50.9 49.4 40.4 41.7 50.0 50. Vehicle Noise: 58.6 56.8 53.8 49.0 57.5 58. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	Unmitigated Nois	e Levels (with	out Topo and ba	arrier atte	nuation)						
Medium Trucks: 50.4 48.9 42.6 41.0 49.5 49.4 Heavy Trucks: 50.9 49.4 40.4 41.7 50.0 50. Vehicle Noise: 58.6 56.8 53.8 49.0 57.5 58. Centerline Distance to Noise Contour (in feet) Ldn: 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	VehicleType	Leq Peak Hou	ur Leq Day	Leq E	vening	Leq	Night		Ldn	CI	NEL
Heavy Trucks: 50.9 49.4 40.4 41.7 50.0 50. Vehicle Noise: 58.6 56.8 53.8 49.0 57.5 58. Centerline Distance to Noise Contour (in feet) Ldn: 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	Autos:	56	5.9 55	.0	53.2		47.1		55.8	3	56.4
Vehicle Noise: 58.6 56.8 53.8 49.0 57.5 58. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	Medium Trucks:	50).4 48	.9	42.6		41.0		49.5	5	49.7
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	Heavy Trucks:	50	0.9 49	.4	40.4		41.7		50.0)	50.1
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 10 22 48 103	Vehicle Noise:	58	3.6 56	i.8	53.8		49.0		57.5	5	58.0
Ldn: 10 22 48 103	Centerline Distan	ce to Noise C	ontour (in feet)								
			-	70	dBA	65	dBA	6	0 dBA	55	dBA
CNEL: 11 24 52 111			Lo	In:	10		22		48	1	03
			CNE	L:	11	:	24		52	1	11

FH\	WA-RD-77-108	HIGHW	AY NO	ISE PRE	DICTI	ON MODE	EL			
Scenario: Year 2023	,							Diamante	•	
Road Name: Stetson Av Road Segment: e/o Mustan					JOD IVI	umber: 97	92			
	• ,						_			
SITE SPECIFIC IN Highway Data	IPUT DATA		Sit	te Cond		(Hard = 10		L INPUTS ft = 15)	5	
Average Daily Traffic (Adt):	600 vehicle	8					tos:	15		
Peak Hour Percentage:	10%			Medi	ium Tri	icks (2 Axi		15		
Peak Hour Volume:	60 vehicle	5				ks (3+ Ax		15		
Vehicle Speed:	50 mph		1/-	hicle Mi		•				
Near/Far Lane Distance:	84 feet		ve		leTvpe		av	Evenina	Night	Daily
Site Data				verno	- //-		3y 7.5%	12.9%		97.42%
				Men	dium Tr		.3%	4.9%	10.3%	1.84%
Barrier Height:	0.0 feet 0.0						6.5%		10.8%	
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	70.0 feet								10.070	0.7 170
Centerline Dist. to Barrier: Centerline Dist. to Observer:	70.0 feet 70.0 feet		No	ise Sou	ırce Ele	evations ('in fe	et)		
Barrier Distance to Observer:	0.0 feet				Autos					
Observer Height (Above Pad):	5.0 feet			Medium						
Pad Flevation:	0.0 feet			Heavy	Trucks	8: 8.00	6	Grade Adj	ustment.	0.0
Road Elevation:	0.0 feet		La	ne Equi	ivalent	Distance	(in f	eet)		
Road Grade:	0.0%				Autos	s: 56.22	3			
Left View:	-90.0 degree	es		Medium	Trucks	56.06	5			
Right View:	90.0 degree	es		Heavy	Trucks	56.08	1			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Distai	nce	Finite R	?oad	Fresnel	I	Barrier Atte	en Ber	m Atten
Autos: 70.20	-14.63		-0.87		-1.20	-4	.72	0.0	00	0.000
Medium Trucks: 81.00			-0.85		-1.20	-4	.88	0.0		0.000
Heavy Trucks: 85.38	-35.82		-0.85		-1.20	-5	.28	0.0	00	0.000
Unmitigated Noise Levels (with		barrier a	attenua	ition)						
VehicleType Leq Peak Ho			eq Eve		Leq I			Ldn		VEL
		51.6		49.8		43.8		52.4		53.0
Medium Trucks: 47		45.6		39.2		37.7		46.1		46.4
Heavy Trucks: 47		46.1		37.0		38.3		46.7		46.8
Vehicle Noise: 55	5.2	53.5		50.4		45.6		54.2		54.6
Centerline Distance to Noise C										

Monday, January 25, 2016

	FHV	/A-RD-77-108	HIGH	WAY N	OISE PI	REDICTION	OM MC	DDEL			
Road Name	io: Year 2023 \ e: Stetson Av. nt: e/o Warren	(S.)				Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC IN	PUT DATA			Site Con	N nditions (L INPUT	s	
Average Daily Peak Hour Peak Ho Vel	Percentage: lour Volume: hicle Speed:	100 vehicles 10% 10 vehicles 50 mph			Me	edium Tru eavy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lar	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data Bar Barrier Type (0-W	rier Height: 'all, 1-Berm):	0.0 feet 0.0				A edium Tri Heavy Tri		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dis	st. to Barrier:	70.0 feet		7	Voise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance to Observer Height (A	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks ry Trucks	: C	.000 .297 .006	Grade Ad	ljustment	: 0.0
Roa	ad Elevation:	0.0 feet		1	ane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks y Trucks	: 56	5.223 5.065 5.081			
FHWA Noise Mode	el Calculations	•									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier At	ten Ber	m Atten
Autos:	70.20	-22.41		-0.87	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	rening	Leq N	light		Ldn	C	NEL
Autos:	45.		43.8		42.1		36	-	44.	-	45.2
Medium Trucks:	39.	-	37.8		31.4		29	-	38.		38.6
Heavy Trucks:	39.		38.3		29.3		30		38.		39.0
Vehicle Noise:	47.	4	45.7		42.6		37	.8	46.	4	46.9
Centerline Distanc	ce to Noise Co	ntour (in feet)							_	
			L	70 c		65 d		(60 dBA		dBA
			Ldn:	2		4			9		19
		CI	IEL:	2		4			9		20

	FHW	/A-RD-77-108	HIG	HWAY N	DISE P	REDICTION	ON MOD	DEL				
Road Nari	rio: Year 2023 V me: Stetson Av. ent: e/o Fisher S	(S.)	t				Name: F Imber: 9		o Diamante	e		
	SPECIFIC IN	PUT DATA							L INPUT	3		
Highway Data				S	ite Cor	nditions (Hard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:	15			
Peak Hour	r Percentage:	10%			Me	edium Tru	cks (2 A	xles):	15			
Peak I	Hour Volume:	10 vehicles	3		Heavy Trucks (3+ Axles): 15							
Ve	ehicle Speed:	50 mph		ν	Vehicle Mix							
Near/Far La	ane Distance:	84 feet		F		icleType		Day	Evening	Night	Daily	
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%	
Ba	arrier Height:	0.0 feet			М	edium Tr	ucks: 8	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-V		0.0				Heavy Tr	ucks: 8	86.5%	2.7%	10.8%	0.74%	
Centerline D	ist. to Barrier:	70.0 feet			laiaa C	ource Ele	ations	/in f	2041			
Centerline Dist.	to Observer:	70.0 feet		^	uise s	Autos		•	ei)			
Barrier Distance	Barrier Distance to Observer: 0.0 feet											
Observer Height	(Above Pad):	5.0 feet				m Trucks vy Trucks			Grade Adj	ivetmont	- 0.0	
P	Pad Elevation:	0.0 feet								usuncin	. 0.0	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)			
	Road Grade:	0.0%				Autos	: 56.2	223				
	Left View:	-90.0 degree	es			m Trucks)65				
	Right View:	90.0 degree	es		Hear	vy Trucks	: 56.0	081				
FHWA Noise Mod	lel Calculations	;										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten	
Autos:	70.20	-22.41		-0.87		-1.20		4.72	0.0	100	0.000	
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	00	0.000	
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	00	0.000	
Unmitigated Nois	e Levels (witho	out Topo and	barr	ier attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq I	Vight		Ldn	С	NEL	
Autos:	45.	7 .	43.8		42.1		36.0		44.6	6	45.2	
Medium Trucks:	39.	3 :	37.8		31.4		29.9		38.4	ļ	38.6	
Heavy Trucks:	39.	7 :	38.3		29.3		30.5		38.9)	39.0	
Vehicle Noise:	47.	4	45.7		42.6		37.8		46.4	1	46.9	
Centerline Distan	ice to Noise Co	ntour (in feet,)									
				70 d	BA	65 c		6	0 dBA		dBA	
			I dn:	2		4			9		19	

Road Name: Road Segment:	Stetson Av.	Vithout Projec	ct				t Name: lumber:		o Diamante	е	
	PECIFIC IN	PUT DATA			a:- a				L INPUT	s	
Highway Data					Site Cor	ditions	(Hard				
Average Daily Tr	. ,		es					Autos:			
Peak Hour P		10%					ucks (2				
		1,350 vehicle	es		He	avy Iru	cks (3+	Axles):	15		
	cle Speed:	50 mph			Vehicle	Mix					
Near/Far Lane	e Distance:	84 feet			VehicleType Day Evening Night D						
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barri	ier Heiaht:	0.0 feet			M	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wal	II, 1-Berm):	0.0			I	Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist.	to Barrier:	70.0 feet		- 1	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to		70.0 feet				Auto		0.000	,		
Barrier Distance to		0.0 feet			Mediu	m Truck		.297			
Observer Height (Al		5.0 feet			Heav	y Truck	rs: 8	.006	Grade Ad	iustment	0.0
	l Elevation:	0.0 feet				•					
	Elevation:	0.0 feet		Ľ.	Lane Eq				reet)		
Ro	oad Grade:	0.0%				Auto		5.223			
	Left View:	-90.0 degre				m Truck		6.065			
F	Right View:	90.0 degre	es		Heav	ry Truck	is: 5t	5.081			
FHWA Noise Model	Calculations	6									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	-1.11		-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	81.00	-18.34		-0.8	-	-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-22.30		-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise I								_		_	
	eq Peak Hou		,	Leq E	vening		Night		Ldn		NEL
Autos:	67.	-	65.1		63.4		57		65.9		66.
Medium Trucks:	60.	-	59.1 59.6		52.7 50.6		51 51	-	59.7 60.2		59.9
Heavy Trucks: Vehicle Noise:	61. 68.		67.0		63.9		51		67.7		60.3
					65.9		59	. !	67.1		00
Centerline Distance	to Noise Co	ntour (in fee	t)	70 (HRΔ	65	dBA	-	60 dBA	EE	dBA
			Ldn:	4			06		228		192

		WA-RD-77-1									
	o: Year 2023		ject						o Diamant	е	
	e: Stetson Av					Job N	umber:	9792			
Road Segmen	it: e/o New S	tetson Av.									
	SPECIFIC II	NPUT DAT	Α						L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	10,600 vehi	cles					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	ıcks (2	Axles):	15		
Peak H	our Volume:	1,060 vehi	cles		He	eavy Truc	cks (3+)	Axles):	15		
Vel	nicle Speed:	50 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	84 feet		1		icleType		Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6%						97.429
Rar	rier Height:	0.0 fee	t		M	edium Ti	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	-	0.0				Heavy Ti	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		70.0 fee	t	İ	Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist.		70.0 fee		İ		Autos		000	,		
Barrier Distance t		0.0 fee	-		Mediu	m Trucks	s: 2.	297			
Observer Height (,	5.0 fee	-		Hea	vv Trucks	s: 8.	006	Grade Ad	justment	0.0
	d Elevation:	0.0 fee		-		,					
	d Elevation:	0.0 fee	t	ļ.	Lane Ec	uivalent			feet)		
F	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 deg				m Trucks		.065			
	Right View:	90.0 deg	grees		Hea	vy Truck:	s: 56.	.081			
FHWA Noise Mode					_						
VehicleType	REMEL	Traffic Flo		stance		Road	Fresi	_	Barrier Att		m Atten
Autos:	70.20			-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	81.00			-0.8		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			-0.8		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise			_				N II I- 1	1	Ldn		NEL
VehicleType Autos:	Leq Peak Ho	ur Leq I	64.1	Leq E	vening 62.3		Night 56.:	2	Lan 64.9	_	NEL 65.
Medium Trucks:	-	9.6	58.0		51.7		50.	-	58.6	-	58.
Heavy Trucks:		0.0	58.6		49.5		50.		59.1		50. 59.
Vehicle Noise:	-	7.7	65.9		62.9		58.	_	66.6		67.
Centerline Distance	e to Noise C	ontour (in f	eet)								
			,	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn: CNEL:	4	12	9	0		194	4	118

Monday, January 25, 2016

	FH	WA-RD-77-	108 HIGH	HWAY N	IOISE PI	REDICTION	ON M	ODEL			
Scenar	io: Year 2023	Without Pro	oject			Project I	Vame:	Ranch	o Diamant	te	
Road Nam	e: Stetson A	٧.				Job Nu	mber:	9792			
Road Segme	nt: e/o Sande	rson Av.									
	SPECIFIC I	NPUT DAT	ГА		04- 0	No ditions (L INPUT	s	
Highway Data					Site Con	iaitions (i	Hara :				
Average Daily	. ,		icles					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	,			He	avy Truck	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mp	h	-	Vehicle I	Mix					
Near/Far La	ne Distance:	84 fee	t	-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Pa	rrier Heiaht:	0.0 fe	nt		Me	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0	5 1		F	Heavy Tru	ıcks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 fee	o†	L.							
Centerline Dist.		70.0 fee		1	Voise So	ource Ele			eet)		
Barrier Distance		0.0 fee				Autos:		0.000			
Observer Height					m Trucks:		2.297				
	ad Flevation:	5.0 fee			Heav	y Trucks:	: 8	3.006	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 fee		- 1	ane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0 16	51	F		Autos		5.223	,		
	Left View:	-90.0 de	arooc		Mediu	m Trucks:		6.065			
	Right View:	90.0 de				y Trucks:		3.081			
	rugin vion.	30.0 dc	grees		77007	y Truono.		,,,,,,			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flo		stance		Road	Fres		Barrier At		rm Atten
Autos:	68.46		.10	-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	79.45			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	5 -17	.09	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Topo a	and barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq	Day	Leq E	/ening	Leq N			Ldn	С	NEL
Autos:	7	0.5	68.6		66.8		60	.8	69.	4	70.0
Medium Trucks:	6	4.3	62.8		56.4		54	.8	63.	3	63.5
Heavy Trucks:	6	5.1	63.7		54.7		55	.9	64.	3	64.4
Vehicle Noise:	7.	2.3	70.6		67.4		62	.8	71.	3	71.8
Centerline Distan	ce to Noise C	Contour (in	feet)								
				70 c	IBA	65 d	BA	(60 dBA	55	dBA
			Ldn:	8	6	18-	4		397	8	356
			CNEL:	9:	2	19	8		426	ç	918

	FHV	WA-RD-77-108	HIGHV	WAY N	IOISE P	REDICTI	ON MC	DEL			
Road Nam		Without Projec	t				Name: umber:		o Diamante	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions ((Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	1,600 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	160 vehicles	S		He	eavy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	25 mph		-	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		-		icleType		Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%		9.69	. ,
Rai	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	. ,	70.0 feet			Maisa S	ource Ele	ovation	e (in f	oot)		
Centerline Dist.	to Observer:	70.0 feet		H.	WOISE S	Autos		000	eei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height ((Above Pad):	5.0 feet							Crada Adi	uotmor	4 00
Pa	Pad Elevation: 0.0 feet					vy Trucks	i: 8.	.006	Grade Adj	usuner	n. 0.0
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
1	Road Grade:	0.0%				Autos	: 56	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	.065			
	Right View:	90.0 degree	es		Hear	vy Trucks	56	.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Atte	en Be	erm Atten
Autos:	58.73	-7.36		-0.8	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	70.80	-24.60		-0.8	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	77.97	-28.55		-0.8	5	-1.20		-5.28	0.0	100	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq I	Night		Ldn	(CNEL
Autos:	49	.3	47.4		45.6		39.	6	48.2	2	48.8
Medium Trucks:	44	.2	42.6		36.3		34.	7	43.2	2	43.4
Heavy Trucks:	47		45.9		36.9		38.		46.5	5	46.6
Vehicle Noise:	52	.2	50.5		46.6		42.	7	51.2	2	51.6
Centerline Distance	ce to Noise Co	ontour (in feet)								
				70 d		65 0		- (60 dBA	5	5 dBA
			Ldn:	4		8			18		39
	CNEL:				1	9	9		19		42

					NOISE PI						
	o: Year 2023		ject						o Diamante	е	
	e: Wincheste					Job I	Number.	9792			
Road Segmen	it: s/o Fiorida	AV.									
	SPECIFIC II	NPUT D	ATA						L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,400 v	rehicles					Autos:	15		
Peak Hour	Percentage:	10%					,	Axles):	15		
	our Volume:	1,940 v			He	avy Tru	icks (3+	Axles):	15		
	nicle Speed:	55 n		ŀ	Vehicle I	Mix					
Near/Far Lar	ne Distance:	36 f	eet	ı	Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0	feet		Me	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		47.0		İ	Noise So	ource E	levatio	ns (in fe	eet)		
Centerline Dist. t		47.0		ı		Auto	os: (0.000			
	Parrier Distance to Observer: 0.0 feet				Mediu	m Truck	ks: 2	2.297			
	bserver Height (Above Pad): 5.0 feet				Heav	y Truck	ks: 8	3.006	Grade Adj	iustment	0.0
	Pad Elevation: 0.0 feet					uhialan	4 Diese	naa (in	foot)		
	d Elevation: Road Grade:	0.0			Lane Eq	Auto		3.704	ieei)		
r	l eft View:	0.09			Modiu	m Truck		3.501			
	Right View:		degrees			y Truck		3.521			
	ragni view.	90.0	degrees		ricav	y much	10. 40	J.JZ I			
FHWA Noise Mode											
VehicleType	REMEL	Traffic		istance		Road	Fres		Barrier Att		m Atten
Autos: Medium Trucks:	71.78 82.40		0.06	0.7		-1.20 -1.20		-4.63 -4.87	0.0		0.000
Heavy Trucks:	82.40 86.40		-17.18 -21.14	0.8	-	-1.20 -1.20		-4.87 -5.46	0.0		0.000
					-	-1.20		-5.40	0.0	000	0.000
VehicleType	Leq Peak Ho		o and bari eq Day		vening	100	Night		Ldn		NEL
Autos:		1.4	69.5		67.7	Leq	f Nigrit 61	7	70.3		70.9
Medium Trucks:	-	1.8	63.3		57.0		55		63.9		64.
Heavy Trucks:	-	1.9	63.4		54.4		55		64.0		64.
Vehicle Noise:		3.0	71.2		68.3		63		72.0		72.4
Centerline Distanc	e to Noise C	ontour (i	in feet)								
				70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	. 6	33	1	137		295	6	35

	FHV	VA-RD-77-108	HIGHW	AY N	IOISE PE	REDICT	ION MOI	DEL			
Road Nar	rio: Year 2023 me: 9th St. ent: e/o Winche	, , ,				,,	Name: I umber: 9		o Diamant	е	
	SPECIFIC IN	IPUT DATA			o: 0				L INPUT	S	
Highway Data				- 2	Site Con	aitions	•				
Average Daily		500 vehicles						Autos:	15		
	r Percentage:	10%					ucks (2 A	,			
	Hour Volume:	50 vehicles			He	avy Iruo	cks (3+ A	(xies	15		
	ehicle Speed:	25 mph		١	Vehicle I	Mix					
Near/Far La	ane Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						-	Autos:	77.5%	12.9%	9.6	% 97.42%
Ra	arrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-V		0.0			F	leavy Ti	rucks:	86.5%	2.7%	10.89	% 0.74%
Centerline D	ist. to Barrier:	70.0 feet		,	Voise So	urce F	levation	s (in f	oet)		
Centerline Dist	to Observer:	70.0 feet		Ľ	10,00 00	Auto		000	,,,		
Barrier Distance	to Observer:	0.0 feet			Madiu	n Truck		97			
Observer Height	Observer Height (Above Pad):					y Truck		006	Grade Ad	iustme	nt: 0.0
F	Pad Elevation:	0.0 feet			ricav	y Truck	3. 0.0	,00	Orado riaj	dourro	n. 0.0
Ro	ad Elevation:	0.0 feet		I	Lane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degree	S		Mediui	n Truck	s: 56.0	065			
	Right View:	90.0 degree	s		Heav	y Truck	s: 56.0	081			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos.	58.73	-12.41		-0.87	7	-1.20		-4.72	0.0	000	0.00
Medium Trucks.	70.80	-29.65		-0.85	5	-1.20		-4.88	0.0	000	0.00
Heavy Trucks.	77.97	-33.60		-0.85	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Ev	/ening	Leq	Night		Ldn		CNEL
Autos.			12.4		40.6		34.5		43.2	-	43.
Medium Trucks.			37.6		31.2		29.7		38.1		38.
Heavy Trucks.			10.9		31.9		33.1		41.5		41.
Vehicle Noise.	47	.1 4	15.5		41.6		37.6		46.2	2	46.
Centerline Distar	ice to Noise Co	ontour (in feet)									
				70 c	iBA	65	dBA	1	60 dBA	5	5 dBA

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	WAY N	IOISE PE	REDICTI	ON MO	DEL				
Road Nam	io: Year 2023 ne: Wincheste nt: n/o 9th St.	er Rd.				Project I Job Nu			o Diamar	nte		
SITE Highway Data	SPECIFIC II	NPUT DATA			Sita Can	N ditions (L INPU	TS		
					site Con	uitions (naru :					
,	. ,	21,300 vehicle	S					Autos:				
	Percentage:	10%				dium Tru		,				
	lour Volume:	,	S		He	avy Truc	ks (3+	Axles):	15			
	hicle Speed:	45 mph		1	Vehicle I	Vix						
Near/Far La	ne Distance:	36 feet			Veh	icleType		Day	Evening	Nig	ght	Daily
Site Data						A	utos:	77.5%	12.9%	6 9	9.6%	97.42%
Pa	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	6 10	0.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tr	ucks:	86.5%	2.7%	6 10	0.8%	0.74%
Centerline Di	. ,	47.0 feet										
Centerline Dist.		47.0 feet		1	Voise So	ource Ele			eet)			
Barrier Distance		0.0 feet				Autos		.000				
Observer Height			m Trucks		.297							
	ad Flevation:	5.0 feet 0.0 feet			Heav	y Trucks	: 8	.006	Grade A	djustr	nent:	0.0
	ad Elevation:	0.0 feet		- 1	ane Eq	uivalent	Distar	ice (in	feet)			
	Road Grade:	0.0%		F		Autos		.704	,			
	Left View:	-90.0 degre	00		Mediu	n Trucks		.501				
	Right View:	90.0 degre				y Trucks		.521				
	rugin vion.	50.0 degre	03		77007	, maono		.02.				
FHWA Noise Mod												
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier A		Bern	Atten
Autos:	68.46			0.77		-1.20		-4.63	-	0.000		0.00
Medium Trucks:	79.45			0.80		-1.20		-4.87		0.000		0.00
Heavy Trucks:	84.25	-19.86		0.80)	-1.20		-5.46	C	0.000		0.000
Unmitigated Nois	e Levels (with	hout Topo and	barrie	er atten	uation)							
VehicleType	Leq Peak Ho	our Leq Daj	/	Leq E	/ening	Leq I	Vight		Ldn		CN	EL
Autos:	6	9.4	67.5		65.7		59.	6	68	3.3		68.9
Medium Trucks:	6	3.1	61.6		55.3		53.	7	62	2.2		62.4
Heavy Trucks:	6	4.0	62.6		53.5		54.	8	63	3.1		63.3
Vehicle Noise:	7	1.2	69.5		66.3		61.	6	70).2		70.0
Centerline Distan	ce to Noise C	Contour (in fee	t)					,				
				70 c		65 c		- (60 dBA		55 c	
			Ldn:	4i 5i	-	10			224		48	-
	Lan: CNEL:					11	2		241		51	9

	FH\	WA-RD-77-108	HIGH	1 YAWH	NOISE P	REDICTI	ON MO	DEL			
Road Na	ario: Year 2023 ame: Patterson / pent: s/o Grand /	Av.					Name: umber:		o Diamante	Э	
	SPECIFIC IN	IPUT DATA							L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Dail	ly Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Hot	ır Percentage:	10%			Me	edium Tru	ıcks (2 i	4xles):	15		
Peak	Hour Volume:	10 vehicle	S		He	eavy Truc	ks (3+)	4xles):	15		
1	/ehicle Speed:	40 mph		F	Vehicle	Mix					
Near/Far L	ane Distance:	12 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							lutos:	77.5%	12.9%	9.6%	97.42%
F	arrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline I	Dist. to Barrier:	22.0 feet		-	Noise S	ource El	ovation	e (in f	oof)		
Centerline Dis	t. to Observer:	22.0 feet		H	Noise Source Elevations (in feet) Autos: 0.000						
Barrier Distance	Barrier Distance to Observer: 0.0 feet					m Trucks		297			
Observer Heigh	Observer Height (Above Pad): 5.0 feet					vy Trucks		006	Grade Ad	ivetmant	. 0.0
	Pad Elevation:	0.0 feet			i ica	vy Trucks	s. o.	000	Orace Au	usuncin	. 0.0
R	load Elevation:	0.0 feet		L	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 21.	749			
	Left View:	-90.0 degre	es		Medium Trucks: 21.338						
	Right View:	90.0 degree	es		Hear	vy Trucks	s: 21.	378			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi	_	Barrier Att		m Atten
Auto		-21.44		5.3	-	-1.20		-4.34	0.0		0.000
Medium Trucks				5.4		-1.20		-4.85	0.0		0.000
Heavy Trucks	s: 82.99	-42.63		5.4	3	-1.20		-6.07	0.0	00	0.000
Unmitigated No.	ise Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hot	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL
Auto	s: 49	1.2	47.3		45.5		39.	5	48.1		48.7
Medium Trucks	s: 43	1.3	41.8		35.4		33.9	9	42.3	3	42.6
Heavy Trucks			43.2		34.1		35.4		43.7		43.9
Vehicle Noise	9: 51	.2	49.5		46.2		41.	7	50.2	2	50.7
Centerline Dista	nce to Noise C	ontour (in feet)								
					dBA		dBA	(60 dBA		dBA
			Ldn:		1 2 5 11						
	CNEL:					2	2		5		11

	FHV	VA-RD-77-108 I	HIGH	WAY N	OISE P	REDICT	ION MOI	DEL				
Road Nan	rio: Year 2023 \ ne: California A nt: s/o Stowe F	v.					t Name: I lumber: 9		o Diamante	е		
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data				S	ite Cor	nditions	(Hard =					
Average Daily	. ,	400 vehicles						Autos:				
	Percentage:	10%					rucks (2 A					
	lour Volume:	40 vehicles			He	eavy Tru	icks (3+ A	(xles	15			
Ve	ehicle Speed:	40 mph		ν	Vehicle Mix							
Near/Far La	ne Distance:	36 feet		Ė	VehicleType Day Evening Night L						Daily	
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%	
Ra	rrier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-VI		0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%	
,, ,	ist, to Barrier:	47.0 feet		-	·- · 0		levations	- /! #	41			
Centerline Dist.	to Observer:	47.0 feet		^	ioise S				eet)			
Barrier Distance	to Observer:	0.0 feet				Auto		000				
Observer Height	oserver Height (Above Pad): 5.0 feet					m Truck		297	Grade Ad	i rotmont		
P	ad Elevation:	0.0 feet			Hear	vy Truck	rs: 8.0	006	Grade Adj	jusimeni	0.0	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	e (in	feet)			
	Road Grade:	0.0%				Auto	s: 43.7	704				
	Left View:	-90.0 degrees	s		Mediu	m Truck	s: 43.5	501				
	Right View:	90.0 degrees	S		Hear	vy Truck	s: 43.5	521				
FHWA Noise Mod	lel Calculation:	s										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos:	66.51	-15.42		0.77		-1.20		-4.63	0.0	000	0.000	
Medium Trucks:	77.72	-32.66		0.80	1	-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	82.99	-36.61		0.80		-1.20		-5.46	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and b	arrie	er attenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn	C	NEL	
Autos:	50.	.7 4	8.8		47.0		40.9		49.6	3	50.2	
Medium Trucks:	44.	7 4	3.2		36.8		35.2		43.7	7	43.9	
Heavy Trucks:			4.6		35.5		36.8		45.1		45.3	
Vehicle Noise:	52.	.7 5	1.0		47.7		43.1		51.7	7	52.	
Centerline Distan	ce to Noise Co	ntour (in feet)		70			10.4				10.4	
			. L	70 d	BA	65	dBA	(60 dBA	55	dBA	

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION MC	DEL			
Road Nan	rio: Year 2023 ne: California / nt: n/o Stowe	٩v.					t Name: lumber:		o Diamant	е	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	S	
	T 77 (4 11)	E 400			Site Coi	iuitions	•				
Average Daily		5,100 vehicle	S					Autos:	15		
	Percentage:	10%					ucks (2	,	15 15		
	Hour Volume:	510 vehicle	S		He	avy Iru	cks (3+	Axies):	15		
	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ва	rrier Heiaht:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall. 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist, to Barrier:	47.0 feet		H	Noise S		· · · · · · · · · · · · · · · · · · ·	- /! #	41		
Centerline Dist.	to Observer:	47.0 feet		Ľ	Noise S	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet			A deceller	Auto m Truck		000 297			
Observer Height	(Above Pad):	5.0 feet						297 006	Grade Ad	ii iatmant	
P	ad Elevation:	0.0 feet			Heat	/y Truck	S: 8	006	Grade Adj	usuneni	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	.501			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	521			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-4.36		0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	77.72	-21.60		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-25.56		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hot	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	61	.7	59.8		58.1		52.	0	60.6	3	61.2
Medium Trucks:			54.2		47.8		46.	-	54.8		55.0
Heavy Trucks:	57	'.O	55.6		46.6		47.	3	56.2	2	56.3
Vehicle Noise:	63	3.7	62.0		58.7		54.	2	62.7	7	63.2
Centerline Distan	ce to Noise C	ontour (in fee	!)	70							10.4
				70 d	aBA	65	dBA	6	60 dBA	55	dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICTIO	N MODEL					
Road Nam	io: Year 2023 ne: California A nt: s/o Stetson	ıv.				ame: Rancl nber: 9792	no Diamante				
SITE	SPECIFIC IN	IPUT DATA					EL INPUTS				
Highway Data				Site Cor	nditions (F	lard = 10, S	oft = 15)				
Average Daily	Traffic (Adt):	200 vehicles				Autos	: 15				
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles)	: 15				
Peak H	lour Volume:	20 vehicles		He	avy Truck	s (3+ Axles)	: 15				
Ve	hicle Speed:	40 mph		Vehicle	Mix						
Near/Far La	ne Distance:	36 feet			icleType	Day	Evening N	light Daily			
Site Data					Au	tos: 77.59	6 12.9%	9.6% 97.42%			
Ra	rrier Height:	0.0 feet		М	edium Tru	cks: 84.89	6 4.9% 1	0.3% 1.84%			
Barrier Type (0-W		0.0		1	Heavy Tru	cks: 86.5%	6 2.7% 1	0.8% 0.74%			
Centerline Di		47.0 feet		Noise Source Elevations (in feet)							
Centerline Dist.			Autos: 0.000								
	Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297						
	Observer Height (Above Pad): 5.0 feet					8.006	Grade Adjus	tment: 0.0			
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		Lane Eq		istance (in	reet)				
	Road Grade:	0.0%		A dec effect	Autos:	43.704					
	Left View:	-90.0 degree			m Trucks:	43.501					
	Right View:	90.0 degree	S	Heat	y Trucks:	43.521					
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atten				
Autos:		-18.43		77	-1.20	-4.63					
Medium Trucks:		-35.67		80	-1.20	-4.87					
Heavy Trucks:		-39.62		80	-1.20	-5.46	0.000	0.000			
Unmitigated Nois											
VehicleType	Leq Peak Hou			Evening	Leq Ni	_	Ldn	CNEL			
Autos:	47		5.8	44.0		37.9	46.6	47.2			
Medium Trucks:	41		0.1	33.8		32.2	40.7	40.9			
Heavy Trucks: Vehicle Noise:	43		1.5 7.9	32.5 44.7		33.8 40.1	42.1 48.7	42.2 49.1			
Centerline Distan			-								
		, 1000)	70) dBA	65 dE	3A	60 dBA	55 dBA			
		L	dn:	2	4		8	18			
	CNEL:				4		9	19			

	FH\	WA-RD-77-108	HIGHW	/AY N	OISE PI	REDICT	ION MC	DEL			
Road Nam	io: Year 2023 ne: California A nt: n/o Simpso	۱v.					Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	Site Con	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	200 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2 .	Axles):	15		
Peak H	lour Volume:	20 vehicle	S		He	avy Trud	cks (3+ .	Axles):	15		
Ve	hicle Speed:	25 mph		ı	/ehicle	Mix					
Near/Far La	ne Distance:	36 feet		F.		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		47.0 feet			laisa Sa	ource El	lovation	s (in f	not)		
Centerline Dist.	to Observer:	47.0 feet			ioise sc	Auto:		.000	(
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height (Above Pad):	5.0 feet				y Truck		.006	Grade Ad	iuetman	t- 0.0
Pa	ad Elevation:	0.0 feet			ricav	y Truck	3. 0.	.000	Orace Au	usuncn	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	.704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	.501			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	.521			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	58.73	-16.39		0.77		-1.20		-4.63	0.0	000	0.000
Medium Trucks:	70.80	-33.63		0.80)	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	77.97	-37.58		0.80)	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atteni	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	' L	.eq Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	41	.9	40.0		38.3		32.	2	40.8	3	41.4
Medium Trucks:	36	.8	35.3		28.9		27.	4	35.8	3	36.1
Heavy Trucks:	40	.0	38.6		29.5		30.	8	39.	1	39.3
Vehicle Noise:	44	.8	43.1		39.2		35.	3	43.8	3	44.2
Centerline Distant	ce to Noise C	ontour (in feet)								
		-		70 d	BA		dBA	6	0 dBA	55	5 dBA
			Ldn:	1			2		4		8
		CI	VEL:	1			2		4		9

	FHWA	A-RD-77-108 HIG	HWAY N	OISE P	REDICT	TION MODEL		
Road Name	o: Year 2023 Wi e: Warren Rd. at: s/o Esplanade	,				t Name: Rand Number: 9792		
SITE S	SPECIFIC INP	UT DATA				NOISE MOD	EL INPUTS	
Highway Data			5	Site Cor	ditions	(Hard = 10, 3	Soft = 15)	
Peak Hour I Peak Ho	our Volume: 2,	10% 740 vehicles				Auto: rucks (2 Axles icks (3+ Axles): 15	
	nicle Speed:	55 mph	١	/ehicle	Mix			
Near/Far Lar	ne Distance:	84 feet		Veh	icleTyp	e Day	Evening	Night Daily
Site Data						Autos: 77.5	% 12.9%	9.6% 97.42%
Ran	rier Heiaht:	0.0 feet		М	edium 7	rucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-Wa		0.0			Heavy 7	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis	t. to Barrier:	70.0 feet		loise S	ource E	levations (in	feet)	
FHWA Noise Mode VehicleType	o Observer: Above Pad): d Elevation: d Elevation: Road Grade: Left View: Right View: El Calculations REMEL 7		stance	Mediu Hear	Auto m Truck ry Truck Road	(s: 2.297 (s: 8.006 at Distance (ii s: 56.223 (s: 56.065 (s: 56.081	n feet) Barrier Atte	
Autos:	71.78	1.55	-0.87	,	-1.20	-4.72	0.00	0.000
Medium Trucks:	82.40	-15.68	-0.85		-1.20	-4.88		
Heavy Trucks:	86.40	-19.64	-0.85	,	-1.20	-5.28	0.00	0.000
Unmitigated Noise	Levels (withou	t Topo and barr	ier atten	uation)				
	Leq Peak Hour	Leq Day	Leq Ev		Leq	Night	Ldn	CNEL
Autos:	71.3	69.4		67.6		61.5	70.2	70.8
Medium Trucks:	64.7	63.2		56.8		55.3	63.7	64.0
Heavy Trucks:	64.7	63.3		54.2		55.5	63.9	64.0
Vehicle Noise:	72.9	71.1		68.1		63.3	71.8	72.3
Centerline Distanc	e to Noise Con	tour (in feet)						
			70 a	BA .	65	dBA	60 dBA	55 dBA
		Ldn:	92	2	1	199	429	925
		CNEL:	99	9	2	214	462	995

	FHV	VA-RD-77-108	HIGH	A YAWI	IOISE P	REDICT	ION M	ODEL			
Road Nan	rio: Year 2023 \ ne: California A ent: s/o Simpso	v.					Name: lumber:		o Diamant	е	
	SPECIFIC IN	PUT DATA			04- 0				L INPUT	s	
Highway Data					Site Cor	aitions	(Hara		oft = 15)		
Average Daily	. ,	100 vehicle	S					Autos:			
	Percentage:	10%				dium Tri		,			
	Hour Volume:	10 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
	ehicle Speed:	25 mph			Vehicle	Mix					
Near/Far La	ane Distance:	36 feet		f	Veh	icleType	•	Day	Evening	Night	Daily
Site Data						-	Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			М	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	47.0 feet		-	Noise S	urco E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	47.0 feet			V0/36 3	Auto:		0.000	bei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				y Truck		3.006	Grade Ad	iuetmant	
P	ad Elevation:	0.0 feet			rica	y ITUCK	s. c	5.000	Orade Au	Justinoni	0.0
Ro	ad Elevation:	0.0 feet		I I	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	3.704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	3.501			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43	3.521			
FHWA Noise Mod	lel Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	58.73	-19.40		0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	70.80	-36.64		0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	77.97	-40.59		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	38.	.9	37.0		35.2		29	.2	37.8	3	38.4
Medium Trucks:	33.	.8	32.3		25.9		24	.3	32.8	3	33.0
Heavy Trucks:	37.	.0	35.6		26.5		27	.8	36.	1	36.3
Vehicle Noise:	41.	.8	40.1	,	36.2		32	.3	40.8	3	41.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70.0	·IRΔ	65	dRA	1 6	SO dRA	55	dBA

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHWA'	Y NOISE P	REDICT	ION MOI	DEL			
	io: Year 2023 e: Warren Ro nt: n/o Tres C	l.				: Name: F lumber: 9		o Diamante	ė	
	SPECIFIC IN	NPUT DATA						L INPUTS	3	
Highway Data				Site Cor	nditions	(Hard =	10, S	oft = 15)		
Peak Hour	Traffic (Adt): Percentage: lour Volume:	27,400 vehicles 10% 2,740 vehicles				ucks (2 A cks (3+ A	,	15		
Ve	hicle Speed:	55 mph		Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		Vel	nicleType	9	Dav	Evening	Night	Dailv
Site Data						Autos:	77.5%	12.9%	9.6%	97.42%
Rai	rier Height:	0.0 feet		M	fedium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	'all, 1-Berm):	0.0			Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		Noise S	ource E	levations	s (in f	eet)		
Centerline Dist.		70.0 feet			Auto	s: 0.0	000			
Barrier Distance		0.0 feet		Mediu	ım Truck	s: 2.2	297			
Observer Height (,	5.0 feet		Hea	vy Truck	s: 8.0	006	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet								
	ad Elevation:	0.0 feet		Lane Ec		t Distanc		feet)		
ı	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degree			ım Truck					
	Right View:	90.0 degree	S	Hea	vy Truck	s: 56.0	081			
FHWA Noise Mode	el Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	1.55	-().87	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.68	-().85	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40).85	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise										
	Leq Peak Ho			Evening		Night		Ldn		NEL
Autos:			69.4	67.6		61.5		70.2		70.8
Medium Trucks:	-		3.2	56.8		55.3		63.7		64.0
Heavy Trucks:	-		33.3	54.2		55.5		63.9		64.0
Vehicle Noise:			71.1	68.1		63.3		71.8	•	72.3
Centerline Distant	ce to Noise C	ontour (in feet)		O dBA	65	dBA		60 dBA		5 dBA
		,	dn:	92		99		429		925
		-	.an: IFI :	92		99 14		429		925 995
		CIV	IEL:	99	2	14		402		990

	FH	WA-RD-77-10	8 HIGI	HWAY N	IOISE PI	REDICT	ION MO	DEL			
Road Nar	rio: Year 2023 me: Warren Ro ent: n/o Devons	l. ,					Name: umber:		o Diamante	е	
	SPECIFIC II	NPUT DATA			a:- a				L INPUT	S	
Highway Data				1	Site Con	aitions	•				
	Traffic (Adt):		es					Autos:	15		
	r Percentage:	10%				dium Tri		,	15		
	Hour Volume:	_,	es		He	avy Truc	cks (3+ /	Axles):	15		
	ehicle Speed:	55 mph			Vehicle I	Mix					
Near/Far L	ane Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
D.	arrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	•	0.0			F	Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet		- 1	Noise So	ource Fl	levation	e (in fa	not)		
Centerline Dist	to Observer:	70.0 feet		F.	10/30 00	Auto:		000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		006	Grade Ad	iustmont	. 0.0
F	Pad Elevation:	0.0 feet			пеач	ry Truck	s. o.	000	Grade Au	usunem	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Auto	s: 56.	223			
	Left View:	-90.0 degre	ees		Mediu	m Truck	s: 56.	065			
	Right View:	90.0 degre	ees		Heav	y Truck	s: 56.	081			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos		1.55	5	-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks	82.40	-15.68	В	-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	86.40	-19.64	4	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois								1			
VehicleType	Leq Peak Ho		,	Leq E		_	Night	<u> </u>	Ldn		VEL
Autos		1.3	69.4		67.6		61.5		70.2	-	70.8
Medium Trucks	-	1.7	63.2		56.8		55.3	-	63.7		64.0
Heavy Trucks Vehicle Noise		1.7	63.3 71.1		54.2 68.1		55.5 63.3		63.9 71.8		64.0 72.3
Centerline Distar	-										
Contonine Distar		oncour (m rec	,	70.	dBA	e E	dBA		0 dBA		dBA
			- 1	700	JDA	03	UDA		U UDA	33	UDA
			Ldn:	9.			99	C	429		25

		WA-RD-77-10									
	o: Year 2023								o Diamante	9	
	e: Warren Ro					Job I	lumber:	9792			
Road Segmen	t: s/o Fiorida	AV.									
	PECIFIC II	NPUT DATA							L INPUT	5	
Highway Data					Site Con	ditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily 1	raffic (Adt):	29,600 vehicle	es					Autos:	15		
Peak Hour F		10%					,	Axles):	15		
	our Volume:	2,960 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
	nicle Speed:	55 mph			Vehicle I	Mix					
Near/Far Lan	e Distance:	84 feet			Veh	icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barı	rier Height:	0.0 feet			Me	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		1	Noise So	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to		70.0 feet				Auto	s: 0	.000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8	.006	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet		H			4 Di-4-	//	F 4\		
	d Elevation:	0.0 feet		H'	Lane Eq			_ •	eet)		
H	Road Grade:	0.0%			14-4	Auto		5.223			
	Left View:	-90.0 degre				m Truck		6.065			
	Right View:	90.0 degre	ees		Heav	ry Truck	S. 50	5.081			
FHWA Noise Mode			,								
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Atte	_	m Atten
Autos:	71.78			-0.8		-1.20		-4.72	0.0		0.000
Medium Trucks:	82.40			-0.8	-	-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40			-0.8		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise								-			
VehicleType Autos:	Leq Peak Ho	ur Leq Da	69.7	Leq E	vening	Leq	Night 61.		Ldn 70.5		NEL 71.
Medium Trucks:		5.0	63.5		67.9 57.1		55.		70.5 64.1		64.3
Heavy Trucks:		5.0	63.6		54.6		55.		64.1		64.
		3.2	71.4		68.5		63		72.1		72.6
· · · · · ·		3.2	71.4		68.5		63	.0	72.1		72.0
Vehicle Noise:			41								
· · · · · ·		ontour (in fee	t)	70.	NDΛ	65	ADA	6	O ADA	55	dD1
Vehicle Noise:		ontour (in fee	l dn:	70 d			dBA	6	0 dBA 452		dBA

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PI	REDICT	TON MOI	DEL			
	o: Year 2023 e: Warren Rd at: n/o Florida	l.					t Name: F Number: 9		o Diamante	•	
SITE	SPECIFIC IN	NPUT DATA					NOISE N	IODE	L INPUTS	3	
Highway Data				Sit	te Con	ditions	(Hard =	10, S	oft = 15)		
Peak H	Percentage: our Volume:	23,500 vehicle 10% 2,350 vehicle					rucks (2 A rcks (3+ A		15		
	nicle Speed:	55 mph		Ve	hicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	е	Dav	Evening	Night	Daily
Site Data								77.5%	-	9.6%	,
Rar	rier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W		0.0			I	Heavy 7	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	t. to Barrier:	70.0 feet		No	ise S	ource E	levations	s (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet				Auto		•	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck					
Observer Height (Above Pad):	5.0 feet				y Truck		006	Grade Adj	ustmen	t: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		La	ne Eq		t Distanc		feet)		
F	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degre	es			m Truck					
	Right View:	90.0 degre	es		Heav	ry Truck	s: 56.0)81			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	71.78	0.89		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-16.35		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-20.31		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenua	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ning	Leq	Night		Ldn	(CNEL
Autos:	70	0.6	68.7		66.9		60.9		69.5		70.1
Medium Trucks:	64	1.0	62.5		56.1		54.6		63.1		63.3
Heavy Trucks:	64	1.0	62.6		53.6		54.8		63.2		63.3
Vehicle Noise:	72	2.2	70.4		67.5		62.6		71.1		71.6
Centerline Distance	e to Noise C	ontour (in fee)								
				70 dB.	Α	65	dBA		60 dBA	5	5 dBA
			Ldn:	83		1	80		387		835
			NFI:	90			93		417		898

Monday, January 25, 2016

	FH	IWA-RD-77-10	8 HIGI	YAW	NOISE PI	REDICTIO	N MC	DEL			
	e: Warren Re					Project N Job Nui			no Diamante	•	
SITE	SPECIFIC I	NPUT DATA				NC)ISE I	MODE	L INPUTS	3	
Highway Data					Site Con	ditions (l	Hard =	: 10, S	oft = 15)		
Average Daily			es					Autos:			
	Percentage:	10%				dium Truc					
	our Volume:	2,780 vehic	es		He	avy Truck	S (3+)	Axies):	15		
	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	77.5%	6 12.9%	9.6%	97.42%
Bai	rier Height:	0.0 feet			M	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	'all, 1-Berm):	0.0			ı	Heavy Tru	cks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dis		70.0 feet			Noise So	ource Ele	vation	s (in f	eet)		
Centerline Dist.		70.0 feet				Autos:	0.	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.	006	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet			Lane Eq	uivalent l			feet)		
ı	Road Grade:	0.0%				Autos:		.223			
	Left View:	-90.0 degr				m Trucks:		.065			
	Right View:	90.0 degr	ees		Heav	y Trucks:	56.	.081			
FHWA Noise Mode	el Calculation	ns									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Atte	en Ber	m Atten
Autos:	71.78	3 1.6	2	-0.8	37	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.6	2	-0.8	35	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.5	8	-0.8	35	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise											
VehicleType	Leq Peak Ho			Leq E	vening	Leq N	ight		Ldn		NEL
Autos:		1.3	69.4		67.7		61.6		70.2		70.8
Medium Trucks:		4.7	63.2		56.9		55.3		63.8		64.0
Heavy Trucks:		4.8	63.3		54.3		55.0		63.9		64.0
Vehicle Noise:		2.9	71.2		68.2		63.	3	71.9	1	72.4
Centerline Distant	e to Noise C	Contour (in fe	et)	70	-10.4	05.4	D.4		00 -ID4		-/D4
			Later		dBA 93	65 di		1 (60 dBA 433		dBA
			Ldn:								004
			CNEL:	1	00	216)		466	1,	004

	FHV	WA-RD-77-108	HIGHV	WAY N	IOISE P	REDICTION	ON MO	DEL			
Road Nam	io: Year 2023 ie: Warren Rd int: s/o Whittier						Name: ımber:		o Diamant	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt): 2	28,200 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	2,820 vehicles	S		He	eavy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle	Mix					
Near/Far Lai	ne Distance:	84 feet		-		icleType		Dav	Evening	Niaht	Daily
Site Data							utos:	77.5%		9.69	% 97.42%
Rai	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	% 1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	% 0.74%
Centerline Dis		70.0 feet		- H	Maiaa C	ource Ele	wation	o (in f	004)		
Centerline Dist.	to Observer:	70.0 feet		H.	worse 3	Autos		000	eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 45 -	Autos m Trucks		297			
Observer Height (Above Pad):	5.0 feet							Crada Ad	i rodeno o	o4: 0 0
Pa	ad Elevation:	0.0 feet			неа	vy Trucks	: 8.	006	Grade Adj	usuner	и. О.О
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
ı	Road Grade:	0.0%				Autos	: 56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	065			
	Right View:	90.0 degree	es		Hear	vy Trucks	: 56.	081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en B	erm Atten
Autos:	71.78	1.68		-0.8	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.56		-0.8	5	-1.20		-4.88	0.0	100	0.000
Heavy Trucks:	86.40	-19.51		-0.8	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq I	Vight		Ldn	(CNEL
Autos:	71	.4	69.5		67.7		61.7	,	70.3	3	70.9
Medium Trucks:	64	.8	63.3		56.9		55.4	ļ	63.8	3	64.1
Heavy Trucks:	64		63.4		54.4		55.6	3	64.0)	64.1
Vehicle Noise:	73	.0	71.2		68.3		63.4	ļ	71.9)	72.4
Centerline Distance	ce to Noise Co	ontour (in feet)								
				70 c		65 c		(60 dBA	5	5 dBA
			Ldn:	9		20	-		438		943
		CI	VEL:	10)1	21	8		471		1,014

	FH\	WA-RD-77-108	HIGI	1 YAWH	IOISE P	REDICT	ION M	ODEL			
	o: Year 2023 e: Warren Rd t: s/o Stetsor	l.					t Name: lumber:		o Diamante	Э	
	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard				
Average Daily T	raffic (Adt):	22,000 vehicle	S					Autos:			
Peak Hour F		10%						Axles):			
	our Volume:	2,200 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Veh	icle Speed:	45 mph			Vehicle	Mix					
Near/Far Lan	e Distance:	84 feet			Veh	icleTyp	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barr	rier Heiaht:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist		70.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		70.0 feet				Auto		0.000			
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height (A	,	5.0 feet				y Truck		3.006	Grade Adj	iustment.	0.0
	d Elevation:	0.0 feet		-	Lane Eq	ialan	4 Dioto	naa (in	foot)		
	d Elevation: Poad Grade:	0.0 feet		H.	Lane Ly	Auto		5.223	ieei)		
K	l eft View:	0.0%			Modiu	m Truck		5.065			
	Right View:	-90.0 degree				ry Truck		6.081			
FHWA Noise Mode	I Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.47		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	79.45	-15.77		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-19.72		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise			barri	er atten	uation)						
.,	Leq Peak Ho	, ,		Leq E	vening	Leq	Night		Ldn		VEL
Autos:			66.0		64.2		58		66.8		67.4
Medium Trucks:			60.1		53.8		52	-	60.7		60.9
Heavy Trucks:	62	2.5	61.1		52.0		53	.3	61.6	3	61.8
Vehicle Noise:	69).7	68.0		64.8		60	.1	68.7	7	69.1
Centerline Distance	e to Noise C	ontour (in feet)							_	
			Į		dBA		dBA	6	60 dBA		dBA
			Ldn:	5			23		265	-	71
		Ci	NEL:	6	1	1	32		285	6	13

Fl	IWA-RD-77-108	HIGHWA	AY NOISE F	REDICT	TION MODEL		
Scenario: Year 2023 Road Name: Warren R Road Segment: s/o Stetso	d.				t Name: Rand Number: 9792		
SITE SPECIFIC I	NPUT DATA				NOISE MOD	EL INPUTS	
Highway Data			Site Co.	nditions	(Hard = 10, S	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	21,100 vehicle 10% 2,110 vehicle				Autos rucks (2 Axles, ıcks (3+ Axles,): 15	
Vehicle Speed:	45 mph		Vehicle	Mix			
Near/Far Lane Distance:	84 feet			hicleTyp	e Dav	Evening I	Night Daily
Site Data					Autos: 77.5	-	9.6% 97.42%
Barrier Height:	0.0 feet		٨	ledium 1	Frucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy T	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource E	levations (in	feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet		Hea	Auto im Truci vy Truci	ks: 2.297 ks: 8.006	Grade Adjus	stment: 0.0
Road Elevation:	0.0 feet		Lane E		nt Distance (ir	i teet)	
Road Grade:	0.0% -90.0 degre	00	Madii	Auto ım Trucl			
Right View:	90.0 degre			vy Truci			
FHWA Noise Model Calculatio	ns						
VehicleType REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 68.4	1.29		-0.87	-1.20		0.00	0.000
Medium Trucks: 79.4			-0.85	-1.20			
Heavy Trucks: 84.2			-0.85	-1.20	-5.28	0.00	0.000
Unmitigated Noise Levels (wit							
VehicleType Leq Peak Ho		_	q Evening		Night	Ldn	CNEL
		65.8	64.0		58.0	66.6	67.2
		59.9	53.6		52.0	60.5	60.7
,		60.9	51.8		53.1	61.4	61.6
		67.8	64.6)	60.0	68.5	69.0
Centerline Distance to Noise C	Contour (in feet	t)	70 dBA	65	i dBA	60 dBA	55 dBA
		Ldn:	56		120	258	556
	C	NEL:	60		128	277	596

Monday, January 25, 2016

	FHWA	-RD-77-108	HIGH	1 YAWI	NOISE P	REDICT	ION MO	DEL			
Scenario: Year 2 Road Name: Warre Road Segment: s/o Mu	Rd.	,					Name: lumber:		no Diamante	9	
SITE SPECIFI	INP	UT DATA				- 1	NOISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Ad	t): 23,	000 vehicles						Autos	: 15		
Peak Hour Percentag	e:	10%					ucks (2 i	,			
Peak Hour Volun	e: 2,	300 vehicles			He	avy Tru	cks (3+)	4xles)	: 15		
Vehicle Spee		40 mph		ŀ	Vehicle	Mix					
Near/Far Lane Distant	e:	84 feet			Veh	icleType	9	Day	Evening	Nigh	t Daily
Site Data							Autos:	77.5%	6 12.9%	9.6	97.42%
Barrier Heig	ıt.	0.0 feet			М	edium T	rucks:	84.89	6 4.9%	10.3	3% 1.84%
Barrier Type (0-Wall, 1-Berl		0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8	3% 0.74%
Centerline Dist. to Barn	er:	70.0 feet		-	Noise S	ource E	levation	s (in t	eet)		
Centerline Dist. to Observ	er:	70.0 feet		ŀ		Auto		000	,		
Barrier Distance to Observ	er:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pa	,	5.0 feet			Heav	/y Truck	s: 8.	006	Grade Ad	ustme	ent: 0.0
Pad Elevation		0.0 feet		L		•					
Road Elevation		0.0 feet		L	Lane Eq			_ •	feet)		
Road Grad		0.0%				Auto		223			
Left Vie		-90.0 degree				m Truck		065			
Right Vie	w:	90.0 degree	S		Heav	ry Truck	s: 56	081			
FHWA Noise Model Calcula											
VehicleType REME		raffic Flow	Dis	tance		Road	Fresi		Barrier Att		Berm Atten
	.51	2.18		-0.8	•	-1.20		-4.72	0.0		0.000
	.72	-15.06		-0.8	-	-1.20		-4.88		000	0.000
,	.99	-19.02		-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Levels (barrie								ONE
VehicleType Leq Peak Autos:	66.6	Leq Day	34.7	Leq E	vening 63.0		Night 56.9	_	Ldn 65.5	<u> </u>	CNEL 66.1
Autos: Medium Trucks:	60.6		9.1 59.1		52.7		50.3 51.3		59.7		59.9
Heavy Trucks:	61.9		9.1 80.5		51.5		52.	-	61.1		61.2
Vehicle Noise:	68.6		66.9		63.6		59.		67.6		68.1
Centerline Distance to Nois	e Cont	tour (in feet)									
				70	dBA	65	dBA		60 dBA		55 dBA
		L	dn:	4	.9	1	05		225		485
		CN	IEL:	5	2	1	12		241		520

	FHV	VA-RD-77-108	HIGHW.	AY N	OISE P	REDICTION	ON MO	DEL			
Road Nam	io: Year 2023 \ ne: Warren Rd. nt: s/o Simpso						Name: ımber:		o Diamante	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	Site Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	16,700 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%				edium Tru					
Peak H	lour Volume:	1,670 vehicles	3		He	eavy Truc	ks (3+ /	4xles):	15		
Ve	hicle Speed:	40 mph		V	/ehicle	Mix					
Near/Far La	ne Distance:	84 feet		F-		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			М	edium Tru	ucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W		0.0				Heavy Tru	ucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Dis		70.0 feet		-	laisa C	ource Ele	wation	o (in f	2041		
Centerline Dist.	to Observer:	70.0 feet		^	ioise s	Autos		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Autos m Trucks		000 297			
Observer Height ((Above Pad):	5.0 feet						297 006	Grade Adj	i iotmon	4 0 0
Pa	ad Elevation:	0.0 feet			Hea	vy Trucks	: 8.	006	Grade Adj	usunen	i. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
i i	Road Grade:	0.0%				Autos	: 56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	065			
	Right View:	90.0 degree	es		Hear	vy Trucks	: 56.	081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	66.51	0.79		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks:	77.72	-16.45		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	82.99	-20.41		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	atteni	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Ev	ening	Leq N	Vight		Ldn	(NEL
Autos:	65	.2	63.3		61.6		55.5	5	64.1		64.7
Medium Trucks:	59	.2	57.7		51.3		49.8	3	58.3	3	58.5
Heavy Trucks:	60	.5	59.1		50.1		51.3	3	59.7	•	59.8
Vehicle Noise:	67	.2	65.5		62.2		57.7	7	66.2	2	66.7
Centerline Distant	ce to Noise Co	ontour (in feet)								
				70 d		65 a		6	60 dBA		5 dBA
			Ldn:	39		84			182		392
		CI	VEL:	42	2	90)		195		420

	FHWA	A-RD-77-108 HIGI	HWAY N	OISE P	REDICT	TION MODEL		
Road Name	o: Year 2023 Wi e: Sanderson Av et: n/o Stetson Av	<i>i</i> .				t Name: Rand Number: 9792		
SITE S	SPECIFIC INP	UT DATA				NOISE MOD	EL INPUTS	3
Highway Data			5	Site Cor	ditions	(Hard = 10, 3	Soft = 15)	
Peak Hour I		400 vehicles 10% 140 vehicles				Auto: rucks (2 Axles icks (3+ Axles): 15	
Vet	nicle Speed:	45 mph	1	/ehicle	Mix			
Near/Far Lar	ne Distance:	50 feet	F		icleTyp	e Dav	Evening	Night Daily
Site Data						Autos: 77.5		9.6% 97.42%
Ran	rier Heiaht:	0.0 feet		М	edium 1	rucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-Wa		0.0			Heavy 1	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis		54.0 feet	^	Voise S	ource E	levations (in	feet)	
Roa	o Observer: Above Pad): d Elevation: d Elevation: Road Grade: Left View: Right View:	54.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees	L	Hear ane Eq Mediu Hear	Auto m Truck ny Truck uivalen Auto m Truck ny Truck ry Truck	(s: 2.297 (s: 8.006 (t Distance (ii (s: 48.125 (s: 47.941		en Berm Atten
Autos:	68.46	5.16	0.15	5	-1.20	-4.67	7 0.0	0.000
Medium Trucks:	79.45	-12.08	0.17	7	-1.20	-4.87	7 0.0	0.000
Heavy Trucks:	84.25	-16.04	0.17	,	-1.20	-5.39	9 0.0	0.000
Unmitigated Noise	Levels (withou	t Topo and barri	er atten	uation)				
	Leq Peak Hour	Leq Day	Leq Ev		Leq	Night	Ldn	CNEL
Autos:	72.6	70.7		68.9		62.8	71.5	
Medium Trucks:	66.3	64.8		58.5		56.9	65.4	
Heavy Trucks:	67.2	65.8		56.7		58.0	66.3	
Vehicle Noise:	74.4	72.7		69.5		64.8	73.4	73.8
Centerline Distanc	e to Noise Con	tour (in feet)						,
			70 a			dBA	60 dBA	55 dBA
	Ldn:							907
		CNEL:	97	7	2	210	452	973

	FH	WA-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION MC	DEL			
	e: Sandersor						Name: lumber:		o Diamante	е	
SITE S	PECIFIC II	NPUT DATA			ito Con				L INPUT:	S	
Average Daily 1 Peak Hour I Peak Ho	, ,	42,100 vehicle 10% 4,210 vehicle 30 mph			Ме Не	edium Tr eavy Tru		Autos: Axles):	15 15		
Near/Far Lan	e Distance:	50 feet		V	ehicle	icleType		Day	Evening	Night	Daily
Site Data Barı Barrier Type (0-Wa	rier Height:	0.0 feet 0.0			М		Autos: rucks:	77.5% 84.8% 86.5%	12.9%	9.6% 10.3% 10.8%	97.429 1.849
Centerline Dis	t. to Barrier:	54.0 feet			loisa S	ource F	levation	e (in f	oof)		
Roa F	o Observer:	54.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 w -90.0 degre		L	Hear ane Eq Mediu	Auto m Truck yy Truck uivalen Auto m Truck yy Truck	s: 2. s: 8. t Distan s: 48. s: 47.	000 297 006 ce (in 125 941 959	Grade Adj	iustmen	± 0.0
FHWA Noise Mode	l Calculation	18									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos: Medium Trucks: Heavy Trucks:	61.75 73.48 79.92	-11.19		0.15 0.17 0.17		-1.20 -1.20 -1.20		-4.67 -4.87 -5.39		000	0.00 0.00 0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	iation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	66	6.7	64.9		63.1		57.0)	65.7	7	66.
Medium Trucks:	6	1.3	59.8		53.4		51.9	9	60.3	3	60.
Heavy Trucks:			62.3		53.3		54.		62.9		63.
Vehicle Noise:	69	9.3	67.6		63.9		59.	7	68.3	3	68.
Centerline Distanc	e to Noise C	ontour (in feet	t)							_	
			L	70 di			dBA	(60 dBA		dBA
		_	Ldn:	41			39		192		113
		C	NEL:	44		9	95		204	4	140

Monday, January 25, 2016

	FH	WA-RD-77-10	8 HIGI	HWAY I	NOISE PI	REDICTION	ON MC	DEL			
Road Nan	io: Year 2023 ne: Florida Av nt: w/o Winch					Project I Job Nu			o Diamant	е	
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	= 10, S			
Average Daily	Traffic (Adt):	42,500 vehicl	es					Autos:			
	Percentage:	10%				dium Tru					
Peak F	lour Volume:	4,250 vehicl	es		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		F	Vehicle	Mix					
Near/Far La	ne Distance:	78 feet		ŀ		icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			M	edium Tru	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			- 1	Heavy Tru	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	76.0 feet		ŀ	Noise So	ouree Ele		o (in f	0.041		
Centerline Dist.	to Observer:	76.0 feet		F	Noise 30	Autos			eet)		
Barrier Distance	to Observer:	0.0 feet			A deceller	Autos m Trucks		.000			
Observer Height	(Above Pad):	5.0 feet					-	.006	Grade Ad	iustman	. 00
P	ad Elevation:	0.0 feet			Heav	y Trucks	: 8	.006	Grade Au	Jusurieri	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 65	.422			
	Left View:	-90.0 degr	ees		Mediu	m Trucks	: 65	.286			
	Right View:	90.0 degr	ees		Heav	y Trucks	: 65	.300			
FHWA Noise Mod	el Calculation	าร									
VehicleType	REMEL	Traffic Flow		istance	Finite		Fres		Barrier Att		rm Atten
Autos:	70.20		-	-1.8	-	-1.20		-4.73		000	0.000
Medium Trucks:	81.00		-	-1.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-17.3	2	-1.8	4	-1.20		-5.25	0.0	000	0.000
Unmitigated Nois			d barri								
VehicleType	Leq Peak Ho		,	Leq E	vening	Leq N			Ldn		NEL
Autos:	-	1.0	69.1		67.4		61.		69.9		70.5
Medium Trucks:	-	4.6	63.1		56.7		55.	_	63.6	-	63.9
Heavy Trucks:		5.0	63.6		54.6		55.	_	64.2		64.3
Vehicle Noise:	7:	2.7	71.0		67.9		63.	1	71.7	7	72.2
Centerline Distan	ce to Noise C	ontour (in fee	et)								
			Į		dBA	65 d		- (60 dBA		dBA
			Ldn:		99	21	_		457		985
		(CNEL:	1	06	22	8		491	1	.058

	FH	WA-RD-77-108	B HIGI	HWAY	NOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Year 2023 me: Florida Av. ent: e/o Warrer						Name: umber:		o Diamante	е	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	52,300 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	edium Tru	ucks (2	Axles):	15		
Peak	Hour Volume:	5,230 vehicle	es		He	eavy Truc	cks (3+	Axles):	15		
V	ehicle Speed:	50 mph		-	Vehicle	Mix					
Near/Far L	ane Distance:	84 feet		f		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%	- 3	9.6%	. ,
D	arrier Height:	0.0 feet			М	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
	Dist. to Barrier:	70.0 feet		ŀ	Noise S	ouroo El	lovestio	an (in f	0041		
Centerline Dis	t. to Observer:	70.0 feet		ŀ	NOISE 3	Auto:		.000	eet)		
Barrier Distance	e to Observer:	0.0 feet			Modiu	m Truck:		.297			
Observer Height	t (Above Pad):	5.0 feet				vy Truck:		.006	Grade Ad	iuetmont	. 0.0
-	Pad Elevation:	0.0 feet			пеа	vy Truck	s. o	.000	Grade Au	Justineni	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ice (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mo	del Calculation	15									
VehicleType	REMEL	Traffic Flow		stance	Finite	Road	Fres		Barrier Att	en Ber	m Atten
Autos	: 70.20	4.78		-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	81.00	-12.46		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	85.38	-16.42		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi	se Levels (with	nout Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos		2.9	71.0		69.2		63.	_	71.8	-	72.4
Medium Trucks		6.5	65.0		58.6		57.		65.5	-	65.8
Heavy Trucks Vehicle Noise		6.9 4.6	65.5 72.9		56.5 69.8		57. 65.		66.1 73.6		66.2 74.0
					69.8		65.	U	73.0)	74.0
Centerline Dista	nce to Noise C	ontour (in fee	t)	70	dBA	65	dBA	-	60 dBA	55	dBA
			I dn:		21		61		563		213
	CNEL:				130 281 605 1,30						

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE PI	REDICT	TION MC	DEL			
Scenario: Road Name: Road Segment:	Stowe Rd.	With Project nia Av.					t Name: Number:		no Diamante	е	
	ECIFIC IN	IPUT DATA							L INPUT	S	
Average Daily Tra Peak Hour Pe	. ,	5,000 vehicle	:S	S			(Hard =	Autos			
Peak Hou	r Volume:	500 vehicle	:S				icks (3+	,			
Vehic Near/Far Lane	le Speed: Distance:	40 mph 36 feet		V	ehicle Veh	Mix icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%		9.6%	
Barrier Type (0-Wall,		0.0 feet 0.0				edium 1 Heavy 1		84.89 86.59		10.3% 10.8%	
Centerline Dist. to		47.0 feet		٨	loise S	ource E	levation	ıs (in i	eet)		
Barrier Distance to Observer Height (Ab Pad	Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet			Heav	Auto m Truck yy Truck	ks: 2	.000 .297 .006	Grade Adj	iustmen	t: 0.0
Ros	ad Grade: Left View: ight View:	0.0 feet 0.0% -90.0 degre 90.0 degre			Mediu	Auto m Truck vy Truck	s: 43	.704 .501 .521	1000		
FHWA Noise Model (
, , ,	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		rm Atten
Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99	-4.45 -21.69 -25.64		0.77 0.80 0.80		-1.20 -1.20 -1.20		-4.63 -4.87 -5.46	0.0	000	0.000
Unmitigated Noise L	evels (with	out Topo and	barri	er atteni	uation)						
	eq Peak Hou		_	Leg Ev		Leg	Night		Ldn	C	NEL
Autos:	61	.6	59.7		58.0		51.	9	60.5	5	61.1
Medium Trucks:	55		54.1		47.8		46.	_	54.7		54.9
Heavy Trucks:	57		55.5		46.5		47.	_	56.1		56.2
Vehicle Noise:	63	••	61.9		58.6		54.	1	62.6	6	63.1
Centerline Distance	to Noise Co	ontour (in feet	t)	70 d	DΛ	e	dBA		60 dBA		i dBA
			I dn:	70 a			33		70		152
		C	NEL:	16			35		75		162

			півп	WATN	JISE P	REDICI	ION MOE	EL			
Scenario: Road Name: Road Segment:	Florida Av.						Name: R lumber: 9		Diamante		
SITE SI Highway Data	PECIFIC II	NPUT DATA			ito Cor		NOISE M		L INPUTS	3	
Average Daily Tr Peak Hour P Peak Hou	, ,	48,300 vehicle 10% 4,830 vehicle 35 mph			Ме	edium Tr eavy Tru		utos: xles):	15 15 15		
Near/Far Lane	Distance:	84 feet		-		icleType	e /	Day	Evening	Night	Daily
Site Data Barri Barrier Type (0-Wal	i er Height: II, 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks: 8	7.5% 84.8% 86.5%		9.6% 10.3% 10.8%	1.84%
Centerline Dist. Centerline Dist. to Barrier Distance to Observer Height (Al Pad	Observer: Observer:	70.0 feet 70.0 feet 0.0 feet 5.0 feet 0.0 feet		N	Mediu	Auto M Truck Ny Truck	s: 2.2	00 97	et) Grade Adju	ıstment	: 0.0
Ro	l Elevation: pad Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre		L	Mediu	Auto Marto M Truck Ny Truck	s: 56.0	23 65	eet)		
FHWA Noise Model	Calculation										
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 64.30 75.75 81.57	-11.26		-0.87 -0.85 -0.85		-1.20 -1.20 -1.20	-	4.72 4.88 5.28	0.00 0.00 0.00 0.00	00 00	0.000 0.000 0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	iation)						
,,	eq Peak Ho			Leq Eve		Leq	Night		Ldn	C	NEL
Autos: Medium Trucks: Heavy Trucks:	62	3.2 2.4 4.3	66.3 60.9 62.9		64.5 54.6 53.8		58.5 53.0 55.1		67.1 61.5 63.4		67. 61.
Vehicle Noise:).4	68.7		65.3		60.9		69.4		69.
Centerline Distance	to Noise C	ontour (in fee	t)								
		(111 100	Ldn:	70 dl			dBA 38	6	0 dBA 298		dBA i41

Monday, January 25, 2016

Barrier Height: 0.0 feet Medium Trucks: 86.5% 2.7% 12.9% 9.6% 9.7		FHV	VA-RD-77-108	HIGH	WAY N	OISE PI	REDICTI	ON M	ODEL			
Autorage Daily Traffic (Adt):	Road Nar	ne: Grand Av.	•							no Diamant	te	
Average Daily Traffic (Adt): 100 vehicles Peak Hour Potentage: 10% Medium Trucks (2 Axles): 15		SPECIFIC IN	PUT DATA		5	Site Con					s	
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 0.1	Average Daily Peak Hou Peak I	r Percentage: Hour Volume: ehicle Speed:	10% 10 vehicles 40 mph			Me He /ehicle i	dium Tru avy Truc Mix	icks (2 :ks (3+	Autos Axles) Axles)	: 15 : 15 : 15	Alicelat	Dailv
Barrier Type (0-Weil, 1-Berm):	Site Data					Veri						. ,
Centerline Dist. to Observer: Barrier Distance to Observer: Barrier Attenuation: Centerline Distance to Observer: Barrier Attenuation:									,			
Autos: 0.000 Auto					٨	loise So	ource El	evatio	ns (in t	eet)		
Road Grade:	Barrier Distance Observer Height	to Observer: (Above Pad):	0.0 feet 5.0 feet				m Trucks	3: 2	.297	Grade Ad	ljustmen	t: 0.0
Left View:	Ro	oad Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
Right View: 90.0 degrees		Road Grade:	0.0%				Autos	s: 56	6.223			
VehicleType												
Multos: 66.51	FHWA Noise Mod	del Calculation	S									
Medium Trucks: 77.72	VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	snel	Barrier Att	ten Be	rm Atten
Heavy Trucks: 82.99												0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL												0.000
Autos: 43.0 41.1 39.3 33.3 41.9 Medium Trucks: 37.0 35.5 29.1 27.6 36.0 Heavy Trucks: 38.3 36.9 27.9 29.1 37.5 Vehicle Noise: 45.0 43.3 40.0 35.5 44.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 3 6 13	Unmitigated Nois	se Levels (with	out Topo and	barrie	r atteni	uation)						
Medium Trucks: 37.0 35.5 29.1 27.6 36.0 Heavy Trucks: 38.3 36.9 27.9 29.1 37.5 Vehicle Noise: 45.0 43.3 40.0 35.5 44.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 3 6 13					Leq Ev		Leq					
Heavy Trucks: 38.3 36.9 27.9 29.1 37.5											-	42.5
Vehicle Noise: 45.0 43.3 40.0 35.5 44.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 3 6 13											-	36.3
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 3 6 13											-	37.6 44.4
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1 3 6 13	Centerline Distar	nce to Noise Co	ontour (in feet)								
====			,,		70 d	IBA	65 (dBA		60 dBA	55	5 dBA
CNFL: 1 3 6 14				Ldn:	1		3	3		6		13
			CI	VEL:	1		3	3		6		14

	FHV	WA-RD-77-108	HIGH	NAY N	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Year 2023 ne: Grand Av. nt: w/o Calvert	,					Name: umber:		o Diamante	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions (Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2 .	Axles):	15		
Peak H	lour Volume:	10 vehicles	3		He	eavy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	40 mph		F	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet				nicleType		Dav	Evenina	Niaht	Dailv
Site Data							utos:	77.5%	12.9%	9.69	6 97.42%
Bai	rrier Height:	0.0 feet			M	ledium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	st. to Barrier:	70.0 feet		H	Naisa S	ource Ele	avation	e (in f	oof)		
Centerline Dist.	to Observer:	70.0 feet		- F	110/30 0	Autos		000			
Barrier Distance	to Observer:	0.0 feet			Modis	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		006	Grade Adj	inetmor	t 0.0
Pa	ad Elevation:	0.0 feet			Hea	vy Trucks	: 8.	006	Grade Adj	usuner	n. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 56	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	065			
	Right View:	90.0 degree	es		Hea	vy Trucks	: 56	.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Atte	en Be	erm Atten
Autos:	66.51	-21.44		-0.8	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	77.72	-38.68		-0.8	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	82.99	-42.63		-0.8	5	-1.20		-5.28	0.0	100	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atten	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq I	Vight		Ldn	(CNEL
Autos:	43	.0	41.1		39.3		33.	3	41.9)	42.5
Medium Trucks:	37	.0	35.5		29.1		27.	3	36.0)	36.3
Heavy Trucks:	38		36.9		27.9	1	29.	1	37.5	5	37.6
Vehicle Noise:	45	.0	43.3		40.0		35.	5	44.0)	44.4
Centerline Distance	ce to Noise Co	ontour (in feet)								
					dBA	65 0		(60 dBA	5	5 dBA
			Ldn:		1	3			6		13
		CI	VEL:	1	1	3	3		6		14

	FHV	VA-RD-77-108	HIGI	1 YAWH	IOISE P	REDICT	ION M	ODEL			
Road Nan	io: Year 2023 \ne: Stetson Av. nt: e/o SR-79 \$	(S.)					t Name lumber		no Diamante	е	
	SPECIFIC IN	PUT DATA			0'' 0				L INPUT	S	
Highway Data					Site Cor	aitions	(Hard	_	oft = 15)		
Average Daily	. ,	100 vehicles	S					Autos.			
	Percentage:	10%				dium Tr	,				
	lour Volume:	10 vehicles	S		He	avy Tru	icks (3+	Axles).	: 15		
Ve	hicle Speed:	50 mph		H	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet				icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	84.89	6 4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	70.0 feet		F	Noise S	ource E	levatio	ns (in t	eet)		
Centerline Dist.	to Observer:	70.0 feet		- 1		Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.006	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet		L	Tical	ry Truck	io. (3.000	Orado riaj	dourion	. 0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 50	6.223			
	Left View:	-90.0 degree	es		Mediu	m Truck	rs: 50	6.065			
	Right View:	90.0 degree	es		Hear	y Truck	rs: 50	6.081			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atter	uation)						
VehicleType	Leq Peak Hou	r Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	45	.7	43.8		42.1		36	.0	44.6	3	45.2
Medium Trucks:	39	.3	37.8		31.4		29	.9	38.4	1	38.6
Heavy Trucks:	39	.7	38.3		29.3		30	.5	38.9	9	39.0
Vehicle Noise:	47	.4	45.7		42.6		37	.8	46.4	1	46.9
Centerline Distan	ce to Noise Co	ontour (in feet)								
			Т	70	·IRΔ	6E	dRΔ		60 dB4		dΒΔ

	FHV	VA-RD-77-108	HIGI	HWAY I	NOISE P	REDICT	ION M	ODEL			
Road Nan	rio: Year 2023 vne: Grand Av. ent: e/o Calvert	,					t Name lumber		o Diamant	е	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	iditions	(Hard	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:			
Peak Hour	Percentage:	10%						Axles):			
Peak H	Hour Volume:	10 vehicle	S		He	avy Tru	cks (3+	- Axles):	15		
Ve	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ŀ	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet		ŀ	Noise S	ourco E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		ŀ	NOISE S	Auto		0.000	bei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				/y Truck	-	B.006	Grade Ad	iuetmani	- 0.0
P	ad Elevation:	0.0 feet								Justinoni	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 5	6.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 5	6.065			
	Right View:	90.0 degre	es		Hea	ry Truck	s: 5	6.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fre	snel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-21.44		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	77.72	-38.68		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	43	.0	41.1		39.3		33	3.3	41.9	9	42.5
Medium Trucks:	37	.0	35.5		29.1		27	.6	36.0)	36.3
Heavy Trucks:	38	.3	36.9		27.9		29	0.1	37.5	5	37.6
Vehicle Noise:	45	.0	43.3		40.0		35	5.5	44.0)	44.4
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70	dBA	65	dBA	1 6	30 dBA	55	dBA

Monday, January 25, 2016

	FHWA	-RD-77-108 H	IIGHWA	y noise i	PREDICT	ION MODE	L		
Scenario: Y Road Name: S Road Segment: e		3.)				Name: Rai umber: 979	ncho Diamani 12	te	
SITE SPE	CIFIC INP	UT DATA					DEL INPUT	S	
Highway Data				Site Co	nditions	(Hard = 10)	, Soft = 15)		
Average Daily Trafi Peak Hour Pero Peak Hour Vehicle	centage:	100 vehicles 10% 10 vehicles 50 mph		H	leavy Trud	Aut ucks (2 Axle cks (3+ Axle	es): 15		
Near/Far Lane D		84 feet		Vehicle			Te .		T 5 "
Site Data	iotarioo.	0.1.1001		Ve	hicleType /		y Evening 5% 12.9%	Night 9.6%	Daily 97.42%
Barrier	Height:	0.0 feet		/	∕ledium Ti	rucks: 84.	8% 4.9%	10.3%	1.84%
Barrier Type (0-Wall,		0.0			Heavy T	rucks: 86.	5% 2.7%	10.8%	0.74%
Centerline Dist. to	Barrier:	70.0 feet		Noise !	Source Fi	levations (i	n feet)		
Road E	bserver:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		Hea	Auto um Truck avy Truck quivalen Auto	s: 2.297 s: 8.006 t Distance	Grade Ad	ljustmen	t: 0.0
Rig	ht View:	-90.0 degrees			um Truck avy Truck				
FHWA Noise Model Ca									
VehicleType F Autos:	70.20	raffic Flow -22.41	Distanc	e Finit	-1.20	Fresnel -4.	Barrier At	ten Be	rm Atten 0.000
Medium Trucks:	81.00	-39.65		0.85	-1.20	-4. -4.		000	0.000
Heavy Trucks:	85.38	-43.60		0.85	-1.20	-5.		000	0.000
Unmitigated Noise Le	vels (withou	t Topo and b	arrier at	tenuation)				
VehicleType Leq	Peak Hour	Leq Day	Le	g Evening	Leq	Night	Ldn	C	NEL
Autos:	45.7	4	3.8	42.	1	36.0	44.	6	45.2
Medium Trucks:	39.3	3	7.8	31.	4	29.9	38.	4	38.6
Heavy Trucks:	39.7	3	8.3	29.	3	30.5	38.	9	39.0
Vehicle Noise:	47.4	4	5.7	42.	6	37.8	46.	4	46.9
Centerline Distance to	Noise Con	tour (in feet)		70 dBA	65	dBA	60 dBA		5 dBA
		1.	dn:	2 2		4	9 9	30	19
		CN		2		4	9		20

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICTION	ON M	DDEL			
Road Nari	rio: Year 2023 v ne: Stetson Av. ent: w/o Califorr	(S.)				Project I Job Nu			o Diamant	е	
	SPECIFIC IN							L INPUT	S		
Highway Data				5	Site Cor	ditions (Hard:	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak I	lour Volume:	10 vehicles	S		He	avy Truc	ks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ane Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data	Data Barrier Height: 0.0 feet ier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet interline Dist. to Observer: 70.0 feet erver Height (Above Pad): 5.0 feet					A	utos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet			Inisa S	ource Ele	ovatio	ne (in f	oot)		
Centerline Dist.	to Observer:	70.0 feet		F.	10/30 0	Autos		.000	001)		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Trucks		.297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks	-	.006	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degree	es			m Trucks		.065			
	Right View:	90.0 degree	es		Hear	y Trucks	: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leg Ev	ening	Leq I	Vight		Ldn	C	NEL
Autos:			43.8		42.1		36	-	44.6	-	45.2
Medium Trucks:		-	37.8		31.4		29	-	38.4		38.6
Heavy Trucks:	39	.7	38.3		29.3		30	.5	38.9	9	39.0
Vehicle Noise:	47	.4	45.7		42.6		37	.8	46.4	1	46.9
Centerline Distant	ce to Noise Co	ontour (in feet)					,			
				70 a	BA .	65 c		(60 dBA		dBA
			Ldn:	2		4	1		9		19

	FH\	WA-RD-77-108	HIGI	HWAY N	OISE P	REDICT	ION M	ODEL			
Road Nan	ne: Stetson Av	. (S.)					t Name. lumber.		no Diamante	Э	
	Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: elo Street 'C' SITE SPECIFIC INPUT DATA way Data werage Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Percentage: 50 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet dier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet rrier Distance to Observer: 0.0 feet erver Height (Above Pad): 5.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees A Noise Model Calculations hicleType REMEL Traffic Flow Dis Autos: 70.20 -22.41 dium Trucks: 81.00 -33.65								L INPUT	S	
Highway Data	Road Segment: e/o Street "C" SITE SPECIFIC INPUT DATA hway Data Average Daily Traffic (Adt): 100 vehicles Peak Hour Volume: 10 vehicles 50 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet rrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Penterline Dist. to Observer: 70.0 feet server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0%					ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Road Name: Stetson Av. (S.) Road Segment: elo Street °C' SITE SPECIFIC INPUT DATA thway Data Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet P Data Barrier Height: 0.0 feet arrier Type (O-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Diserver: 70.0 feet Sarrier Distance to Observer: 0.0 feet beserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees							Autos.			
						dium Tr	,				
		10 vehicle	S		He	avy Tru	icks (3+	Axles).	: 15		
Ve	ehicle Speed:	50 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Ra	rrier Height	0.0 feet			М	edium T	rucks:	84.89	6 4.9%	10.3%	1.84%
						Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet			loise S	ource E	levatio	ns (in t	eet)		
Centerline Dist.	to Observer:	70.0 feet		É	.0.00	Auto		0.000	001)		
Barrier Distance					Modiu	m Truck		2.297			
Observer Height	Observer Height (Above Pad): 5.0 fee					vy Truck		3.006	Grade Ad	iustment	. 00
P											
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto		3.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	rs: 56	3.065			
	Right View:	90.0 degre	es		Hear	y Truck	rs: 56	5.081			
FHWA Noise Mod	lel Calculation	-									
VehicleType			Di	stance		Road	Fres		Barrier Att		rm Atten
				-0.87		-1.20		-4.72		000	0.000
Medium Trucks:				-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	Heavy Trucks: 85.38 -43.60			-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atteni	uation)						
VehicleType	Leq Peak Hot	ur Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:			43.8		42.1		36		44.6		45.2
Medium Trucks:			37.8		31.4		29		38.4		38.6
Heavy Trucks:			38.3		29.3		30		38.9	9	39.0
Vehicle Noise:	47	7.4	45.7		42.6		37	.8	46.4	1	46.9
Centerline Distan	ce to Noise C	ontour (in feet)					_			
				70 a	IBA .	65	dBA		60 dBA	55	dBA

FHW	A-RD-77-108	HIGHW	AY N	OISE P	REDICTI	ON M	ODEL			
Scenario: Year 2023 V Road Name: Stetson Av. Road Segment: e/o Californi	(S.)					Name: umber:		o Diamant	е	
SITE SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data			S	ite Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Hour Percentage:	10%			Me	dium Tru	ıcks (2	Axles):	15		
Peak Hour Volume:	10 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
Vehicle Speed:	50 mph		ν	/ehicle	Mix					
Near/Far Lane Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data					A	lutos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			М	edium Tı	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy Ti	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		۸	loise S	ource El	evatio	ns (in f	eet)		
Centerline Dist. to Observer:	70.0 feet				Autos		0.000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (Above Pad):	5.0 feet			Heav	vy Trucks	s: 8	3.006	Grade Ad	justment	0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet		L	ane Eq	uivalent		_	feet)		
Road Grade:	0.0%				Autos		5.223			
Left View:	-90.0 degree				m Trucks		6.065			
Right View:	90.0 degree	es		Heav	y Trucks	s: 56	5.081			
FHWA Noise Model Calculations	;									
VehicleType REMEL	Traffic Flow	Dista			Road	Fres		Barrier Att		m Atten
Autos: 70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks: 81.00	-39.65		-0.85		-1.20		-4.88		000	0.000
Heavy Trucks: 85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Levels (with							_			
VehicleType Leq Peak Hou			.eq Ev		Leq	Night		Ldn		NEL
Autos: 45.	-	43.8		42.1		36		44.6	-	45.2
Medium Trucks: 39.		37.8		31.4		29		38.4	•	38.6
Heavy Trucks: 39.		38.3		29.3		30		38.9		39.0
Vehicle Noise: 47.	4	45.7		42.6		37	.8	46.4	4	46.9
Centerline Distance to Noise Co	ntour (in feet)	70 -	D.4	05			20 -104		-/D 4

Monday, January 25, 2016

Fl	WA-RD-77-108 H	IIGHWAY	NOISE P	REDICT	ION MODEL		
Scenario: Year 2023 Road Name: Stetson A Road Segment: e/o Musta	v. (S.)				Name: Rand lumber: 9792	ho Diamante	
SITE SPECIFIC I	NPUT DATA				IOISE MOD	EL INPUTS	
Highway Data			Site Cor	ditions	(Hard = 10, S	oft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	100 vehicles 10% 10 vehicles 50 mph		He	avy Tru	Autos ucks (2 Axles) cks (3+ Axles)	: 15	
Near/Far Lane Distance:	84 feet		Vehicle				
Near/Far Lane Distance:	84 feet		Veh	icleType	Day	Evening N	light Daily
Site Data					Autos: 77.59		9.6% 97.42%
Barrier Height:	0.0 feet			edium T			10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 86.5°	% 2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource F	levations (in	feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet		Mediu Heav	Auto m Truck ry Truck	s: 0.000 s: 2.297	Grade Adjus	tment: 0.0
Road Elevation: Road Grade:	0.0 feet 0.0%		Laile Ly	Auto		reet)	
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck ry Truck	s: 56.065		
				,			
FHWA Noise Model Calculation							
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atten	
Autos: 70.2		-0.8		-1.20	-4.72		
Medium Trucks: 81.0 Heavy Trucks: 85.3		3.0- 3.0-		-1.20 -1.20	-4.88 -5.28		
Unmitigated Noise Levels (wit	hout Topo and b	arrier atte	nuation)				
VehicleType Leq Peak Ho	our Leq Day	Leq E	Evening	Leq	Night	Ldn	CNEL
Autos: 4	5.7 43	3.8	42.1		36.0	44.6	45.2
Medium Trucks: 3	9.3 37	7.8	31.4		29.9	38.4	38.6
Heavy Trucks: 3	9.7 38	8.3	29.3		30.5	38.9	39.0
Vehicle Noise: 4	7.4 45	5.7	42.6		37.8	46.4	46.9
Centerline Distance to Noise (Contour (in feet)						
		70	dBA	65	dBA	60 dBA	55 dBA
	Lo	dn:	2		4	9	19
	CNE	EL:	2		4	9	20

	FHW	/A-RD-77-108	HIG	HWAY NO	DISE PI	REDICTI	ON MO	DEL			
Road Nan	ne: Stetson Av.	(S.)				.,	Name: umber:		o Diamante	9	
	SITE SPECIFIC INPUT DATA								L INPUT	S	
Highway Data	Scenario: Year 2023 With Project Road Alame: Stetson Av. (S.) Road Segment: w/o Warren Rd. SITE SPECIFIC INPUT DATA Vary Data Verage Daily Traffic (Adt):					ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicles	S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru			15		
Peak F	Hour Volume:	10 vehicle:	S		He	avy Truc	ks (3+)	Axles):	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ane Distance:	84 feet		F		icleType		Day	Evening	Night	Daily
Site Data							lutos:	77.5%		9.6%	
Ra	rrier Height	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
					1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
,, ,		70.0 feet				ource El		- // 6-	41		
Centerline Dist.	to Observer:	70.0 feet		N	orse s	Autos		000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Autos m Trucks		000 297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		297 006	Grade Adj	ustmont	. 0.0
P	ad Elevation:	0.0 feet			i ica	ry Trucks	s. o.	000	Orace Au	asancin	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	s: 56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56.	065			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 56.	081			
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Atte	en Bei	m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	100	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barr	ier attenu	ation)						
VehicleType	Leq Peak Hou	Leq Day	,	Leg Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	45.	7	43.8		42.1		36.0)	44.6	5	45.2
Medium Trucks:	39.	3	37.8		31.4		29.9	9	38.4	ļ	38.6
Heavy Trucks:	39.	7	38.3		29.3		30.5	5	38.9)	39.0
Vehicle Noise:	47.	4	45.7		42.6		37.8	3	46.4		46.9
Centerline Distan	ce to Noise Co	ntour (in feet)								
			Į	70 di	BA		dBA	6	0 dBA		dBA
			Ldn:	2		4	4		9		19

F	HWA-RD-77-10	8 HIGHV	NAY N	DISE PI	REDICT	TION MOD	EL			
Scenario: Year 202 Road Name: Stetson I Road Segment: e/o Fishe	Av. (S.)					t Name: F Number: 9		Diamante	:	
SITE SPECIFIC	INPUT DATA					NOISE N	ODE	INPUTS	3	
Highway Data			S	ite Cor	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	10%					rucks (2 A rcks (3+ A		15 15 15		
Vehicle Speed:	50 mph		v	ehicle	Mix					
Near/Far Lane Distance:	84 feet		F		icleTyp	e	Dav	Evening	Night	Daily
Site Data			_				77.5%	12.9%	9.6%	,
Barrier Height:	0.0 feet			М	edium 7	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm).				1	Heavy 7	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier.	70.0 feet			loise Si	ource F	levations	(in fe	et)		
Centerline Dist. to Observer.	70.0 feet		F.	0,00	Auto		•	01,		
Barrier Distance to Observer.	0.0 feet			Madiu	m Truck					
Observer Height (Above Pad).	5.0 feet				v Truck			Grade Adju	ustment	0.0
Pad Elevation.	0.0 1001		_ <u> </u>		,					
Road Elevation.	0.0 1001		L	ane Eq		t Distanc		eet)		
Road Grade.	0.070				Auto					
Left View. Right View.	00.0 0091				m Truck vy Truck					
FHWA Noise Model Calculation	ons									
VehicleType REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el l	Barrier Atte	en Bei	m Atten
Autos: 70.2	20 -22.4	1	-0.87		-1.20		4.72	0.0	00	0.000
Medium Trucks: 81.0	0 -39.65	5	-0.85		-1.20		4.88	0.0	00	0.000
Heavy Trucks: 85.3	43.60)	-0.85		-1.20		5.28	0.0	00	0.000
Unmitigated Noise Levels (wi	thout Topo and	d barrier	r attenu	ıation)						
VehicleType Leq Peak H		,	Leq Ev		Leq	Night		Ldn		NEL
	45.7	43.8		42.1		36.0		44.6		45.2
	39.3	37.8		31.4		29.9		38.4		38.6
	39.7	38.3		29.3		30.5		38.9		39.0
	47.4	45.7		42.6		37.8		46.4		46.9
Centerline Distance to Noise	Contour (in fee	et)								
			70 d	BA	65	dBA	6	0 dBA		dBA
		Ldn:	2			4		9		19
	C	CNEL:	2			4		9	:	20

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION M	ODEL			
Road Nan	rio: Year 2023 ne: Stetson Av nt: e/o Warren	. (S.)					Name. lumber		o Diamant	е	
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT oft = 15)	S	
Average Daily	Traffic (Adt):	100 vehicle	s		one con	- antionio	(11414	Autos:			
	Percentage:	10% 10 vehicle				dium Tr avy Tru		,			
	hicle Speed:	50 mph	5	-	Vehicle		uns (St	Axies).	15		
Near/Far La	ne Distance:	84 feet		ŀ		icleType	•	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Ва	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			-	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	70.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.		70.0 feet				Auto	s: (0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	297			
Observer Height	. ,	5.0 feet			Heav	vy Truck	s: 8	3.006	Grade Ad	justment	: 0.0
-	ad Elevation:	0.0 feet		L		·					
	ad Elevation:	0.0 feet		-	Lane Eq				teet)		
	Road Grade:	0.0%				Auto		5.223			
	Left View:	-90.0 degre				m Truck		6.065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 5t	5.081			
FHWA Noise Mod					1	1		. 1			
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten
Autos: Medium Trucks:		-22.41 -39.65		-0.8		-1.20 -1.20		-4.72 -4.88		000	0.000
Heavy Trucks:		-39.65		-0.8	-	-1.20		-4.88		000	0.000
Unmitigated Nois						-1.20		0.20	0.0		0.000
VehicleType	Leg Peak Hou			Leg E		Lea	Night		Ldn	0	NEL
Autos:	•		43.8	_04 L	42.1	209	36	.0	44.6		45.2
Medium Trucks:			37.8		31.4		29		38.4	-	38.6
Heavy Trucks:			38.3		29.3		30		38.9		39.0
Vehicle Noise:		.4	45.7		42.6		37	.8	46.4	4	46.9
Centerline Distan	ce to Noise C	ontour (in feet	!)								
				70.0	·IRΔ	65	dRA	1 4	SO dBA	55	dBA

Monday, January 25, 2016

	FH'	WA-RD-77-108	HIGH	1 YAWI	NOISE PI	REDICTI	ON M	ODEL			
Scenari	o: Year 2023	With Project							o Diamant	e	
Road Name	e: Stetson Av	·.				Job Nu	ımber.	9792			
Road Segmen	nt: e/o New S	tetson Av.									
SITE S	SPECIFIC II	NPUT DATA			Site Con				L INPUT	S	
Average Daily	Traffic (Adt):	11 300 vehicle			0.110 001	uniono (Autos:			
	Percentage:	10%	,		Me	dium Tru	cks (2				
	our Volume:	1.130 vehicle	2			avy Truc		,			
	hicle Speed:	50 mph		L			(
Near/Far I ar		84 feet		L	Vehicle						
	10 Diolarioo.	01.1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet				edium Tr		84.8%		10.3%	1.849
Barrier Type (0-W	all, 1-Berm):	0.0			,	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	st. to Barrier:	70.0 feet			Noise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet				Autos		0.000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks		.297			
Observer Height (A	Above Pad):	5.0 feet				y Trucks	-	3.006	Grade Ad	iustment.	0.0
	nd Elevation:	0.0 feet		L							
	nd Elevation:	0.0 feet		L	Lane Eq			_ •	feet)		
F	Road Grade:	0.0%				Autos		5.223			
	Left View:	-90.0 degree	es			m Trucks		6.065			
	Right View:	90.0 degree	es		Heav	ry Trucks	: 56	5.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		m Atten
Autos:	70.20			-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	81.00			-0.8		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			-0.8		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise							li auta t	1	Ldn	-	NEL
VehicleType Autos:	Leq Peak Ho		64.4	Leq E	vening 62.6	Leq I	vignt 56	-	Lan 65.2		VEL 65.
Medium Trucks:			58.3		52.0		50		58.9	_	59.
Heavy Trucks:			58.8		49.8		51		59.4	-	59.
Vehicle Noise:			66.2		63.2		58		66.9		67.
Centerline Distance	e to Noise C	ontour (in feet)								
			T	70	dBA	65 c	IBA	(60 dBA	55	dBA
			Ldn:	4	4	94	4		203	4	37
		CI	VFI:	Δ	7	10	11		218	4	69

	FH\	VA-RD-77-108	HIGH	WAY N	OISE PF	REDICTI	ON MOI	DEL			
Road Nar	ne: Stetson Av						Name: I umber: 9		o Diamante	e	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data	Scenario: Year 2023 With Project Road Name: Stetson Av. Road Segment: e/o Cawston Av. SITE SPECIFIC INPUT DATA way Data werage Daily Traffic (Adt): 14,600 vehicles Peak Hour Porcentage: 10% Peak Hour Porcentage: 50 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet dier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet rier Distance to Observer: 0.0 feet rier Distance to Observer: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees A Noise Model Calculations hicleType REMEL Traffic Flow Di Autos: 70.20 -0.77 dium Trucks: 81.00 -18.00					ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	14,600 vehicle	:S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru		,	15		
Peak I	Hour Volume:	1,460 vehicle	s		He	avy Truc	ks (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph		ı	/ehicle l	Wix					
Near/Far La	ane Distance:	84 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data								77.5%		9.6%	- /
	vrior Holabti	0.0 foot			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
					F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
,, ,											
				٨	Voise Sc				eet)		
						Autos		000			
						n Trucks		297			
	. ,				Heav	y Trucks	8: 8.0	006	Grade Adj	ustment.	0.0
				L	ane Eq	uivalent	Distanc	e (in t	feet)		
						Autos			,		
			es		Mediu	n Trucks	: 56.0	065			
					Heav	y Trucks	: 56.0	081			
FHWA Noise Mod	lel Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el .	Barrier Atte	en Ber	m Atten
		-0.77		-0.87	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	81.00	-18.00		-0.85	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-21.96		-0.85	5	-1.20		-5.28	0.0	00	0.000
	e Levels (with										
Unmitigated Nois		ır Leg Da	/	Leq Ev		Leq	Night		Ldn		VEL
VehicleType	Leq Peak Hou				63.7		57.7		66.3	3	66.9
VehicleType Autos:	67	.4	65.5								
VehicleType Autos: Medium Trucks:	67 60	.4 .9	59.4		53.1		51.5		60.0		
VehicleType Autos:	67 60 61	.4 .9 .4							60.0 60.5	5	60.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67 60 61 69	.4 .9 .4	59.4 59.9 67.3		53.1 50.9		51.5 52.2		60.5	5	60.6
VehicleType Autos: Medium Trucks: Heavy Trucks:	67 60 61 69	.4 .9 .4	59.4 59.9 67.3	70 d	53.1 50.9 64.3	65 (51.5 52.2		60.5)	60.2 60.6 68.5
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67 60 61 69	.4 .9 .4	59.4 59.9 67.3	70 d	53.1 50.9 64.3		51.5 52.2 59.5		68.0	55	68.5

	FH\	WA-RD-77-108	HIGHV	NAY N	OISE PI	REDICT	ION MOI	DEL			
Scenari Road Name Road Segmen		,					t Name: F lumber: 9		Diamante	1	
	SPECIFIC IN	IPUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	ft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	2,500 vehicles 10% 250 vehicles 25 mph		1		avy Tru	rucks (2 A rucks (3+ A		15 15 15		
Near/Far Lar	ne Distance:	84 feet				icleType	0	Dav	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
	rier Height:	0.0 feet				edium 7		34.8%		10.3%	
Barrier Type (0-Wa		0.0			- 1	Heavy T	rucks:	36.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		٨	loise S	ource E	levations	(in fe	et)		
	to Observer: Above Pad): ad Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Heav	Auto m Truck ry Truck	rs: 2.2	97	Grade Adju	ustmeni	t: 0.0
	d Elevation:	0.0 feet			ane Eq	uivaien Auto	t Distand		eet)		
r	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				m Truck ry Truck	s: 56.0	65			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	58.73	-5.42		-0.87		-1.20		4.72	0.0		0.000
Medium Trucks: Heavy Trucks:	70.80 77.97			-0.85 -0.85		-1.20 -1.20		-4.88 -5.28	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and I	barrier	r attenu	uation)						
VehicleType	Leg Peak Hou	ır Leq Day		Leg Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	51	.2 4	19.3		47.6		41.5		50.2	·	50.8
Medium Trucks:	46	5.1 4	14.6		38.2		36.7		45.1		45.4
Heavy Trucks:	49	0.3 4	7.9		38.9		40.1		48.5		48.6
Vehicle Noise:	54	1.1 5	2.5		48.6		44.6		53.1		53.5
Centerline Distance	e to Noise Co	ontour (in feet)									
				70 d	BA	65	dBA	6	0 dBA	55	dBA
		L	dn:	5			11		24		53
		CN	IEL:	6			12		26		56

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TION MODE	L		
	o: Year 2023 e: Stetson Av nt: e/o Sande	<i>'</i> .					t Name: Rai lumber: 979	ncho Diamar 02	ite	
SITE	SPECIFIC II	NPUT DATA				- 1	NOISE MO	DEL INPU	ΓS	
Highway Data				S	ite Cor	ditions	(Hard = 10	Soft = 15)		
	Traffic (Adt): Percentage: our Volume:	45,200 vehicle 10% 4,520 vehicle					Aut rucks (2 Axle icks (3+ Axle	es): 15		
Vei	hicle Speed:	45 mph			ehicle	Miv				
Near/Far Lai	ne Distance:	84 feet		H.		icleType	e Da	y Evening	Nig	ht Daily
Site Data					*011			5% 12.9%		.6% 97.42%
	rier Height:	0.0 feet			М	edium T	rucks: 84	8% 4.9%		.3% 1.84%
Barrier Type (0-W		0.0			1	Heavy T	rucks: 86	5% 2.7%	10	.8% 0.74%
Centerline Dis	st. to Barrier:	70.0 feet		^	loise S	ource E	levations (i	n feet)		
Centerline Dist. Barrier Distance Observer Height (Pa	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Heav	Auto m Truck ⁄y Truck	os: 0.000 (s: 2.297 (s: 8.006	Grade A	djustn	nent: 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq		t Distance	,		
F	Road Grade:	0.0%				Auto				
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck ∕y Truck				
FHWA Noise Mode	el Calculation	15								
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresnel	Barrier A	tten	Berm Atten
Autos:	68.46	4.60		-0.87		-1.20	-4.	72 0	.000	0.000
Medium Trucks:	79.45	-12.64		-0.85		-1.20	-4.	88 0	.000	0.000
Heavy Trucks:	84.25	-16.59		-0.85		-1.20	-5.	28 0	.000	0.000
Unmitigated Noise	Levels (with	nout Topo and	barri	er atteni	uation)					
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Ev	ening	Leq	Night	Ldn		CNEL
Autos:	7	1.0	69.1		67.3		61.3	69	.9	70.5
Medium Trucks:	64	4.8	63.3		56.9		55.3	63	.8	64.0
Heavy Trucks:	65	5.6	64.2		55.2		56.4	64	.8	64.9
Vehicle Noise:	72	2.8	71.1		67.9		63.3	71	.8	72.3
Centerline Distance	e to Noise C	ontour (in feet	t)							
			L	70 d			dBA	60 dBA		55 dBA
			Ldn:	92			99	429		924
		С	NEL:	99	9	2	213	460		991

Monday, January 25, 2016

FH	WA-RD-77-108	HIGHWAY	NOISE P	REDICT	ION MOD	EL			
Scenario: Year 2023 Road Name: 9th St. Road Segment: e/o Winch	,				Name: F umber: 9		o Diamante	e	
SITE SPECIFIC I	NPUT DATA						L INPUTS	3	
Highway Data			Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	600 vehicles					lutos:	15		
Peak Hour Percentage:	10%				ucks (2 A	,	15		
Peak Hour Volume:	60 vehicles		He	avy Iruo	cks (3+ A	xles):	15		
Vehicle Speed:	25 mph		Vehicle	Mix					
Near/Far Lane Distance:	84 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data				-	Autos: 7	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet		М	edium Ti	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Ti	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource El	evations	(in fe	eet)		
Centerline Dist. to Observer:	70.0 feet			Auto	s: 0.0	00			
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck	s: 2.2	97			
Observer Height (Above Pad):	5.0 feet		Heav	v Truck	s: 8.0	06	Grade Adj	ustment	: 0.0
Pad Elevation:	0.0 feet		ļ			,,			
Road Elevation:	0.0 feet		Lane Eq		Distanc	_	reet)		
Road Grade:	0.0%			Auto					
Left View:	-90.0 degree			m Truck					
Right View:	90.0 degree	S	Heav	y Truck	s: 56.0	181			
FHWA Noise Model Calculation									
VehicleType REMEL	Traffic Flow	Distance		Road	Fresne		Barrier Atte		m Atten
Autos: 58.73		-	.87	-1.20		4.72	0.0		0.000
Medium Trucks: 70.80		-	.85	-1.20		4.88	0.0		0.000
Heavy Trucks: 77.97			.85	-1.20		5.28	0.0	00	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho			Evening	,	Night		Ldn		NEL
		3.2	41.4		35.3		44.0		44.6
		8.4	32.0		30.5		38.9		39.2
		6.3	32.7 42.4		33.9 38.4		42.3 46.9		42.4
		0.0	42.4		30.4		40.8	'	47.0
Centerline Distance to Noise C	ontour (in feet)	-		05	dBA		60 dBA		-/D4
		/	0 dBA	00				. ວວ	dBA
	L	.dn:	0 aBA 2		а <i>в</i> А 4		9 9		ава 20

FH\	WA-RD-77-108	HIGH	IWAY N	OISE PE	REDICTI	ON MO	DEL			
Scenario: Existing W Road Name: Wincheste Road Segment: s/o Florida	r Rd.					Name: umber:		o Diamant	е	
SITE SPECIFIC IN Highway Data	IPUT DATA			Site Con				L INPUT	S	
			3	site Con	uitions	•				
Average Daily Traffic (Adt):		3					Autos:	15		
Peak Hour Percentage:	10%				dium Tru			15		
Peak Hour Volume:	1,960 vehicles	3		He	avy Truc	cks (3+)	Axles):	15		
Vehicle Speed:	55 mph		V	/ehicle l	Wix					
Near/Far Lane Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet		٨	Voise Sc	urce El	evation	s (in fe	eet)		
Centerline Dist. to Observer:	47.0 feet				Autos	s: 0.	000			
Barrier Distance to Observer:	0.0 feet			Mediui	n Trucks	s: 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks	s: 8.	006	Grade Ad	justmen	t: 0.0
Pad Elevation:	0.0 feet		_							
Road Elevation:	0.0 feet		L	ane Eq				eet)		
Road Grade:	0.0%				Autos		704			
Left View:	-90.0 degree				n Trucks		501			
Right View:	90.0 degree	es		Heav	y Trucks	s: 43.	521			
FHWA Noise Model Calculation				,						
VehicleType REMEL	Traffic Flow	Dis	tance		Road	Fresr		Barrier Att		rm Atten
Autos: 71.78			0.77		-1.20		-4.63		000	0.000
Medium Trucks: 82.40			0.80		-1.20		-4.87		000	0.000
Heavy Trucks: 86.40			0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise Levels (with							1			
VehicleType Leq Peak Hou		_	Leq Ev		Leq	Night		Ldn		NEL
		69.6		67.8		61.7		70.4	-	71.0
		63.4		57.0		55.5	-	63.9	-	64.1
Medium Trucks: 64										
Heavy Trucks: 64	1.9	63.5 71.3		54.4 68.3		55.7 63.5		72.0		
Heavy Trucks: 64	i.9 i.0	71.3								
Heavy Trucks: 64 Vehicle Noise: 73	i.9 i.0	71.3	70 d	68.3	65 (5)	64.2 72.5 i dBA
Heavy Trucks: 64 Vehicle Noise: 73	.9 3.0 ontour (in feet	71.3	70 d	68.3		63.5	5	72.0	55	72.5

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	ODEL			
Road Nan	io: Existing Wine: Patterson Ant: s/o Grand	۸v.				.,	! Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:			
	Percentage:	10%				edium Tr	,				
	lour Volume:	10 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		ν	'ehicle	Mix					
Near/Far La	ne Distance:	12 feet			Veh	icleType	э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	Centerline Dist. to Barrier: 22.0 feet Centerline Dist. to Observer: 22.0 feet				loise S	ource E	levatio	ns (in f	eet)		
						Auto		0.000	,		
Barrier Distance	Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297						
Observer Height	(Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet				•					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
	Road Grade:	0.0%				Auto		.749			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 21	.338			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 21	.378			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-21.44		5.32		-1.20		-4.34	0.0	000	0.000
Medium Trucks:	77.72	-38.68		5.44		-1.20		-4.85	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		5.43		-1.20		-6.07	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	47.3		45.5		39	.5	48.1	1	48.7		
Medium Trucks:	41.8		35.4		33		42.3	-	42.6		
Heavy Trucks: 44.6 43.2					34.1		35	.4	43.7	7	43.9
Vehicle Noise: 51.2 49.5				46.2 41.7 50.2				50.7			
Centerline Distan	Centerline Distance to Noise Contour (in feet)										
		T	70 dBA 65 dBA 60 dBA 55					dBA			

		WA-RD-77-10		IIII N	OIOL F						
Road Name	e: Wincheste						t Name Iumber		o Diamant	е	
Road Segmen											
	SPECIFIC II	NPUT DATA	١		a a				L INPUT	S	
Highway Data					Site Coi	naitions	(Hard		oft = 15)		
Average Daily			les					Autos:			
	Percentage:	10%				edium Ti		,			
	our Volume:	2,150 vehic	les		He	eavy Tru	cks (3+	- Axles):	15		
	nicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far Lar	ne Distance:	36 feet			Vel	nicleTyp	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet			M	ledium 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%	0.749
Centerline Dis		47.0 feet		1	Voise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.		47.0 feet				Auto	s: (0.000			
Barrier Distance t		0.0 feet			Mediu	ım Truck	s: 2	2.297			
Observer Height (,	5.0 feet			Hea	vy Truck	s: 8	3.006	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		1	Lane Ec	uivalen			feet)		
F	Road Grade:	0.0%				Auto		3.704			
	Left View:	-90.0 degr				m Truck		3.501			
	Right View:	90.0 degi	ees		Hea	vy Truck	s: 4	3.521			
FHWA Noise Mode			_		,						
VehicleType	REMEL	Traffic Flow	_	stance		Road	Fre		Barrier Att		m Atten
Autos:	68.46			0.77		-1.20		-4.63		000	0.00
Medium Trucks:	79.45		-	0.80		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-19.8	2	0.80)	-1.20		-5.46	0.0	000	0.00
Unmitigated Noise											
VehicleType Autos:	Leq Peak Ho	ur Leq D	67.5	Leq E	ening/ 65.7		Night	. 7	Ldn 68.3		NEL 68.
		9.4 3.2	61.7				59 53		62.2	-	62.
Medium Trucks:		3.2 4.0	62.6		55.3 53.6		54		63.2		
Heavy Trucks: Vehicle Noise:		1.3	69.5		66.4		61		70.2		63. 70.
Centerline Distance	e to Noise C	ontour (in fe	et)								
	, ., ., ., ., ., .,		/	70 d	IBA	65	dBA	6	60 dBA	55	dBA
			Ldn:	4	9	1	05		226	4	86

Monday, January 25, 2016

	FHV	VA-RD-77-108 HI	GHWAY	NOISE P	REDICTI	ON MOD	EL			
Road Nar	rio: Existing Wi me: California A ent: n/o Stowe F	v.				Name: R ımber: 9		Diamante	9	
SITE	SPECIFIC IN	PUT DATA						L INPUTS	5	
Highway Data				Site Cor	nditions (Hard =	10, Sc	ft = 15)		
	Traffic (Adt): r Percentage: Hour Volume:	5,100 vehicles 10% 510 vehicles			edium Tru eavy Truc	cks (2 A.	/	15 15 15		
V	ehicle Speed:	40 mph	-	Vehicle	Miss					
Near/Far La	ane Distance:	36 feet			icleType	L	Day	Evening	Night	Daily
Site Data						utos: 7	77.5%	12.9%	9.6%	
R:	arrier Height:	0.0 feet		M	edium Tr	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			Heavy Tr	ucks: 8	36.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	47.0 feet		Noise S	ource Ele	evations	(in fe	et)		
Centerline Dist.	to Observer:	47.0 feet			Autos	: 0.0	00			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks					
Observer Height	. ,	5.0 feet			vy Trucks		06	Grade Adj	ustment	0.0
F	Pad Elevation:	0.0 feet								
Ro	oad Elevation:	0.0 feet		Lane Eq	uivalent			eet)		
	Road Grade:	0.0%			Autos					
	Left View:	-90.0 degrees		Mediu	m Trucks	: 43.5	01			
	Right View:	90.0 degrees		Hea	vy Trucks	: 43.5	21			
FHWA Noise Mod	del Calculation	s								
VehicleType	REMEL	Traffic Flow L	Distance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos.	66.51	-4.36	0.7	77	-1.20		4.63	0.0	000	0.000
Medium Trucks.	77.72	-21.60	3.0	30	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks.	82.99	-25.56	3.0	30	-1.20	-	5.46	0.0	000	0.000
Unmitigated Nois	se Levels (with	out Topo and bar	rrier atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq I	Vight		Ldn	C	VEL
Autos.	61	.7 59.	8	58.1		52.0		60.6	6	61.2
Medium Trucks.		.7 54.:	2	47.8		46.3		54.8	3	55.0
Heavy Trucks.	57	.0 55.0	6	46.6		47.8		56.2	2	56.3
Vehicle Noise.	63	.7 62.0	0	58.7		54.2		62.7		63.2
Centerline Distar	ice to Noise Co	ontour (in feet)								
				dBA	65 c		6	0 dBA		dBA
Ldn:				15	33	-		71		54
		CNEL	- '	16	3	5		76	1	65

	FH\	WA-RD-77-108	HIGH	A YAWI	IOISE P	REDICTI	ON MC	DEL			
Road Na	ario: Existing W nme: California A nent: s/o Stowe I	۸v.					Name: umber:		o Diamante	Э	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				,	Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Dail	ly Traffic (Adt):	400 vehicle	S					Autos:	15		
Peak Hot	ır Percentage:	10%			Me	dium Tru	icks (2 .	4xles):	15		
Peak	Hour Volume:	40 vehicle	S		He	avy Truc	ks (3+ .	4xles):	15		
١	/ehicle Speed:	40 mph		-	Vehicle	Miv					
Near/Far L	ane Distance:	36 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							utos:	77.5%	12.9%	9.6%	97.42%
F	arrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
,,,,,	Dist. to Barrier:	47.0 feet		-	Maisa S	ource El	ovation	e (in f	not)		
Centerline Dis	t. to Observer:	47.0 feet		H'	WOISE S	Autos		000	cei)		
Barrier Distanc	e to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Heigh	t (Above Pad):	5.0 feet				vy Trucks		006	Grade Ad	iustmont	. 0.0
_	Pad Elevation:	0.0 feet			пеа	ry Trucks	s. o.	000	Grade Au	usunem	. 0.0
R	oad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	3: 43	704			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 43	501			
	Right View:	90.0 degree	es		Hear	y Trucks	3: 43	521			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi	_	Barrier Att	_	m Atten
Auto		-15.42		0.7		-1.20		-4.63	0.0		0.000
Medium Trucks				0.80	-	-1.20		-4.87	0.0		0.000
Heavy Trucks	s: 82.99	-36.61		0.80	0	-1.20		-5.46	0.0	000	0.000
Unmitigated No.	ise Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hot	ır Leq Day	/	Leg E	vening	Leq i	Night		Ldn	С	NEL
Auto	s: 50	1.7	48.8		47.0		40.	-	49.6	3	50.2
Medium Trucks	s: 44	.7	43.2		36.8		35.	2	43.7	7	43.9
Heavy Trucks			44.6		35.5		36.	_	45.1		45.3
Vehicle Noise	9: 52	2.7	51.0		47.7		43.	1	51.7	7	52.1
Centerline Dista	nce to Noise C	ontour (in feet)								
	-			70 c		65 (6	60 dBA		dBA
			Ldn:	3	-	6			13		28
		Ci	VEL:	3	3	6	6		14		30

	FHW	A-RD-77-108 H	lighw	AY NO	DISE PI	REDICT	ION MO	DEL			
Road Nan	io: Existing With ne: California Av nt: n/o Simpsor	<i>'</i> .				, ,	Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	200 vehicles						Autos:	15		
Peak Hour	Percentage:	10%					ucks (2 A				
Peak F	lour Volume:	20 vehicles			He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	25 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet		-					4		
Centerline Dist.		47.0 feet		N	oise S		evation		eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297	Grade Adj	i rotmont	
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	usunem	0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalen	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43.	704			
	Left View:	-90.0 degrees	6		Mediu	m Truck	s: 43.	501			
	Right View:	90.0 degrees	3		Heav	ry Truck	s: 43.	521			
FHWA Noise Mod											
VehicleType		Traffic Flow	Distar		Finite	Road	Fresr	_	Barrier Atte		m Atten
Autos:	58.73	-16.39		0.77		-1.20		-4.63		000	0.00
Medium Trucks:		-33.63		0.80		-1.20		-4.87		000	0.000
Heavy Trucks:	77.97	-37.58		0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and b	arrier a	attenu	ation)						
VehicleType	Leq Peak Hour			eq Eve			Night		Ldn		NEL
Autos:	41.9		0.0		38.3		32.2		40.8		41.4
Medium Trucks:	36.8		5.3		28.9		27.4		35.8		36.
Heavy Trucks:	40.0		8.6		29.5		30.8		39.1		39.
Vehicle Noise: 44.8 43.1					39.2		35.3	3	43.8	3	44.:
Centerline Distan	ce to Noise Co	ntour (in feet)	_								
				70 dE	ЗА	65	dBA	6	60 dBA	55	dBA

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICT	ION MOI	DEL			
Road Nan	rio: Existing Wi ne: California A ent: s/o Stetson	ıv.				Name: I umber: 9		o Diamante	9	
	SPECIFIC IN	IPUT DATA						L INPUT	3	
Highway Data				Site Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	200 vehicles				,	Autos:	15		
Peak Hour	Percentage:	10%		Me	dium Tri	ucks (2 A	(xles	15		
Peak F	Hour Volume:	20 vehicles		He	avy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ane Distance:	36 feet			icleType		Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Height:	0.0 feet		М	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	47.0 feet		Noise S	urco E	lovation	c (in f	oot)		
Centerline Dist.	to Observer:	47.0 feet		NOISE S	Auto:		000	eei)		
Barrier Distance	to Observer:	0.0 feet		Madiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet			y Truck		006	Grade Adj	ustmen	t 0.0
P	ad Elevation:	0.0 feet		77001	y much	3. 0.0	,00	Orado riaj	000111011	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%			Auto	s: 43.	704			
	Left View:	-90.0 degree	S	Mediu	m Truck	s: 43.	501			
	Right View:	90.0 degree	s	Heav	y Truck	s: 43.5	521			
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	66.51	-18.43	0.	.77	-1.20		-4.63	0.0	00	0.000
Medium Trucks:	77.72	-35.67	0.	.80	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	82.99	-39.62	0	.80	-1.20		-5.46	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and I	parrier atte	enuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq	Night		Ldn	C	NEL
Autos:	47	.7 4	5.8	44.0		37.9	_	46.6	_	47.2
Medium Trucks:			0.1	33.8		32.2		40.7		40.9
Heavy Trucks:		.0 4	1.5	32.5		33.8		42.1		42.2
Vehicle Noise:	49	.7 4	7.9	44.7		40.1		48.7		49.1
Centerline Distan	ce to Noise Co	ontour (in feet)								
				0 -/ 0 4		-ID 4		00 -ID 4		10 4

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHWA	Y NOISE F	PREDICTION	ON MODEL		
Road Nan	io: Existing Wine: California Ant: s/o Simpso	۱.				lame: Ran mber: 979:	cho Diamante 2	•
SITE	SPECIFIC IN	IPUT DATA			N	DISE MOI	DEL INPUTS	5
Highway Data				Site Co	nditions (Hard = 10,	Soft = 15)	
	Traffic (Adt): Percentage: four Volume:	100 vehicles 10% 10 vehicles				Auto cks (2 Axle ks (3+ Axle	s): 15	
Ve	hicle Speed:	25 mph						
	ne Distance:	36 feet		Vehicle Ve	Mix hicleType	Day	Evening	Night Daily
Site Data					A	utos: 77.5	5% 12.9%	9.6% 97.42%
Ba Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0		٨	Medium Tru Heavy Tru			10.3% 1.84% 10.8% 0.74%
Centerline Di	st. to Barrier:	47.0 feet		Noise S	Source Ele	vations (ir	r feet)	
Centerline Dist. Barrier Distance Observer Height	to Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet		Media	Autos: um Trucks: avy Trucks:	0.000		ustment: 0.0
Ro	ad Elevation:	0.0 feet		Lane E	quivalent	Distance (in feet)	
	Road Grade:	0.0%			Autos	43.704		
	Left View: Right View:	-90.0 degree			um Trucks: vy Trucks:			
FHWA Noise Mod	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	58.73	-19.40		0.77	-1.20	-4.6	3 0.0	0.000
Medium Trucks:	70.80	-36.64		0.80	-1.20	-4.8	7 0.0	0.000
Heavy Trucks:	77.97	-40.59		0.80	-1.20	-5.4	0.0	0.000
Unmitigated Nois			barrier at	tenuation))			
VehicleType	Leq Peak Hou			q Evening	Leq N	0	Ldn	CNEL
Autos:	38		37.0	35.2		29.2	37.8	
Medium Trucks:	33		32.3	25.9		24.3	32.8	
Heavy Trucks: Vehicle Noise:	37 41		35.6 40.1	26.5 36.5		27.8 32.3	36.1 40.8	36.3 41.2
Centerline Distan				30.	_	02.0	70.0	71.2
Octronino Distan	ce to Noise Ci	omour (mileet,		70 dBA	65 d	BA	60 dBA	55 dBA
			Ldn:	1	1		2	5
		CI	VEL:	1	1		3	6

FHW	A-RD-77-108	HIGHWA	Y NOISI	E PREDICTI	ON MO	DEL			
Scenario: Existing With Road Name: Warren Rd. Road Segment: s/o Esplanac	,				Name: umber:		o Diamante	9	
SITE SPECIFIC INI	PUT DATA						L INPUT	5	
Highway Data			Site	Conditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt): 2	8,300 vehicles	3				Autos:	15		
Peak Hour Percentage:	10%			Medium Tru	icks (2 /	Axles):	15		
Peak Hour Volume:	2,830 vehicles	3		Heavy Truc	ks (3+)	Axles):	15		
Vehicle Speed:	55 mph		Vehic	le Mix					
Near/Far Lane Distance:	84 feet			/ehicleType		Dav	Evenina	Niaht	Dailv
Site Data					utos:	77.5%	- 5	9.6%	
Barrier Height:	0.0 feet			Medium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise	Source El	evation	s (in fe	eet)		
Centerline Dist. to Observer:	70.0 feet			Autos	. 0.	000	,		
Barrier Distance to Observer:	0.0 feet		Me	dium Trucks	2.	297			
Observer Height (Above Pad):	5.0 feet		h	leavy Trucks	8. 8.	006	Grade Ad	ustment	0.0
Pad Elevation:	0.0 feet			-					
Road Elevation:	0.0 feet		Lane	Equivalent			feet)		
Road Grade:	0.0%			Autos		223			
Left View:	-90.0 degree	es		dium Trucks		065			
Right View:	90.0 degree	es	H	leavy Trucks	s: 56.	081			
FHWA Noise Model Calculations									
		Distan	-						
VehicleType REMEL	Traffic Flow	Distant	ce Fi	nite Road	Fresr	nel	Barrier Att	en Ber	m Atten
VehicleType REMEL Autos: 71.78	Traffic Flow 1.70		0.87	nite Road -1.20	Fresr	nel -4.72	Barrier Att 0.0		m Atten 0.000
, , , .					Fresi			00	0.000
Autos: 71.78	1.70		0.87	-1.20	Fresi	-4.72	0.0	100	0.000
Autos: 71.78 Medium Trucks: 82.40	1.70 -15.54 -19.50	-	0.87 0.85 0.85	-1.20 -1.20 -1.20	Fresr	-4.72 -4.88	0.0	100	0.000
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40	1.70 -15.54 -19.50 ut Topo and	barrier a	0.87 0.85 0.85	-1.20 -1.20 -1.20	Fresr Night	-4.72 -4.88	0.0	100 100 100	0.000 0.000 0.000
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Unmitigated Noise Levels (witho	1.70 -15.54 -19.50 ut Topo and Leq Day	barrier a	0.87 0.85 0.85 ttenuatio q Evenin	-1.20 -1.20 -1.20		-4.72 -4.88 -5.28	0.0 0.0 0.0	000 000 000	0.000 0.000 0.000
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 71. Medium Trucks: 64.8	1.70 -15.54 -19.50 ut Topo and Leq Day	barrier a	0.87 0.85 0.85 ttenuatio q Evenin 6	-1.20 -1.20 -1.20 on) g Leq 1	Night 61.7 55.4	-4.72 -4.88 -5.28	0.0 0.0 0.0 <i>Ldn</i> 70.3 63.9	000 000 000	0.000 0.000 0.000 VEL 70.9
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Umnitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 64.4 Heavy Trucks: 64.4	1.70 -15.54 -19.50 ut Topo and Leq Day 4	barrier a Le 69.5 63.3 63.4	0.87 0.85 0.85 ttenuatio q Evenin 6 5	-1.20 -1.20 -1.20 on) g Leq. 7.7 6.9 4.4	Night 61.7 55.4 55.6	-4.72 -4.88 -5.28	0.0 0.0 0.0 Ldn 70.3 63.9 64.0	000 000 000 000	0.000 0.000 0.000 NEL 70.9 64.1
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Umnitigated Noise Levels (without the control of the cont	1.70 -15.54 -19.50 ut Topo and Leq Day 4 3 3	barrier a Le 69.5 63.3 63.4 71.2	0.87 0.85 0.85 ttenuatio q Evenin 6 5	-1.20 -1.20 -1.20 on) g Leq 1	Night 61.7 55.4	-4.72 -4.88 -5.28	0.0 0.0 0.0 <i>Ldn</i> 70.3 63.9	000 000 000 000	0.000 0.000 0.000 NEL 70.9 64.1
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Umnitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 64.4 Heavy Trucks: 64.4	1.70 -15.54 -19.50 ut Topo and Leq Day 4 3 3	barrier a: Le 69.5 63.3 63.4 71.2	0.87 0.85 0.85 ttenuatio q Evenin 6 5	-1.20 -1.20 -1.20 on) g Leq. 7.7 6.9 4.4	Night 61.7 55.4 55.6 63.4	-4.72 -4.88 -5.28	0.0 0.0 0.0 Ldn 70.3 63.9 64.0	000 000 000 Ca	0.000 0.000 0.000
Autos: 71.78 Medium Trucks: 82.40 Heavy Trucks: 86.40 Umnitigated Noise Levels (without the control of the cont	1.70 -15.54 -19.50 ut Topo and Leq Day 4 3 3 3	barrier a: Le 69.5 63.3 63.4 71.2	0.87 0.85 0.85 ttenuatic <i>q Evenin</i> 6 5 5	-1.20 -1.20 -1.20 on) g Leq. 7.7 6.9 4.4	Night 61.7 55.4 55.6 63.4	-4.72 -4.88 -5.28	0.0 0.0 0.0 <i>Ldn</i> 70.3 63.9 64.0	000 1000 1000 1000	0.000 0.000 0.000 VEL 70.9 64.1 72.4

		WA-RD-77-108									
		ithout Project							o Diamante	е	
	e: Warren Ro					Job N	lumber	9792			
Road Segmen	t: n/o Devon	snire Av.									
	PECIFIC II	IPUT DATA			01: 0				L INPUT	5	
Highway Data					Site Cor	aitions	(Hard	= 10, Sc			
Average Daily	. ,		es					Autos:	15		
Peak Hour I		10%					,	Axles):	15		
	our Volume:	2,830 vehicle	es		He	avy Iru	icks (3+	- Axles):	15		
	nicle Speed:	55 mph			Vehicle	Mix					
Near/Far Lar	e Distance:	84 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		1	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. t		70.0 feet				Auto		0.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck		2.297			
Observer Height (/	,	5.0 feet			Hear	y Truck	rs: 8	3.006	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		L		•					
	d Elevation:	0.0 feet		Ľ	Lane Eq			nce (in	eet)		
F	Road Grade:	0.0%				Auto		6.223			
	Left View:	-90.0 degre				m Truck		6.065			
	Right View:	90.0 degre	es		Hear	ry Truck	(s: 5)	6.081			
FHWA Noise Mode				1							
VehicleType	REMEL	Traffic Flow		stance		Road	Fre		Barrier Att		m Atten
Autos:	71.78			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	82.40			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40			-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise										_	
	Leq Peak Ho		_	Leq E	vening	Leq	Night	_	Ldn		VEL 70.
Autos:	-	1.4	69.5		67.7		61		70.3		70.9
Medium Trucks:	-	1.8	63.3		56.9		55		63.9		64.
Heavy Trucks:		1.8	63.4		54.4		55		64.0		64. 72.
Vehicle Noise:		3.0	71.2		68.3		63	1.4	72.0)	72.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	-(D.4		-/04		0.404		-ID 4
			1 -1	70 0			dBA	6	0 dBA		dBA
		_	Ldn: NFI:	9		_	204		439 472	-	45
											016

									D: .		
		ithout Project							o Diamant	e	
Road Nami Road Seamer	e: Warren Ro					JOD IV	lumber:	9792			
Road Segmen	n: n/o rres C	erritos Av.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				,	Site Cor	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	28,300 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	2,830 vehicle	es		He	eavy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	55 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Vel	nicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet			M	ledium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		70.0 feet		1	Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.		70.0 feet				Auto		0.000			
Barrier Distance t		0.0 feet			Mediu	ım Truck	s: 2	.297			
Observer Height (,	5.0 feet			Hea	vv Truck	s: 8	3.006	Grade Ad	ljustment	0.0
	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		14	Lane Eq	uivalen		_ •	feet)		
F	Road Grade:	0.0%				Auto		5.223			
	Left View:	-90.0 degre				ım Truck		6.065			
	Right View:	90.0 degre	ees		Hea	vy Truck	s: 56	5.081			
FHWA Noise Mode	el Calculation	18									
VehicleType	REMEL	Traffic Flow		stance	_	Road	Fres		Barrier At		m Atten
Autos:	71.78			-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40			-0.8		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-19.50)	-0.8	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise			_								
	Leq Peak Ho			Leg E			Night		Ldn		NEL
Autos:	-	1.4	69.5		67.7		61		70.	-	70
Medium Trucks:		4.8	63.3		56.9		55		63.		64
Heavy Trucks:		4.8	63.4		54.4		55		64.	-	64
Vehicle Noise:		3.0	71.2		68.3	}	63	.4	72.	D	72
Centerline Distanc	e to Noise C	ontour (in fee	t)	70 0	4D A	e E	dBA	1 4	60 dBA	FE	dBA
			I dn:	9.			0 <i>DA</i>	,	439		945
			NEL:	10		_	04 19		439		945 016

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	WAY	NOISE P	REDICTI	ON MO	DDEL			
	io: Existing W e: Warren Rd nt: n/o Florida	l.					Name: umber:		no Diamante	•	
	SPECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data					Site Cor	ditions	(Hard :	= 10, S	oft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	24,400 vehicle: 10% 2,440 vehicle: 55 mph			He	dium Tru avy Truc		,	15		
Near/Far Lar		84 feet			Vehicle						
	ne Distance.	04 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-W	rier Height: 'all, 1-Berm):	0.0 feet 0.0				A edium Ti Heavy Ti		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dis	st. to Barrier:	70.0 feet			Noise S	ource El	evatio	ns (in t	eet)		
Centerline Dist. Barrier Distance to Observer Height (to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks yy Trucks	s: 0 s: 2	.000 .297 .006	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%		ı	,	Autos		.223	,		
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 56	.065			
	Right View:	90.0 degree			Heav	y Truck	s: 56	.081			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	1.05		-0.8	37	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-16.19		-0.8	35	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-20.14		-0.8	35	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	′	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	70).8	68.9		67.1		61.	0	69.7		70.3
Medium Trucks:	64	.2	62.7		56.3		54.	8	63.2		63.4
Heavy Trucks:	64	1.2	62.8		53.7		55.	0	63.3	i	63.5
Vehicle Noise:	72	2.3	70.6		67.6		62.	.8	71.3		71.8
Centerline Distanc	e to Noise C	ontour (in feet)								
				70	dBA	65	dBA		60 dBA	55	dBA
Ldn:				1			397	1	356		
		CI	VEL:	9				921			

	FHV	VA-RD-77-108	HIGH	WAY	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Existing Wit ne: Warren Rd. nt: s/o Florida	•					Name: umber:		o Diamante	9	
	SPECIFIC IN	PUT DATA							L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 3	2,300 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	3,230 vehicle	S		He	avy Truc	ks (3+.	Axles):	15		
Ve	hicle Speed:	55 mph		ŀ	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		H		icleType		Dav	Evenina	Niaht	Dailv
Site Data					V C/		lutos:	77.5%	- 3	9.69	
		0.0 feet			М	edium Tr		84.8%		10.39	
	rrier Height:	0.0 reet				Heavy Tr		86.5%		10.89	
Barrier Type (0-W Centerline Di		70.0 feet								10.07	0.1 170
Centerline Dist.		70.0 feet			Noise S	ource El	evation	ıs (in f	eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height		5.0 feet				m Trucks		297			
	ad Elevation:	0.0 feet			Hear	vy Trucks	s: 8.	.006	Grade Adj	ustmer	t: 0.0
	ad Elevation:	0.0 feet		f	Lane Eo	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%		f		Autos		223	,		
	Left View:	-90.0 degre	25		Mediu	m Trucks		.065			
	Right View:	90.0 degree			Hea	vy Trucks	s: 56	.081			
FHWA Noise Mod	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	2.27		-0.8	37	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-14.97		-0.8	35	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-18.92		-0.8	35	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	72.	.0	70.1		68.3		62.	3	70.9)	71.5
Medium Trucks:	65.	4	63.9		57.5		56.	0	64.4	ļ	64.7
Heavy Trucks:	65.	4	64.0		55.0		56.	2	64.6	i	64.7
Vehicle Noise:	73.	.6	71.8		68.8		64.	0	72.5	5	73.0
Centerline Distant	ce to Noise Co	ntour (in feet)					,			
			L		dBA	65 (6	60 dBA		5 dBA
			Ldn:		03	22			479		,032
		Ci	VEL:	1	11	23	39		515	1	,110

	- FHI	WA-RD-77-108	HIGHV	VAY NO	JISE PI	KEDIC I I	N MC	DEL			
	e: Warren Rd					Project I Job Nu			o Diamant	е	
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (Hard =				
Average Daily	. ,		S					Autos:	15		
	Percentage:	10%				dium Tru			15		
	our Volume:	3,080 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
	nicle Speed:	55 mph		ν	ehicle l	Viix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6%	97.429
Bar	rier Heiaht:	0.0 feet			Me	edium Tro	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy Tro	icks:	86.5%	2.7%	10.8%	0.74
Centerline Dis		70.0 feet		Ν	loise Sc	ource Ele	vation	ıs (in fe	eet)		
Centerline Dist. t		70.0 feet				Autos	: 0	.000			
Barrier Distance t		0.0 feet			Mediui	n Trucks	2	.297			
Observer Height (/	,	5.0 feet			Heav	y Trucks	. 8	.006	Grade Ad	justment	0.0
	d Elevation:	0.0 feet					. .				
	d Elevation:	0.0 feet		L	ane Eq	uivalent			reet)		
F	Road Grade:	0.0%				Autos n Trucks		.223			
	Left View:	-90.0 degre									
	Right View:	90.0 degre	es		Heav	y Trucks	56	.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dista			Road	Fres		Barrier Att		m Atter
Autos:	71.78			-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40			-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			-0.85		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise								1			
VehicleType Autos:	Leq Peak Hou		69.9	Leq Ev	ening 68.1	Leq N	lignt 62.	4	Ldn 70.		NEL 71
Medium Trucks:			63.7		57.3		55.		64.:		64
Heavy Trucks:			63.8		54.8		56.	-	64.	_	64.
Vehicle Noise:			71.6		68.6		63.	_	72.		72
	- 4- 11-1 0	ontour (in feet)								
Centerline Distanc			,								
Centerline Distanc	e to Noise C			70 di	BA	65 a	BA	6	0 dBA	55	dBA
Centerline Distanc	e to Noise C		Ldn:	70 di		65 a		6	0 dBA 464		000

	FH'	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DEL			
	e: Warren Ro						Name:		o Diamante	e	
SITE S	SPECIFIC II	NPUT DATA				1	NOISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: our Volume:	30,300 vehicle 10% 3,030 vehicle					ucks (2 A	,	15 15 15		
Vel	nicle Speed:	55 mph		v	ehicle	Miv					
Near/Far Lar	ne Distance:	84 feet		-		icleType		Dav	Evening	Night	Daily
Site Data					*011			77.5%	Ü	9.69	
	rier Height:	0.0 feet			М	edium T	rucks:	84.8%		10.39	
Barrier Type (0-W	-	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	t. to Barrier:	70.0 feet		^	loise S	ource E	levation	s (in fe	eet)		
	o Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet			Mediu Heav	Auto m Truck ⁄y Truck	s: 0.0	000 297 006	Grade Adj	iustmer	nt: 0.0
F	Road Grade:	0.0%				Auto	s: 56.	223			
	Left View: Right View:	-90.0 degre				m Truck ⁄y Truck					
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	71.78	1.99		-0.87	'	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	82.40	-15.25		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-19.20		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	uation)						
	Leq Peak Ho			Leq Ev		_	Night		Ldn		CNEL
Autos:		1.7	69.8		68.0		62.0		70.6		71.2
Medium Trucks:		5.1	63.6		57.2		55.7		64.2		64.4
Heavy Trucks:		5.1	63.7		54.7		55.9		64.3		64.4
Vehicle Noise:		3.3	71.5		68.6		63.7		72.3	3	72.7
Centerline Distance	e to Noise C	ontour (in fee	:)					_		_	
			L	70 d			dBA	6	i0 dBA	_	5 dBA
		_	Ldn:	99			13		459		989
		С	NEL:	100	6	2	29		494	1	,064

Monday, January 25, 2016

	FH	WA-RD-7	7-108 HIG	HWAY	NOISE PF	REDICTIO	N MC	DEL			
	io: Existing W ne: Warren Ro nt: s/o Stetso	d.	•			Project N Job Nu			o Diamant	е	
	SPECIFIC I	. ,				NC	DISE	MODE	L INPUT	s	
Highway Data					Site Con					_	
Average Daily	Traffic (Adt):	24.900 v	ehicles					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2)	Axles):	15		
Peak H	lour Volume:	2,490 v	ehicles		He	avy Truck	(3+ i	Axles):	15		
Ve	hicle Speed:	45 n	nph		Vehicle I	at					
	ne Distance:	84 fe	eet			cleType		Dav	Evening	Night	Daily
Site Data					VCIII		ıtos:	77.5%	0	9.6%	
					Me	edium Tru		84.8%		10.3%	
Barrier Type (0-W	rrier Height:	0.0	teet			leavy Tru		86.5%		10.8%	
Centerline Di		70.0	foot								• • • • • • • • • • • • • • • • • • • •
Centerline Dist.		70.0			Noise Sc				eet)		
Barrier Distance		0.0				Autos:		000			
Observer Height		5.0				n Trucks:		297			
	ad Elevation:	0.0			Heav	y Trucks:	8.	006	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0			Lane Eq	uivalent l	Distan	ce (in	feet)		
	Road Grade:	0.09				Autos:	56	.223			
	Left View:		degrees		Mediur	n Trucks:	56.	.065			
	Right View:		degrees		Heav	y Trucks:	56.	.081			
FHWA Noise Mod	el Calculation	ns									
VehicleType	REMEL	Traffic	Flow D	istance	Finite		Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	68.46		2.01	-0.8		-1.20		-4.72		000	0.000
Medium Trucks:			15.23	-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	5 -	19.18	-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Top	o and barı	rier atte	nuation)						
VehicleType	Leq Peak Ho	our Le	eq Day	Leq E	vening	Leq N	light		Ldn	С	NEL
Autos:	6	8.4	66.5		64.7		58.	7	67.3		67.9
Medium Trucks:	-	2.2	60.7		54.3		52.8	-	61.2	-	61.5
Heavy Trucks:		3.0	61.6		52.6		53.8		62.2		62.3
Vehicle Noise:	7	0.2	68.5		65.3		60.	7	69.2	2	69.7
Centerline Distan	ce to Noise C	ontour (i	n feet)								
				70	dBA	65 di	BA	- 6	60 dBA	55	dBA
			Ldn:		62	134	4		288	6	21
			CNEL:		67	143	3		309	6	666

	FH	WA-RD-77-108	HIGI	HWAY I	NOISE PI	REDICT	ION MC	DEL			
Road Na	rio: Existing W me: Warren Ro ent: s/o Stetsor	l. ,					Name: lumber:		o Diamante	е	
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =				
Average Daily	/ Traffic (Adt):	24,600 vehicle	:S					Autos:	15		
	r Percentage:	10%				dium Tr		,	15		
Peak	Hour Volume:	2,460 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far L	ane Distance:	84 feet			Veh	icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	
В	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0 reet			,	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist. to Barrier:	70.0 feet		L							
Centerline Dis		70.0 feet			Noise S				eet)		
		0.0 feet				Auto		.000			
	Barrier Distance to Observer: 0.0 feet bserver Height (Above Pad): 5.0 feet					m Truck		297			
	Pad Elevation:	0.0 feet			Heav	ry Truck	s: 8	.006	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet		F	Lane Eq	uivalen	t Distar	ce (in	feet)		
7.0	Road Grade:	0.0%				Auto		223			
	Left View:	-90.0 degre	Δ C		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre			Heav	y Truck	s: 56	.081			
FHWA Noise Mo	del Calculation	IS									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos	: 68.46	1.96		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks	: 79.45	-15.28		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	: 84.25	-19.24		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi								_			
VehicleType	Leq Peak Ho			Leq E	vening	Leq	Night		Ldn		VEL
Autos		3.4	66.5		64.7		58.	-	67.3		67.9
Medium Trucks		2.1	60.6		54.3		52.	-	61.2	-	61.4
Heavy Trucks Vehicle Noise		3.0	61.5 68.4		52.5 65.3		53. 60.	_	62.1		62.2
Centerline Dista	nce to Noise C	ontour (in fee	f)								
Contonine Distai		ontour (III look	,	70	dBA	65	dBA	6	0 dBA	55	dBA
	Ldn:					62 133 286			6	16	
	CNEL:					66 142 307 6			60		

	FH\	WA-RD-77-108	HIGHWA	Y NOISE F	PREDICT	TION MOD	EL		
	io: Existing W e: Warren Rd nt: s/o Simpso	l.				t Name: R: Number: 97	ancho Diamant 792	е	
	SPECIFIC IN	NPUT DATA					DDEL INPUT	S	
Highway Data				Site Co	nditions	6 (Hard = 1	0, Soft = 15)		
Peak H	Percentage: our Volume:	10% 1,790 vehicle				Au rucks (2 Ax icks (3+ Ax			
	hicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ne Distance:	84 feet		Ve	hicleTyp	e D	ay Evening	Night	Daily
Site Data	rier Heiaht:	0.0 feet			∕ledium ī		7.5% 12.9% 4.8% 4.9%	9.6%	97.42% 1.84%
Barrier Type (0-W		0.0 reet 0.0			Heavy	Frucks: 8	6.5% 2.7%	10.8%	0.74%
Centerline Dis	. ,	70.0 feet							
Centerline Dist.		70.0 feet		Noise S		levations			
Barrier Distance		0.0 feet			Auto				
Observer Height (Above Pad):	5.0 feet			um Truci				
	ad Flevation:	0.0 feet		Hea	vy Truci	ks: 8.00	6 Grade Ad	justment:	0.0
Ros	ad Elevation:	0.0 feet		Lane E	quivaler	nt Distance	(in feet)		
ı	Road Grade:	0.0%			Auto	os: 56.22	23		
	Left View:	-90.0 degre	es	Medi	um Truci	ks: 56.06	55		
	Right View:	90.0 degree		Hea	avy Truci	ks: 56.08	31		
FHWA Noise Mode	el Calculation	IS		-					
VehicleType	REMEL	Traffic Flow	Distant	ce Finit	e Road	Fresne	Barrier Att	en Berr	n Atten
Autos:	66.51	1.09	-	0.87	-1.20	-4	1.72 0.0	000	0.000
Medium Trucks:	77.72	-16.15	-	0.85	-1.20	-4	1.88 0.0	000	0.000
Heavy Trucks:	82.99			0.85	-1.20	-6	5.28 0.0	000	0.000
Unmitigated Noise									
VehicleType	Leq Peak Hou			q Evening		Night	Ldn		IEL
Autos:	65		63.6	61.	-	55.8	64.4		65.0
Medium Trucks:			58.0	51.	-	50.1	58.0	-	58.8
Heavy Trucks:	60		59.4	50.		51.6	60.0	_	60.1
Vehicle Noise:			65.8	62.	5	58.0	66.	5	67.0
Centerline Distance	e to Noise C	ontour (in feet		70 dBA		i dBA	60 dBA	FF	dBA
			Ldn:						11
							11 40		
		Ci	VEL:	44		90	204	4	+0

	FHV	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	TION MOI	DEL			
Scenario: Road Name: Road Segment:	: Warren Rd	-					t Name: I Number: S		o Diamante	•	
SITE SI	PECIFIC IN	IPUT DATA					NOISE N	IODE	L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
	ercentage: ur Volume:	10% 2,490 vehicle					rucks (2 A rucks (3+ A		15		
	icle Speed:	40 mph		V	ehicle	Mix					
Near/Far Lane	e Distance:	84 feet			Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data								77.5%	-	9.6%	,
Rarri	ier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-Wal		0.0			1	Heavy 7	rucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Dist.	to Barrier:	70.0 feet		N	oise S	ource E	levation	s (in f	eet)		
Centerline Dist. to	Observer:	70.0 feet				Auto		000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (Al	bove Pad):	5.0 feet				/y Truck		006	Grade Adj	ustmen	t: 0.0
Pad	l Elevation:	0.0 feet									
Road	l Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	e (in	feet)		
Ro	oad Grade:	0.0%				Auto					
	Left View:	-90.0 degre	es			m Truck					
F	Right View:	90.0 degre	es		Heav	y Truck	s: 56.0)81			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	66.51	2.52		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks:	77.72	-14.72		-0.85		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	82.99	-18.67		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ıation)						
VehicleType L	.eq Peak Hοι	ır Leq Day	/ L	.eq Eve	ening	Leq	Night		Ldn	(CNEL
Autos:	67		65.1		63.3		57.2		65.9		66.5
Medium Trucks:	61		59.4		53.1		51.5		60.0		60.2
Heavy Trucks:	62	3	60.8		51.8		53.1		61.4		61.5
Vehicle Noise:	69	0.0	67.2		64.0		59.4		68.0		68.4
Centerline Distance	to Noise Co	ontour (in feet)								
				70 dl			dBA		60 dBA		5 dBA
			Ldn:	51			10		237		512
		C	NEL:	55		1	18		254		548

Monday, January 25, 2016

	FH	WA-RD-77-108	HIG	HWAY	NOISE P	REDICTION	ON MC	DDEL			
	e: Sandersor					Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC II	NPUT DATA			Sito Cor	N nditions (L INPUT	s	
Average Daily Peak Hour	Traffic (Adt): Percentage: our Volume:	42,400 vehicle 10% 4,240 vehicle			Me	edium Tru eavy Truc	cks (2	Autos: Axles):	15 15		
Vel Near/Far Lar	hicle Speed: ne Distance:	30 mph 50 feet			Vehicle	Mix nicleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				ledium Tro Heavy Tro		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		54.0 feet			Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance to Observer Height (A	to Observer:	54.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks vy Trucks	: 2	.000 .297 .006	Grade Ad	justment.	0.0
	d Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%			·	Autos	: 48	3.125			
	Left View: Right View:	-90.0 degre				m Trucks vy Trucks		'.941 '.959			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow		istance		Road	Fres		Barrier Att		m Atten
Autos:	61.75			0.1	-	-1.20		-4.67		000	0.000
Medium Trucks: Heavy Trucks:	73.48 79.92			0.1		-1.20 -1.20		-4.87 -5.39		000	0.000
Unmitigated Noise	Levels (with	hout Topo and	barr	ier atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	У	Leq E	vening	Leq N	light		Ldn	CI	VEL
Autos:	66	6.8	64.9		63.1		57	.1	65.7	7	66.3
Medium Trucks:	-	1.3	59.8		53.4		51	.9	60.3	-	60.6
Heavy Trucks:		3.8	62.4		53.3		54		62.9		63.
Vehicle Noise:	69	9.3	67.6		64.0		59	.8	68.3	3	68.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70		05					10.4
			1 -1		dBA	65 0		1 6	60 dBA		dBA
	Ldn: CNFL:							15 42			
		C	IVEL:		***	9:	,		200	4	42

	FHV	VA-RD-77-108	HIGHW	/AY N	IOISE P	REDICTION	ON MO	DEL			
Road Nam	io: Existing Wi ne: Sanderson nt: n/o Stetson	Av.					Name: ımber:		o Diamante	e	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions (Hard =	10, S			
Average Daily	Traffic (Adt):	51,900 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%				edium Tru					
Peak H	lour Volume:	5,190 vehicles	3		He	eavy Truc	ks (3+ /	4xles):	15		
	hicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	50 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis	. ,	54.0 feet		١,	Vaina C	ource Ele	wation	o (in f	2041		
Centerline Dist.	to Observer:	54.0 feet		-	voise 3	Autos		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Autos m Trucks		000 297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		297 006	Grade Adj	iuctmor	t 0.0
Pa	ad Elevation:	0.0 feet			пеа	vy Trucks	. 0.	000	Grade Auj	usunen	n. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distan	ce (in	feet)		
ı	Road Grade:	0.0%				Autos	: 48.	125			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 47.	941			
	Right View:	90.0 degree	es		Hear	vy Trucks	: 47.	959			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Atte	en Be	erm Atten
Autos:	68.46	5.20		0.15	5	-1.20		-4.67	0.0	00	0.000
Medium Trucks:	79.45	-12.04		0.17	7	-1.20		-4.87	0.0	100	0.000
Heavy Trucks:	84.25	-15.99		0.17	7	-1.20		-5.39	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	· L	.eq Ev	ening/	Leq I	Vight		Ldn		CNEL
Autos:	72	.6	70.7		68.9		62.9	9	71.5	i	72.1
Medium Trucks:	66	.4	64.9		58.5		57.0)	65.4	ļ	65.7
Heavy Trucks:	67		65.8		56.8		58.0		66.4		66.5
Vehicle Noise:	74	.4	72.7		69.6		64.9	9	73.4	ŀ	73.9
Centerline Distant	ce to Noise Co	ontour (in feet)								
			L	70 c		65 0		(60 dBA		5 dBA
			Ldn:	9	-	19			424		913
		CI	VEL:	98	В	21	1		455		979

Scenario: Existing Without Project							
Road Name: Florida Av. Road Segment: e/o Warren Rd.			oject Name: ob Number:		Diamante		
SITE SPECIFIC INPUT DATA					INPUTS	}	
Highway Data	S	Site Condition	ons (Hard =	10, Sof	t = 15)		
Average Daily Traffic (Adt): 53,500 vehicles				Autos:	15		
Peak Hour Percentage: 10%			n Trucks (2)		15		
Peak Hour Volume: 5,350 vehicles		Heavy	Trucks (3+)	Axles):	15		
Vehicle Speed: 50 mph	V	/ehicle Mix					
Near/Far Lane Distance: 84 feet		Vehicle	Гуре	Day I	Evening	Night	Daily
Site Data			Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Height: 0.0 feet		Mediu	m Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0		Heav	y Trucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Barrier: 70.0 feet	٨	Voise Source	e Elevation	s (in fee	t)		
Centerline Dist. to Observer: 70.0 feet	_			000	-/		
Barrier Distance to Observer: 0.0 feet		Medium Ti		297			
Observer Height (Above Pad): 5.0 feet		Heavy Ti		006	Grade Adju	ıstment:	0.0
Pad Elevation: 0.0 feet	L.						
Road Elevation: 0.0 feet	L	ane Equiva		ce (in te 223	et)		
Road Grade: 0.0%		Medium Ti		223 065			
Left View: -90.0 degrees Right View: 90.0 degrees		Heavy Ti					
FHWA Noise Model Calculations							
VehicleType REMEL Traffic Flow Dist	ance	Finite Roa	ad Fresr	nel B	arrier Atte	n Ber	m Atten
Autos: 70.20 4.87	-0.87	· -1	.20	-4.72	0.00	00	0.00
Medium Trucks: 81.00 -12.36	-0.85	5 -1	.20	-4.88	0.00	00	0.00
Heavy Trucks: 85.38 -16.32	-0.85	5 -1	.20	-5.28	0.00	00	0.00
Unmitigated Noise Levels (without Topo and barrie							
	Leq Ev	-	Leq Night		.dn	CI	VEL
Autos: 73.0 71.1		69.3	63.3		71.9		72.
Medium Trucks: 66.6 65.1		58.7	57.2		65.6		65.
Heavy Trucks: 67.0 65.6 Vehicle Noise: 74.7 73.0		56.6 69.9	57.8 65.1		66.2 73.7		66. 74.
		09.9	65.		13.1		74.
Centerline Distance to Noise Contour (in feet)	70 d	IBA	65 dBA	60	dBA	55	dBA
			265		71		231
Ldn:	12:						

	FHV	VA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DDEL			
Road Nam	io: Existing Wine: Florida Av. nt: w/o Winche	,					Name: lumber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	Site Cor	nditions	(Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	43,000 vehicle	S					Autos:			
Peak Hour	Percentage:	10%				edium Tr					
Peak H	lour Volume:	4,300 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph			/ehicle	Mix					
Near/Far La	ne Distance:	78 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Bai	rrier Height:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	st. to Barrier:	76.0 feet			loise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet		F.	.0.00	Auto		.000	501)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet								,	
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distar	ıce (in	feet)		
i i	Road Grade:	0.0%				Auto		.422			
	Left View:	-90.0 degre				m Truck		.286			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 65	.300			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier At	en Be	rm Atten
Autos:	70.20	3.93		-1.85	;	-1.20		-4.73	0.0	000	0.00
Medium Trucks:	81.00	-13.31		-1.84	ļ.	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-17.27		-1.84	ļ	-1.20		-5.25	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atteni	uation)						
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn		NEL
Autos:	71		69.2		67.4		61.		70.		70
Medium Trucks:	64		63.1		56.8		55.	_	63.		63
Heavy Trucks:	65 72		63.6 71.0		54.6		55.		64.:		64. 72.
Vehicle Noise:					68.0	1	63.	2	71.	1	/2.
Centerline Distant	ce to Noise Co	ontour (in feet	t)	70 -	ID A	65	dBA		SO dBA		i dBA
			I do:	70 d			ава 14	_ (461		993
		_	Ldn: NFI:	10		_	14 30		461 495		.067
		C.	IVEL:	10	1		30		490	- 1	,007

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	IWAY I	NOISE P	REDICTI	ON M	ODEL			
	o: Existing Wi e: Florida Av. t: e/o Myers S	,				Project I Job Nu			o Diamant	e	
SITE S Highway Data	PECIFIC IN	IPUT DATA			Site Cor	N nditions (L INPUT	S	
Average Daily 1 Peak Hour F Peak Ho Veh	Percentage: our Volume: nicle Speed:	10% 4,920 vehicles 35 mph		-	Me	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lan	ne Distance:	84 feet		İ	Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				A edium Tri Heavy Tri		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dis	t. to Barrier:	70.0 feet		ŀ	Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. to Barrier Distance to Observer Height (A	o Observer:	70.0 feet 0.0 feet 5.0 feet		-	Mediu	Autos m Trucks y Trucks	c (0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	d Elevation:	0.0 feet		ľ	Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks y Trucks	: 56	6.223 6.065 6.081			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier At	ten Ber	m Atten
Autos:	64.30	6.06		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	75.75	-11.18		-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	81.57	-15.13		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attei	nuation)						
	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos:	68		66.4		64.6		58		67.:	_	67.8
Medium Trucks:	62		61.0		54.7		53		61.	-	61.8
Heavy Trucks:	64		63.0		53.9		55		63.		63.7
Vehicle Noise:	70		8.86		65.4		61	.0	69.	b	69.9
Centerline Distance	e to Noise Co	ontour (in feet)								
			L	_	dBA	65 0		(60 dBA		dBA
			Ldn:	-	5	14	-		301		49
		CI	VEL:	6	9	14	9		322	6	94

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MO	DEL			
Road Na	me: Stowe Rd.	,					Name: lumber:		o Diamant	Э	
SITE	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data	### age Daily Traffic (Adt): 5,000 vehicles				Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	5,000 vehicle	s					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	500 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	40 mph			Vehicle	Miv					
Near/Far L	ane Distance:	36 feet				icleType		Dav	Evenina	Niaht	Dailv
Site Data	SITE SPECIFIC INPUT DATA ay Data				*07.		Autos:	77.5%	- 3	9.6%	- /
	arriar Haimba	0.0 foot			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
						Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,											
					Noise S			٠,	eet)		
						Auto		.000			
						m Truck		.297			
	. ,	0.0 feet			Hear	vy Truck	s: 8	.006	Grade Adj	ustment.	0.0
		0.0 feet			Lane Eq	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	.704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	.501			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 43	.521			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Ber	m Atten
				0.7		-1.20		-4.63	0.0	000	0.000
Medium Trucks				0.8		-1.20		-4.87		000	0.000
Heavy Trucks	82.99	-25.64		0.8	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noi			barri	er atte	nuation)						
VehicleType				Leq E	vening		Night		Ldn		VEL
			59.7		58.0		51.	-	60.5		61.1
Medium Trucks					47.8		46.	_	54.7		54.9
Heavy Trucks Vehicle Noise			55.5 61.9		46.5 58.6		47. 54.		56.1 62.6		56.2 63.1
Centerline Dista					55.0		54.		02.0		00.1
Centennie Dista	ince to NOISE C	ontour (III leet	,	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		15	3	33		70	1	52
		C	NEL:		16	3	35		75	1	62

						REDICTI					
Scenario Road Name Road Segment		,					Name: umber:		o Diamante	е	
	PECIFIC IN	PUT DATA			u- 0				L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard :		oft = 15)		
Average Daily T	. ,	100 vehicles	3					Autos:			
Peak Hour P		10%				dium Tru					
	ur Volume:	10 vehicles	3		Hei	avy Truc	cks (3+	Axles):	15		
	icle Speed:	40 mph		V	ehicle I	Vlix					
Near/Far Lan	e Distance:	84 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						F	lutos:	77.5%	12.9%	9.6%	97.42%
Barr	ier Heiaht:	0.0 feet			Me	edium Tr	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			F	leavy Tr	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist	to Barrier:	70.0 feet		M	nisa Sr	ource El	lovatio	ne (in f	oot)		
Centerline Dist. to	Observer:	70.0 feet		-	0/36 00	Autos		.000	001)		
Barrier Distance to	Observer:	0.0 feet			Modium	n Trucks		.297			
Observer Height (A	bove Pad):	5.0 feet				y Trucks		.006	Grade Ad	iustment	0.0
Pac	d Elevation:	0.0 feet									
Road	d Elevation:	0.0 feet		L	ane Eq	uivalent	t Distar	ıce (in	feet)		
R	oad Grade:	0.0%				Autos	s: 56	.223			
	Left View:	-90.0 degree	es		Mediur	n Trucks	s: 56	.065			
1	Right View:	90.0 degree	es		Heav	y Trucks	s: 56	.081			
FHWA Noise Model	Calculations	3									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-21.44		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	77.72	-38.68		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	82.99	-42.63		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise			barrier a	ttenu	ıation)						
	.eq Peak Hou			q Eve	ening	Leq	Night		Ldn	_	NEL
Autos:	43.	-	41.1		39.3		33.		41.9		42.5
Medium Trucks:	37.		35.5		29.1		27.		36.0		36.3
Heavy Trucks:	38.		36.9		27.9		29.		37.5		37.6
Vehicle Noise:	45.	0	43.3		40.0		35	5	44.0)	44.4
Centerline Distance	e to Noise Co	ntour (in feet,)								

	FHV	VA-RD-77-108	HIGI	HWAY I	NOISE P	REDICT	TION M	ODEL			
Road Nan	io: Existing Wine: Grand Av. nt: e/o Patterso	,					t Name Number		o Diamant	е	
	Peak Hour Percentage: 100 vehicles Peak Hour Vercentage: 10% Peak Hour Vehicle Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 84 feet 10 vehicles Speed: 40 mph 10 vehicles Speed: 40 mph 10 vehicles Speed: 40 mph 40 m								L INPUT	S	
Highway Data					Site Cor	nditions	(Hard	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	100 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium T	rucks (2	Axles):	15		
Peak F	lour Volume:	10 vehicle	S		He	eavy Tru	icks (3+	- Axles):	15		
Ve	hicle Speed:	40 mph		F	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		ŀ		icleTyp	е	Dav	Evening	Night	Daily
Site Data							Autos:	77.5%	Ü	9.6%	,
Ra	rrier Heiaht	0.0 feet			M	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
						Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,		70.0 feet		-	Noise S	auraa E	lovotio	no (in f	2041		
Centerline Dist.	to Observer:	70.0 feet		-	Noise 3	Auto		0.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truci		B.006	Grade Ad	iuetmant	. 0.0
P	ad Elevation:	0.0 feet								Justinoni	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivaler	nt Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	os: 5	6.223			
	Left View:	-90.0 degre	es		Mediu	m Truci	ks: 5	6.065			
	Right View:	90.0 degre	es		Hea	vy Truci	ks: 5	6.081			
FHWA Noise Mod	el Calculation	s									
VehicleType				stance	_	Road		snel	Barrier Att		m Atten
				-0.8		-1.20		-4.72		000	0.000
Medium Trucks:				-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	82.99	-42.63		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attei	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	43	.0	41.1		39.3		33	3.3	41.9	9	42.5
Medium Trucks:			35.5		29.1			7.6	36.0		36.3
Heavy Trucks:	38		36.9		27.9			9.1	37.5		37.6
Vehicle Noise:	45	.0	43.3		40.0		35	5.5	44.0)	44.4
Centerline Distan	ce to Noise Co	ontour (in feet	t)								
				70	dBA	65	dBA	1 6	60 dBA	55	dBA

Monday, January 25, 2016

	FHW	/A-RD-77-108	HIGHV	VAY N	OISE P	REDICTIO	N MOD	EL		
Scenario: Road Name: Road Segment:		,					lame: R mber: 97		Diamante	
SITE SF	PECIFIC IN	PUT DATA				NO	DISE M	DDEI	LINPUTS	
Highway Data				S	Site Con	ditions (i	Hard = 1	0, So	ft = 15)	
Average Daily Tra Peak Hour Pe		100 vehicles 10% 10 vehicles				dium Truc avy Truck	ks (2 Ax	,	15 15 15	
	le Speed:	40 mph	,	L			0 (0171)	100).		
Near/Far Lane		84 feet		١	/ehicle I Veh	Wix icleType		av	Evening N	light Daily
Site Data								7.5%	-	9.6% 97.42%
Barrier Type (0-Wall	. ,	0.0 feet 0.0				edium Tru Heavy Tru		4.8% 6.5%		0.3% 1.84% 0.8% 0.74%
Centerline Dist.		70.0 feet		٨	loise So	ource Ele	vations	(in fe	et)	
Centerline Dist. to Barrier Distance to Observer Height (Ab	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos: m Trucks: ry Trucks:	2.29	7	Grade Adjus	tment: 0.0
Road	Flevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in f	eet)	
Ro	ad Grade:	0.0%				Autos:	56.22	23		
	Left View:	-90.0 degree	es		Mediui	m Trucks:	56.06	35		
R	Right View:	90.0 degree			Heav	y Trucks:	56.08	31		
FHWA Noise Model	Calculations	5								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	/ I	Barrier Atten	Berm Atten
Autos:	66.51	-21.44		-0.87	,	-1.20	-4	1.72	0.000	0.000
Medium Trucks:	77.72	-38.68		-0.85	i	-1.20	-4	1.88	0.000	0.000
Heavy Trucks:	82.99	-42.63		-0.85		-1.20	-6	5.28	0.000	0.000
Unmitigated Noise L										
	eq Peak Hou			Leq Ev		Leq N	_		Ldn	CNEL
Autos:	43.		41.1		39.3		33.3		41.9	42.5
Medium Trucks:	37.	-	35.5		29.1		27.6		36.0	36.3
Heavy Trucks: Vehicle Noise:	38. 45.		36.9 43.3		27.9 40.0		29.1 35.5		37.5 44.0	37.6 44.4
Centerline Distance					40.0		33.3		44.0	44.4
Cernerime Distance	to Noise Co	intour (In feet)	<u> </u>	70 d	IBA	65 d	BA	6	0 dBA	55 dBA
			Ldn:	1		3			6	13
		CI	VEL:	1		3			6	14

	FHV	VA-RD-77-108	HIG	HWAY N	OISE PI	REDICTIO	ON MO	DEL			
Road Nari	ne: Stetson Av.	(S.)				Project N Job Nu			o Diamante	Э	
	rage Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: 10% Peak Hour Volume: 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%								L INPUT	s	
Highway Data				S	ite Cor	iditions (l	Hard =	10, Sc			
	Average Daily Traffic (Adt): 100 vehicles Peak Hour Volume: 10% Peak Hour Volume: 50 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet rier Type (0-Wall, 1-Berm): 70.0 feet enterline Dist. to Observer: 70.0 feet errier Distance to Observer: 0.0 feet server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet							Autos:	15		
						dium Truc			15		
			3		He	avy Truck	is (3+)	4xles):	15		
	Peak Hour Volume: 10 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet rrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet parter Distance to Observer: 0.0 feet server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet			V	ehicle	Mix					
Near/Far La	Average Daily Traffic (Adt): Peak Hour Volume: Peak Hour Volume: 10 vehicles Peak Hour Volume: 10 vehicles Peak Hour Volume: 10 vehicles 50 mph Neat/Far Lane Distance: 84 feet Barrier Height: 10 0.0 feet 10 vehicles Centerline Dist. to Barrier: 10 0.0 feet 10 vehicles					icleType		Day	Evening	Night	Daily
Site Data	Neway Data Average Daily Traffic (Adt):					Αι	ıtos:	77.5%	12.9%	9.6%	97.42%
Ва	Vehicle Speed: 50 mph 84 feet				М	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			- 1	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline D	ist. to Barrier:	70.0 feet			laica S	ource Ele	vation	c (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		,	orse si	Autos:		000	(
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks:		297			
Observer Height						n Trucks. v Trucks:		297 006	Grade Adj	iuetmant	- 0.0
F	Pad Elevation: 0.0 feet				rica	ry Trucks.	0.	000	Orace Au	usuncin	. 0.0
Ro					ane Eq	uivalent l	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	56.	223			
	Left View:	-90.0 degree	es		Mediu	m Trucks:	56.	065			
	Right View:	90.0 degree	es		Heav	y Trucks:	56.	081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Atte	en Bei	rm Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atteni	ıation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq N	light		Ldn	С	NEL
Autos:	45	.7	43.8		42.1		36.0)	44.6	3	45.2
Medium Trucks:	39	.3	37.8		31.4		29.9	9	38.4	1	38.6
Heavy Trucks:	39	.7	38.3		29.3		30.	5	38.9)	39.0
Vehicle Noise:	47	.4	45.7		42.6		37.8	3	46.4	1	46.9
Centerline Distan	ice to Noise Co	ontour (in feet,)								
				70 d	BA	65 di	BA	6	60 dBA		dBA
			Ldn:	2		4			9		19

	FHV	VA-RD-77-108	HIGI	N YAWH	DISE P	REDICT	ION MO	DDEL			
Road Nan	io: Existing Wine: Stetson Av. nt: w/o Californ	(S.)					t Name: lumber:		o Diamanto	е	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Cor	ditions	(Hard :		oft = 15)		
Average Daily		100 vehicle	S					Autos:			
	Percentage:	10%				dium Tr	,				
	lour Volume:	10 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
	hicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-VI		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	70.0 feet			laica S	ource E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		-	UISE S	Auto		.000	cei)		
Barrier Distance	Barrier Distance to Observer: 0.0 fee				Modiu	m Truck		.297			
Observer Height (Above Pad): 5.0 fe						vy Truck	-	.006	Grade Ad	iustment	. 0.0
Pad Elevation: 0.0 fe						•					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degre	es		Hear	y Truck	s: 56	.081			
FHWA Noise Mod				<u>'</u>							
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	-22.41		-0.87		-1.20		-4.72		000	0.000
Medium Trucks: 81.00 -39.65 Heavy Trucks: 85.38 -43.60			-0.85		-1.20		-4.88		000	0.000	
			-0.85		-1.20		-5.28	0.0	000	0.000	
Unmitigated Noise Levels (without Topo and bar			barri								
VehicleType Leq Peak Hour Leq Day				Leq Ev		Leq	Night		Ldn		NEL
Autos: 45.7 43.					42.1			-	44.6		45.
Medium Trucks: 39.3 37.8							38.4		38.		
Heavy Trucks: 39.7 38.3									39.		
Vehicle Noise:	• • •	• •	45.7		42.6 37.8 46.4 46.					46.9	
Centerline Distan	ce to Noise Co	ontour (in feet)	770		-	10.4				10.4
				70 dBA 65 dBA 60 dBA 55 dBA					aBA		

	FHV	VA-RD-77-108	HIGH	I YAWH	NOISE P	REDICT	ION M	ODEL			
Road Nan	ne: Stetson Av.	(S.)					t Name. Iumber		o Diamant	e	
	Scenario: Existing Without Project Road Name: Stetson Av. (S.) coad Segment: e'o SR-79 NB Ramps SITE SPECIFIC INPUT DATA ay Data Brage Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Vehicle Speed: 50 mph Vehicle S				04- 0				L INPUT	S	
	vay Data verage Daily Traffic (Adt): Peak Hour Percentage: 100 vehicles Peak Hour Volume: 10 vehicles 10 vehicles 10 vehicles 50 mph 84 feet Barrier Height: er Type (0-Wall, 1-Berm): Conterline Dist. to Barrier: 70.0 feet rier Distance to Observer: rier Distance to Observer: er ver Height (Above Pad): Pad Elevation: Road Grade: Left View: 90.0 degrees				Site Cor	iaitions	(Hara				
	. ,		S					Autos:			
								Axles):			
			S		He	eavy Iru	cks (3+	Axles):	15		
					Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		Ī	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ва	rrier Heiaht:	0.0 feet			М	ledium 7	rucks:	84.8%	4.9%	10.3%	1.84%
		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet		-	Noise S	ourco E	lovatio	ne (in f	not)		
Centerline Dist.	to Observer:	70.0 feet		ŀ	NOISE S	Auto		0.000	bei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck	-	3.006	Grade Ad	liustment	- 00
P	ad Elevation:	0.0 feet		L						juou mom	. 0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen			feet)		
	Road Grade:					Auto		5.223			
	Left View:	-90.0 degre	es		Mediu	m Truck		6.065			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 56	6.081			
FHWA Noise Mod	lel Calculation										
VehicleType			Dis	stance		Road	Fres		Barrier Att		rm Atten
				-0.8		-1.20		-4.72		000	0.000
Medium Trucks:				-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:				-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Nois			barri	er atter	nuation)						
VehicleType				Leq E	vening		Night		Ldn		NEL
					42.1		36		44.6	-	45.2
Medium Trucks:					31.4		29		38.4		38.6
Heavy Trucks:			38.3		29.3		30		38.9		39.0
Vehicle Noise:	• •		45.7		42.6	i	37	.8	46.4	4	46.9
Centerline Distan	ce to Noise Co	ontour (in feet)	70	-/D.4	-	-10.4		20 -/04		-/DA
					dBA		dBA		60 dBA		dBA

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICT	ION MODEL		
Road Name	e: Stetson Av.	(S.)				Name: Rand lumber: 9792		
SITES	SPECIFIC IN	PUT DATA					EL INPUTS	
Highway Data	Verage Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Vehicle Speed: Somph Mear/Far Lane Distance: Satisfies Somph Mear/Far Lane Distance: Satisfies Somph Mear/Far Lane Distance: Satisfies Somph Mear/Far Lane Distance: On feet				nditions	(Hard = 10, 3	Soft = 15)	
Average Daily	Traffic (Adt):	100 vehicles				Auto	3: 15	
Peak Hour	Percentage:	10%		Me	edium Tr	ucks (2 Axles): 15	
Peak H	our Volume:	10 vehicles		He	eavy Tru	cks (3+ Axles): 15	
Vel	nicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lar	ne Distance:	84 feet			icleType	Day	Evening	Night Daily
Site Data						Autos: 77.5	-	9.6% 97.42%
Rar	rier Heiaht	0.0 feet		М	edium T	rucks: 84.8	% 4.9%	10.3% 1.84%
					Heavy T	rucks: 86.5	% 2.7%	10.8% 0.74%
				Noise S	ource E	levations (in	feet)	
		70.0 feet			Auto	-	,	
				Mediu	m Truck	s: 2.297		
	,			Hear	vy Truck	s: 8.006	Grade Adju	stment: 0.0
						4 Di-4 //-		
				Lane Eq		t Distance (in s: 56.223	i reet)	
F				Madiu	Auto m Truck			
					vy Truck			
			Distance	Einito	Road	Fresnel	Barrier Atte	n Berm Atten
			-0.		-1.20	-4.72		
Medium Trucks:			-0.		-1.20	-4.88		
Heavy Trucks:	85.38	-43.60	-0.	85	-1.20	-5.28	0.00	0.000
Unmitigated Noise	Levels (with	out Topo and I	barrier atte	enuation)				
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq	Night	Ldn	CNEL
			13.8	42.1		36.0	44.6	45.2
Medium Trucks:			87.8	31.4		29.9	38.4	38.6
Heavy Trucks:	39		38.3	29.3		30.5	38.9	39.0
Vehicle Noise:	47		15.7	42.6		37.8	46.4	46.9
Centerline Distanc	e to Noise Co	ntour (in feet)) dBA	05	dBA	00 -104	55 dBA
		,	dn:	2 2		dBA 4	60 dBA 9	19
		_	un. IFI :	2		4	9	20
		Ch		-		-	3	20

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION M	DDEL			
Road Nam	io: Existing Wit e: Stetson Av. nt: e/o Street "0	(S.)					Name. lumber.		o Diamant	е	
SITE :	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	s	
					Site Coi	luluons	(Hai u				
Average Daily	. ,	600 vehicle	S					Autos:	15		
	Percentage:	10%				edium Tr			15		
	lour Volume:	60 vehicle	S		He	eavy Tru	CKS (3+	Axies):	15		
	hicle Speed:	50 mph		Γ	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		Γ	Veh	icleType	9	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet		1	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	70.0 feet				Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pad):	5.0 feet			Hear	vy Truck	s: 8	.006	Grade Ad	liustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		L		•				,	
Ros	ad Elevation:	0.0 feet			Lane Eq				feet)		
I	Road Grade:	0.0%				Auto		5.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 56	6.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	inel	Barrier Att	en Be	rm Atten
Autos:	70.20	-14.63		-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	81.00	-31.87		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-35.82		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leg E	vening	Leq	Night		Ldn		NEL
Autos:	53.	5	51.6		49.8		43	.8	52.4	4	53.0
Medium Trucks:	47.	.1	45.6		39.2		37	.7	46.	1	46.4
Heavy Trucks:	47.		46.1		37.0		38		46.		46.8
Vehicle Noise:	55.	.2	53.5		50.4		45	.6	54.	2	54.6
Centerline Distance	ce to Noise Co	ntour (in feet)	70	dBA	65	dBA	-	0 dBA		5 dBA
			Ldn:	70 (<i>ав</i> а 13		29) 50	62
			Lan: NFI:		o 7		13 14		31		66
		C	vCL.	-	,	1	1-4		J1		UU

FH	WA-RD-77-108 HIG	HWAY N	OISE PRE	DICTION M	ODEL		
Scenario: Existing W Road Name: Stetson A Road Segment: w/o Warre	/. (S.)			roject Name. Job Number.		no Diamante	
SITE SPECIFIC II	NPUT DATA			NOISE	MODE	EL INPUTS	
Highway Data		S	Site Condit	tions (Hard	= 10, S	oft = 15)	
Average Daily Traffic (Adt):	2,400 vehicles				Autos	: 15	
Peak Hour Percentage:	10%		Mediu	ım Trucks (2	Axles)	: 15	
Peak Hour Volume:	240 vehicles		Heav	y Trucks (3+	Axles)	: 15	
Vehicle Speed:	50 mph	V.	/ehicle Mix	,			
Near/Far Lane Distance:	84 feet	F.	Vehicle		Dav	Evening I	Night Daily
Site Data				Autos:	77.59		9.6% 97.42%
Barrier Height:	0.0 feet		Medi	um Trucks:	84.89	6 4.9%	10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		Hea	avy Trucks:	86.5%	6 2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	70.0 feet		Voise Sou	rce Elevatio	ns (in i	feet)	
Centerline Dist. to Observer:	70.0 feet	F	10100 0041		0.000	001)	
Barrier Distance to Observer:	0.0 feet		Medium		2.297		
Observer Height (Above Pad):	5.0 feet		Heavy		3.006	Grade Adjus	stment: 0.0
Pad Elevation:	0.0 feet	١.					
Road Elevation:	0.0 feet	<u> </u>	.ane Equiv	alent Dista		teet)	
Road Grade:	0.0%		A decellorum		3.223		
Left View:	-90.0 degrees		Medium		6.065 6.081		
Right View:	90.0 degrees		Heavy	TTUCKS. St	0.001		
FHWA Noise Model Calculation		·					
VehicleType REMEL		istance	Finite Ro			Barrier Atter	
Autos: 70.20		-0.87		1.20	-4.72	0.00	
Medium Trucks: 81.00		-0.85		1.20	-4.88		
Heavy Trucks: 85.38		-0.85		1.20	-5.28	0.00	0.000
Unmitigated Noise Levels (with				I Mintel		Lata	ONE
VehicleType Leq Peak Ho Autos: 5	ur Leq Day 9.5 57.6	Leq Ev	55.9	Leq Night 49	0	Ldn 58.4	CNEL 59.0
	3.1 51.6		45.2	49		52.2	59.0
	3.5 52.1		43.1	44		52.7	52.4
	1.2 59.5		56.4	51		60.2	60.7
Centerline Distance to Noise C	contour (in feet)						
					-1		
		70 d	IBA	65 dBA		60 dBA	55 dBA
	Ldn:	70 d		65 dBA 33		72	55 dBA 155

	FHV	VA-RD-77-108	HIGH	NAY N	OISE P	REDICT	TION MOI	DEL			
Road Name:	Stetson Av.	(S.)					t Name: I Number: 9		o Diamante	•	
SITE SF	Scenario: Existing Without Project Road Name: Stetson Av. (S.) and Segment: e/o Mustang Wy.						NOISE N	IODE	L INPUTS	•	
Highway Data	Road Name: Stetson Av. (S.)					ditions	(Hard =	10, S	oft = 15)		
Peak Hour Pe	ercentage:	10%					rucks (2 A Icks (3+ A	,	15		
		50 mph		ν	ehicle	Mix					
Near/Far Lane	Distance:	84 feet		<u> </u>		icleTyp	е	Dav	Evening	Night	Daily
Site Data								77.5%	-	9.6%	,
Rarrie	or Hoight	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
						Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
				٨	loise S	ource E	levation	s (in f	eet)		
						Auto	os: 0.0	000	,		
					Mediu	m Truck	ks: 2.2	297			
	,				Heav	y Truck	ks: 8.0	006	Grade Adju	ustment	0.0
				-				,,			
				L	ane Eq		t Distanc		reet)		
					A 4 15	Auto m Truck					
						y Truck					
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
	70.20	-9.86		-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks:				-0.85		-1.20		-4.88	0.0		0.000
Heavy Trucks:				-0.85		-1.20		-5.28	0.0	00	0.000
	•		_	Leq Ev		Leq	Night		Ldn		NEL
			56.4		54.6		48.6		57.2		57.8
Medium Trucks:			50.3		44.0		42.4		50.9		51.
Vehicle Noise:			58.2		41.8 55.2		43.1 50.4		51.4 58.9		51.6 59.4
Centerline Distance	to Noise Co	ontour (in feet	•)								
Contonino Distance		mou (m reet	,	70 di	BA	65	dBA	-	60 dBA	55	dBA
			Ldn:	13	}		28		60	1	28
		C	NEL:	14			30		64	1	38

Monday, January 25, 2016

FH	WA-RD-77-108 HI	IGHWAY	NOISE P	REDICTIO	N MODE	L		
Road Name: Stetson Av	r. (S.)				lame: Ra mber: 979	ncho Diamani 92	le	
SITE SPECIFIC II	NPUT DATA			NC	DISE MO	DEL INPUT	s	
Highway Data	Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance: Data Barrier Height: Trier Type (0-Wall, 1-Berni): Centerline Dist. to Barrier: Denterline Dist. to Barrier: Denterline Dist. to Observer: Server Height (Above Pad): Server Height (Above Pad): Road Elevation: Road Elevation: Road Grade: Left View: Right View: 90.0 degrees				Hard = 10	, Soft = 15)		
Average Daily Traffic (Adt):	100 vehicles				Au	tos: 15		
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 Axle	es): 15		
Peak Hour Volume:	10 vehicles		He	avy Truck	s (3+ Axle	es): 15		
Vehicle Speed:	50 mph		Vehicle I	Miv				
Near/Far Lane Distance:	84 feet			icleType	De	y Evening	Night	Daily
Site Data						.5% 12.9%	9.6%	97.42%
Barrier Height.	0.0 foot		Me	edium Tru		.8% 4.9%	10.3%	1.84%
				leavy Tru		.5% 2.7%	10.8%	0.74%
** '								
			Noise So	ource Ele				
				Autos:				
				m Trucks:				
• '			Heav	y Trucks:	8.006	Grade Ad	ljustment.	0.0
Road Elevation:			Lane Eq	uivalent l	Distance	(in feet)		
Road Grade:				Autos:	56.223	3		
Left View:			Mediui	m Trucks:	56.06	5		
Right View:			Heav	y Trucks:	56.08	1		
FHWA Noise Model Calculation								
VehicleType REMEL		Distance		Road	Fresnel	Barrier At		m Atten
Autos: 70.20		-0.		-1.20	-4.		000	0.000
Medium Trucks: 81.00		-0.		-1.20			000	0.000
Heavy Trucks: 85.38	-43.60	-0.	85	-1.20	-5.	28 0.	000	0.000
Unmitigated Noise Levels (with								
VehicleType Leq Peak Ho			Evening	Leq N	_	Ldn		VEL
	5.7 43		42.1		36.0	44.	-	45.2
	9.3 37		31.4		29.9	38.		38.6
	9.7 38 7.4 45		29.3 42.6		30.5 37.8	38. 46.		39.0 46.9
		.,	42.0		57.0	40.	_	40.5
Centerline Distance to Noise C	ontour (in feet)	70) dBA	65 di	BA	60 dBA	55	dBA
	Ld	n:	2	4		9		19

	FHW	/A-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION MO	DDEL			
Road Nam	io: Existing Wit ne: Stetson Av. nt: e/o Fisher S	(S.)					Name: lumber:		o Diamant	е	
SITE :	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	S	
	T # (4 ti)	400 111			One our	iditions	(mara .				
Average Daily	. ,	100 vehicle	S			-#: T		Autos:	15 15		
	Percentage:	10%				dium Tr			15		
	lour Volume:	10 vehicle	S		HE	eavy Tru	CKS (3+	Axies):	15		
	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet		F		Auto	s: 0	.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (5.0 feet			Hear	vy Truck	s: 8	.006	Grade Ad	justmen	t: 0.0
Pa	ad Elevation:	0.0 feet		L		•					
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen		_ •	feet)		
ı	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre	es			m Truck		.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mode	el Calculations	3									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-22.41		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-39.65		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-43.60		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise											
VehicleType	Leq Peak Hou	., .,	_	Leq E	vening		Night		Ldn		NEL
Autos:	45.		43.8		42.1		36.		44.6		45.2
Medium Trucks:	39.	-	37.8		31.4		29.	-	38.4		38.6
Heavy Trucks: Vehicle Noise:	39. 47.	•	38.3 45.7		29.3 42.6		30.	-	38.9 46.4		39.0 46.9
Centerline Distant					72.0		31.		70.	•	70.3
Centerine Distant	ce to worse Co	inour (in reet		70 (dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:	2	2		4		9		19
	CNEL:				2 4 9			20			

	FHW.	A-RD-77-108	HIGH	HWAY N	OISE P	REDICT	TION MOD	DEL			
Scenario: Existing Road Name: Stetsor Road Segment: e/o Car	Av.	,					t Name: F Number: 9		o Diamante	;	
SITE SPECIFIC	INP	UT DATA							L INPUTS	3	
Highway Data				5	Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad Peak Hour Percentag Peak Hour Volum	9: 9: 1	10% ,580 vehicles					rucks (2 A icks (3+ A				
Vehicle Spee		50 mph		١	/ehicle	Mix					
Near/Far Lane Distance	9.	84 feet			Veh	icleTyp	e i	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Heigh	<i>t</i> ·	0.0 feet			М	edium 7	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Bern		0.0				Heavy 1	rucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrie	*	70.0 feet			laisa S	ourco E	levations	· (in f	not)		
	er: ()): n: n: e: w: w:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree -0.42 -17.66	es	stance -0.87 -0.85	Hear	Auto m Truck vy Truck uivaler Auto m Truck vy Truck Road -1.20 -1.20	(s: 2.2 (s: 8.0 ot Distance os: 56.2 (s: 56.0 ot Fresne	97 06 e (in 223 065 081	Grade Adji feet) Barrier Atte 0.0 0.0	en Be	rm Atten 0.000 0.000
Heavy Trucks: 85	.38	-21.62		-0.85	;	-1.20		5.28	0.0	00	0.000
Unmitigated Noise Levels (vithou	ut Topo and	barri	er atten	uation)						
VehicleType Leg Peak		Leg Day	_	Leg Ev		Lea	Night		Ldn	С	NEL
Autos:	67.7		65.8		64.0		58.0		66.6		67.2
Medium Trucks:	61.3		59.8		53.4		51.9		60.3		60.6
Heavy Trucks:	61.7		60.3		51.3		52.5		60.9		61.0
Vehicle Noise:	69.4		67.7		64.6		59.8		68.4		68.8
Centerline Distance to Nois	e Con	tour (in feet)								
		,		70 a	BA .	65	dBA	6	60 dBA	55	dBA
			Ldn:	55	5	1	118		253	· ·	546
	CNEL:				59 126 272				587		

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE P	REDICTI	ION MOI	DEL			
Scenario: Road Name: Road Segment:	Stetson Av.						Name: I umber: 9		Diamante	ė	
SITE SI	PECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUTS	3	
Highway Data				,	Site Cor	nditions	(Hard =	10, Sc	ft = 15)		
Average Daily Tr Peak Hour Pe Peak Hou		12,600 vehicle 10% 1,260 vehicle				edium Tru eavy Truc	ucks (2 A	,	15 15 15		
Vehic	cle Speed:	50 mph			Vehicle	Miv					
Near/Far Lane	Distance:	84 feet		H		nicleType		Dav	Evening	Night	Daily
Site Data					V C /			77.5%	0	9.6%	,
	er Height:	0.0 feet			M	ledium Tr	rucks:	84.8%		10.3%	
Barrier Type (0-Wal	I, 1-Berm):	0.0				Heavy Tr	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist.		70.0 feet		1	Noise S	ource El	evation	s (in fe	et)		
Centerline Dist. to		70.0 feet				Autos	s: 0.0	000			
Barrier Distance to		0.0 feet			Mediu	m Trucks	s: 2.2	297			
Observer Height (Al	,	5.0 feet				vy Trucks		006	Grade Adi	ustmen	t: 0.0
	Elevation:	0.0 feet						-			
Road	Elevation:	0.0 feet		1	Lane Ec	uivalent			eet)		
Ro	ad Grade:	0.0%				Autos					
E	Left View: Right View:	-90.0 degre				ım Truck: vy Truck:					
						.,					
VehicleType	REMEL	Traffic Flow	Die	tance	Cinite	Road	Fresn	ol	Barrier Atte	on Bo	rm Atten
Autos:	70.20	-1.40	DIS	-0.87	_	-1.20		-4.72	0.0		0.000
Medium Trucks:	81.00	-18.64		-0.8		-1.20		-4.88	0.0		0.000
Heavy Trucks:	85.38	-22.60		-0.8		-1.20		-5.28	0.0		0.000
Unmitigated Noise I	evels (with	out Topo and	barrie	er atten	uation)						
	eq Peak Hou			Leg E		Leg	Night		Ldn	C	NEL
Autos:	66	.7	64.8		63.1		57.0		65.6	i	66.2
Medium Trucks:	60	.3	58.8		52.4		50.9		59.4		59.6
Heavy Trucks:	60	.7	59.3		50.3		51.5		59.9	1	60.0
Vehicle Noise:	68	.4	66.7		63.6	;	58.8		67.4		67.9
Centerline Distance	to Noise Co	ontour (in feet)								
		-	П	70 c	dBA	65	dBA	6	0 dBA	55	5 dBA
			Ldn:	4	7	10	01		218		469
		C	NEL:	5	0	10	09		234		504

Monday, January 25, 2016

Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet Heavy Trucks: 84.8% 4.9% 10.3% 1.84 Heavy Trucks: 86.5% 2.7% 10.8% 0.74 Noise Outcome Dist. to Observer: 70.0 feet Centerline Dist. to Observer: 70.0 feet Autos: 0.00 Medium Trucks: 8.000 Grade Adjustment: 0.0 Medium Trucks: 2.297 Heavy Trucks: 8.000 Grade Adjustment: 0.0 Medium Trucks: 2.297 Heavy Trucks: 8.000 Grade Adjustment: 0.0 Medium Trucks: 2.297 Heavy Trucks: 8.000 Grade Adjustment: 0.0 Medium Trucks: 56.065 Medium Trucks: 56.065 Heavy Trucks: 56.065 Heavy Trucks: 56.065 Heavy Trucks: 56.065 Heavy Trucks: 79.45 -12.60 -0.85 -1.20 -4.72 0.000 0.00 Medium Trucks: 79.45 -12.60 -0.85 -1.20 -4.72 0.000 0.00 Medium Trucks: 79.45 -12.60 -0.85 -1.20 -4.72 0.000 0.00 Medium Trucks: 79.45 -12.60 -0.85 -1.20 -4.88 0.000 0.00 0.00 Medium Trucks: 79.45 -12.60 -0.85 -1.20 -4.88 0.000 0.00 0.00 Medium Trucks: 79.45 -12.60 -0.85 -1.20 -4.88 0.000 0.00		FH	WA-RD-77-108	HIGH	I YAWI	NOISE P	REDICTI	ON M	DDEL			
Medium Trucks Autos: 15 Autos: 15	Road Na	me: Stetson A	v. ,							no Diamant	е	
Average Daily Traffic (Adt): 45,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,560 vehicles Vehicle Speed: 45 mph Wear/Far Lane Distance: 84 feet Wehicle Type Day Evening Night Dail Vehicle Type Day Evening Night Dail Vehicle Type Night Night Dail Night Dail Night Night Dail Night Nigh		SPECIFIC I	NPUT DATA			Site Cor					S	
Site Data	Average Daily Peak Hou Peak V	r Percentage: Hour Volume: ehicle Speed:	10% 4,560 vehicle 45 mph			Me He Vehicle	edium Tru eavy Truc Mix	ucks (2 cks (3+	Autos Axles) Axles)	: 15 : 15 : 15		1 6 7
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Medium Trucks: 8.006 Grade Adjustment: 0.0 feet Autos: 6.066 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Autos: 6.065 Medium Trucks: 8.006 Grade Adjustment: 0.0 feet Autos: 6.065 Medium Trucks: 8.006 Grade Adjustment: 0.0 feet Autos: 6.065 Medium Trucks: 8.006 Grade Adjustment: 0.0 feet Autos: 6.065 Medium Trucks: 6.065 Heavy Trucks: 6.065 Heavy Trucks: 6.065 Heavy Trucks: 6.065 Heavy Trucks: 6.065 Heavy Trucks: 6.065 Heavy Trucks: 6.085 1.20 4.88 0.000 0.00 0.00 Medium Trucks: 84.25 -16.56 -0.85 -1.20 -5.28 0.000 0.00 0.00 Medium Trucks: 84.25 -16.56 -0.85 -1.20 -5.28 0.000 0.00						ven						. ,
Centerline Dist. to Observer: Autos: 0.000									,	6 4.9%		1.84%
Autos: 0.000					ı	Noise S	ource El	evatio	ns (in t	eet)		
Road Grade:	Barrier Distance Observer Height	e to Observer: (Above Pad):	0.0 feet 5.0 feet		Ī		m Trucks	s: 2	.297	Grade Ad	ljustmen	t: 0.0
Left View:	Re	oad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
VehicleType		Left View:	-90.0 degre				m Trucks	s: 56	6.065			
Autos: 68.46 4.64 -0.87 -1.20 -4.72 0.000 0.0	FHWA Noise Mo	del Calculation	ns									
Medium Trucks: 79.45	VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	ten Be	rm Atten
Heavy Trucks: 84.25												0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 71.0 69.1 67.4 61.3 69.9 77. Medium Trucks: 64.8 63.3 56.9 55.4 63.8 6.6 Heavy Trucks: 65.6 64.2 55.2 56.4 64.8 66. Vehicle Noise: 72.9 71.1 68.0 63.3 71.8 77. Centerline Distance to Noise Contour (In feet) Ldn: 93 200 431 929						-						0.000
Autos: 71.0 69.1 67.4 61.3 69.9 70 Medium Trucks: 64.8 63.3 56.9 55.4 63.8 6 Heavy Trucks: 65.6 64.2 55.2 56.4 64.8 6 Vehicle Noise: 72.9 71.1 58.0 63.3 71.8 77 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA Ldn: 93 200 431 929	Unmitigated Nois	se Levels (with	hout Topo and	barri	er atter	nuation)						
Medium Trucks: 64.8 63.3 56.9 55.4 63.8 6.8 Heavy Trucks: 65.6 64.2 55.2 56.4 64.8 6.8 Vehicle Noise: 72.9 71.1 68.0 63.3 71.8 72. Centerline Distance to Noise Contour (in feet) Image: Contour Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 93 200 431 929					Leq E							
Heavy Trucks: 65.6 64.2 55.2 56.4 64.8 64.5											-	70.5
Vehicle Noise: 72.9 71.1 68.0 63.3 71.8 73.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 93 200 431 929											-	64.1
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 93 200 431 929											_	64.9 72.3
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 93 200 431 929	Centerline Distar	nce to Noise C	Contour (in fee	t)								
			, ,	_			65	dBA		60 dBA	55	dBA
CNEL: 100 215 463 997					-		_					
			C	NEL:	1	100 215 463			9	997		

	FHW	/A-RD-77-108	HIGH	WAY N	IOISE P	REDICTION	ON MO	DEL				
Road Nan	io: Existing Wit ne: 9th St. nt: w/o Winche	,				Project I Job Nu			o Diamante	е		
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data					Site Cor	nditions (Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	2,500 vehicles	S					Autos:	15			
Peak Hour	Percentage:	10%			Me	edium Tru	cks (2 i	4xles):	15			
Peak F	lour Volume:	250 vehicles	S		He	eavy Truc	ks (3+)	Axles):	15			
Ve	hicle Speed:	25 mph		-	Vehicle	Miv						_
Near/Far La	ne Distance:	84 feet		-		nicleType		Dav	Evenina	Niah	t Dai	lv
Site Data							utos:	77.5%	- 3	9.6		_
Ra	rrier Heiaht:	0.0 feet			M	ledium Tru	ucks:	84.8%	4.9%	10.3	% 1.8	4%
Barrier Type (0-W		0.0				Heavy Tro	ucks:	86.5%	2.7%	10.8	% 0.7	4%
Centerline Di	st. to Barrier:	70.0 feet			Naisa S	ource Ele	vation	e (in f	oof)			_
Centerline Dist.	to Observer:	70.0 feet		ľ	110/30 0	Autos		000	JC1)			_
Barrier Distance	to Observer:	0.0 feet			Modis	m Trucks		297				
Observer Height	(Above Pad):	5.0 feet				vy Trucks		297 006	Grade Ad	iuotmo	nt 00	
P	ad Elevation:	0.0 feet			пеа	vy Trucks	. 0.	000	Grade Au	usune	n. 0.0	
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	: 56.	223				
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	065				
	Right View:	90.0 degree	es		Hea	vy Trucks	: 56.	081				
FHWA Noise Mod	el Calculations	3										_
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en E	Berm Atte	en
Autos:	58.73	-5.42		-0.8	7	-1.20		-4.72	0.0	000	0.0	000
Medium Trucks:	70.80	-22.66		-0.8	5	-1.20		-4.88	0.0	000	0.0	000
Heavy Trucks:	77.97	-26.61		-0.8	5	-1.20		-5.28	0.0	000	0.0	000
Unmitigated Nois	e Levels (witho	out Topo and	barrie	r atten	uation)							_
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq N	Vight		Ldn		CNEL	
Autos:	51.	_	49.3		47.6		41.		50.2			0.8
Medium Trucks:	46.	1 .	44.6		38.2		36.7	7	45.1		4	5.4
Heavy Trucks:	49.	*	47.9		38.9		40.		48.5			8.6
Vehicle Noise:	54.	1	52.5		48.6		44.0	6	53.1		5	3.5
Centerline Distan	ce to Noise Co	ntour (in feet)									
				70 d		65 a		6	60 dBA	- 4	55 dBA	
			Ldn:	5		11			24		53	
		CI	VEL:	6	3	12	2		26		56	

	FHWA-F	RD-77-108 HIGI	HWAY N	OISE PI	REDICT	ION MODEL		
Scenario: E Road Name: V Road Segment: s						t Name: Rand lumber: 9792	ho Diamante	
SITE SPE	CIFIC INPU	T DATA				NOISE MOD	EL INPUTS	
Highway Data			5	Site Cor	ditions	(Hard = 10, S	Soft = 15)	
Average Daily Trafi Peak Hour Pero Peak Hour	entage:	00 vehicles 10% 50 vehicles				Autos rucks (2 Axles rcks (3+ Axles): 15	
Vehicle	Speed:	55 mph	,	/ehicle	Miv			
Near/Far Lane D	istance:	36 feet	Η,		icleType	e Dav	Evening	Night Daily
Site Data				*011		Autos: 77.5		9.6% 97.42%
Parrier	Heiaht:	0.0 feet		М	edium 7	rucks: 84.8		10.3% 1.84%
Barrier Type (0-Wall,		0.0		1	leavy 7	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dist. to	Barrier: 4	7.0 feet		Voise S	ource E	levations (in	feet)	
Road E Road Le Rig	bserver: ve Pad): levation: levation: d Grade: eft View: 9	7.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 degrees 0.0 degrees	L	Heav .ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2.297 (s: 8.006 at Distance (in (s: 43.704 (s: 43.501		stment: 0.0
VehicleType		affic Flow Di	stance	Einito	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	71.78	1.07	0.77		-1.20	-4.63		
Medium Trucks:	82.40	-16.17	0.80)	-1.20	-4.87		
Heavy Trucks:	86.40	-20.13	0.80)	-1.20	-5.46	0.00	0.000
Unmitigated Noise Le	vels (without	Topo and barri	er atten	uation)				
VehicleType Leq	Peak Hour	Leq Day	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos:	72.4	70.5		68.8		62.7	71.3	71.9
Medium Trucks:	65.8	64.3		58.0		56.4	64.9	65.1
Heavy Trucks:	65.9	64.5		55.4		56.7	65.0	65.1
Vehicle Noise:	74.0	72.2		69.3		64.4	73.0	73.4
Centerline Distance to	Noise Conto	ur (in feet)						
			70 a			dBA	60 dBA	55 dBA
	Ldn:					742		
		CNEL:	80)	1	72	370	798

	FHV	VA-RD-77-108	HIGH	I YAWH	NOISE P	REDICT	ION MC	DEL			
Road Nan	rio: Existing Wi ne: 9th St. ent: e/o Winche	,					Name: lumber:		no Diamant	е	
	SPECIFIC IN	IPUT DATA			0': 0				L INPUT	S	
Highway Data					Site Cor	iditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	600 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	Hour Volume:	60 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	25 mph		F	Vehicle	Miv					
Near/Far La	ne Distance:	84 feet		ŀ		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0				Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	70.0 feet		F	Noise S	ouraa E	lovotion	ao (in f			
Centerline Dist.	to Observer:	70.0 feet		F	Noise 3	Auto		.000	eet)		
Barrier Distance	to Observer:	0.0 feet			A deceller	Auto m Truck		.000			
Observer Height	(Above Pad):	5.0 feet							Crodo Ad	ii rotmo na	
P	ad Elevation:	0.0 feet			Heal	/y Truck	S: 8	.006	Grade Ad	jusimem	. 0.0
Ro	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distar	ice (in	feet)		
	Road Grade:	0.0%		Ī		Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	.081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten
Autos:	58.73	-11.62		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	70.80	-28.86		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	77.97	-32.81		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barri	er atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Daj	y	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	45	.1	43.2		41.4		35.	3	44.0)	44.6
Medium Trucks:	39	.9	38.4		32.0		30.	5	38.9	9	39.2
Heavy Trucks:	43	.1	41.7		32.7		33.	9	42.3	3	42.4
Vehicle Noise:	47	.9	46.3		42.4	•	38.	4	46.9	9	47.3
Centerline Distan	ce to Noise Co	ontour (in fee	t)								
				70	dBA	65	dBA	1 6	60 dBA	55	dBA

Monday, January 25, 2016

	FH'	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICTI	ON MO	DDEL			
	e: Existing W e: Wincheste t: n/o 9th St.	r Rd.					Name: umber:		no Diamant	е	
	PECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard :	= 10, S	oft = 15)		
Average Daily T Peak Hour F Peak Ho		28,700 vehicles 10% 2,870 vehicles				dium Tru avy Truc		/	15		
Veh	icle Speed:	45 mph			ehicle	Miss					
Near/Far Lan	e Distance:	36 feet				icleType		Dav	Evening	Night	Daily
Site Data					VCII		lutos:	77.5%		9.69	
	alan Halada	0.0 feet			М	edium Tı		84.89		10.39	
Barrier Type (0-Wa		0.0			ı	Heavy Ti	ucks:	86.5%	6 2.7%	10.89	
Centerline Dis		47.0 feet		٨	loise So	ource El	evatio	ns (in f	eet)		
Centerline Dist. to Barrier Distance to		47.0 feet 0.0 feet				Autos		.000	,		
Observer Height (A	Above Pad):	5.0 feet				m Trucks		.297	0		-4: 0.0
	d Elevation:	0.0 feet			Heav	y Trucks	s: 8	.006	Grade Ad	justmei	nt: 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in	feet)		
R	Road Grade:	0.0%				Autos	s: 43	.704			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 43	.501			
	Right View:	90.0 degree	es		Heav	y Truck	s: 43	.521			
FHWA Noise Mode	l Calculation	18									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten
Autos:	68.46	2.63		0.77		-1.20		-4.63	0.0	000	0.000
Medium Trucks:	79.45	-14.61		0.80		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-18.57		0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	Levels (with	nout Topo and	barrier	attenu	ıation)						
	Leq Peak Ho			eq Ev		Leq	Night		Ldn		CNEL
Autos:			8.86		67.0		60		69.6	-	70.2
Medium Trucks:	-		62.9		56.6		55	-	63.5	-	63.7
Heavy Trucks:			63.9		54.8		56		64.4	•	64.6
Vehicle Noise:	72	2.5	70.8		67.6		62	.9	71.	5	71.9
Centerline Distance	e to Noise C	ontour (in feet))	70 -	D4	05	-/D4		CO -/D4		75 -ID4
			l dn:	70 d			dBA 27		60 dBA 274	1 5	5 dBA 590
			Lan: JFI :	63			27 36		274		633
		Cr	VL'L.	03	,	1.	JU		294		UJJ

	FH	WA-RD-77-10	08 HIG	HWAY I	NOISE PI	REDICTION	ON M	ODEL			
Road Nar	rio: Existing W ne: Patterson ent: s/o Grand	Av.				Project I Job Nu			o Diamant	e	
	SPECIFIC I	NPUT DATA	1						L INPUT	s	
Highway Data					Site Con	ditions (Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	12,800 vehic	les					Autos:	15		
Peak Hou	r Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak I	Hour Volume:	1,280 vehic	les		He	avy Truc	ks (3+	- Axles):	15		
Ve	ehicle Speed:	40 mph		ŀ	Vehicle	Mix					
Near/Far La	ane Distance:	12 feet		ŀ		icleType		Dav	Evening	Niaht	Dailv
Site Data							utos:	77.5%	0	9.6%	97.429
	arrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			F	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
,, ,	ist. to Barrier:	22.0 feet		-							
Centerline Dist.	to Observer:	22.0 feet			Noise So			- '	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		0.000			
Observer Height	(Above Pad):	5.0 feet				m Trucks	-	2.297	0	E	
	Pad Elevation:	0.0 feet			Heav	y Trucks	:: 8	3.006	Grade Ad	ijustment.	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos	: 2	1.749			
	Left View:	-90.0 deg	ees		Mediu	m Trucks	: 2	1.338			
	Right View:	90.0 deg	ees		Heav	ry Trucks	: 2	1.378			
FHWA Noise Mod	lel Calculation	ns									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos.			-	5.3	_	-1.20		-4.34		000	0.00
Medium Trucks.				5.4		-1.20		-4.85		000	0.00
Heavy Trucks.	82.99	9 -21.5	6	5.4	3	-1.20		-6.07	0.	000	0.00
Unmitigated Nois								_			
VehicleType	Leq Peak Ho			Leq E	vening	Leq I			Ldn		VEL
Autos.		0.3	68.4		66.6		60		69.	_	69.
Medium Trucks.	-	4.4	62.8		56.5		54		63.		63.
Heavy Trucks: Vehicle Noise		5.7 2.3	64.2 70.6		55.2 67.3		56 62		64. 71.	-	64. 71.
	•				07.3		02		71.		, 1.
Centerline Distan	ice to Noise C	ontour (in fe	et)	70	dBA	65 c	1BA	1 6	0 dBA	55	dBA
			I dn:		7	58			125		68
						50					

FHWA	-RD-77-108 HIGH	1 YAWI	IOISE PI	KEDIC I I	ON MOI	DEL			
Scenario: Existing With F Road Name: California Av. Road Segment: s/o Stowe Rd.	Project				Name: I imber: S		o Diaman	e	
SITE SPECIFIC INPU	JT DATA						L INPUT	s	
Highway Data			Site Con	ditions (
Average Daily Traffic (Adt): 16,9 Peak Hour Percentage: Peak Hour Volume: 1,6	900 vehicles 10% 690 vehicles			dium Tru avy Truc	cks (2 A		15 15 15		
Vehicle Speed:	40 mph	H	Vehicle i	Wix					
Near/Far Lane Distance:	36 feet	H	Veh	icleType		Dav	Evening	Night	Daily
Site Data					utos:	77.5%		9.6	
Barrier Height:	0.0 feet		M	edium Tr	ucks:	84.8%	4.9%	10.3	% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Tr	ucks:	86.5%	2.7%	10.8	% 0.74%
	47.0 feet	H	Noise So	ource Ele	evations	s (in fe	eet)		
	47.0 feet	F		Autos		000	,		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks	. 2.2	297			
Observer Height (Above Pad):	5.0 feet		Heav	y Trucks	: 8.0	006	Grade Ad	ljustme	nt: 0.0
Pad Elevation: Road Elevation:	0.0 feet	-	l ano Ea	uivalent	Dietan	o (in	Foot)		
Road Elevation: Road Grade:	0.0 feet 0.0%	H	Larie Ly	Autos			eei)		
	90.0 degrees		Madiu	m Trucks					
	90.0 degrees 90.0 degrees			ry Trucks					
FHWA Noise Model Calculations									
VehicleType REMEL Tr	raffic Flow Dis	stance	Finite	Road	Fresn	el	Barrier At	ten B	erm Atten
Autos: 66.51	0.84	0.7	7	-1.20		-4.63	0.	000	0.000
Medium Trucks: 77.72	-16.40	0.8	0	-1.20		-4.87	0.	000	0.000
Heavy Trucks: 82.99	-20.35	0.8	0	-1.20		-5.46	0.	000	0.000
Unmitigated Noise Levels (without	Topo and barrie	er atter	nuation)						
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq I			Ldn		CNEL
Autos: 66.9	65.0		63.3		57.2		65.		66.4
Medium Trucks: 60.9	59.4		53.1		51.5		60.	-	60.2
Heavy Trucks: 62.2	60.8		51.8		53.0		61.		61.
Vehicle Noise: 68.9	67.2		63.9		59.4		67.	9	68.4
Centerline Distance to Noise Conte	our (in feet)	-			·D.4				
	L		dBA	65 0		ϵ	0 dBA	5	5 dBA
	Ldn:	-	4	74			159		342
	CNEL:	3	7	79	J		170		366

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE P	REDICT	ION MC	DEL			
	o: Existing W e: California et: n/o Stowe	Av.					t Name: lumber:		o Diamante	9	
SITE S	PECIFIC II	NPUT DATA			ito Cor				L INPUTS	5	
Average Daily i Peak Hour I Peak Ho	Percentage: our Volume:	10% 1,240 vehicle			Ме	dium Tr	•	Autos: Axles):	15 15		
Vel Near/Far Lar	nicle Speed:	40 mph 36 feet		Ve	ehicle	Mix					
	ie Distalice.	30 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-Wa	rier Height:	0.0 feet 0.0				edium T Heavy T		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dis	. ,	47.0 feet		M	oico S	ourco E	levation	e (in f	oot)		
Centerline Dist. to Observer:					Heav ane Eq Mediu	Auto m Truck yy Truck uivalen Auto m Truck yy Truck	(S: 2. (S: 8. (S: 43.	000 297 006 ce (in .704 .501	Grade Adj	iustment	: 0.0
FHWA Noise Mode	l Calculation	18									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Atte	en Bei	m Atten
Autos:	66.51			0.77		-1.20		-4.63	0.0		0.000
Medium Trucks: Heavy Trucks:	77.72 82.99			0.80		-1.20 -1.20		-4.87 -5.46	0.0		0.00
						-1.20		-0.40	0.0	700	0.00
Unmitigated Noise VehicleType	Leg Peak Ho			Leg Eve		I on	Night		Ldn		NEL
Autos:			63.7	-04	61.9	209	55.9	9	64.5		65.1
Medium Trucks:	59	9.6	58.1		51.7		50.2	2	58.6	6	58.9
Heavy Trucks:	60	0.9	59.5		50.4		51.	7	60.0)	60.2
Vehicle Noise:	67	7.6	65.9		62.6		58.	0	66.6	6	67.
Centerline Distanc	e to Noise C	ontour (in feet	t)								
		-		70 dE	BA	65	dBA	- (60 dBA	55	dBA
			Ldn:	28			60		129		278
		C	NEL:	30		(64		138	2	297

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGHWA'	Y NOISE P	REDICT	ION MODE	L		
Road Nam	io: Existing W ne: California A nt: s/o Stetsor	Av.				Name: Ra lumber: 97	ncho Diamar 92	ite	
	SPECIFIC IN	NPUT DATA					DEL INPU	rs	
Highway Data				Site Co.	nditions	(Hard = 10)), Soft = 15)		
Peak Hour	Traffic (Adt): Percentage: lour Volume:	17,900 vehicles 10% 1,790 vehicles				Au ucks (2 Axl cks (3+ Axl	/		
Ve	hicle Speed:	40 mph		Vehicle	Mile				
Near/Far La	ne Distance:	36 feet			nicleType	e Di	y Evening	Nigh	nt Daily
Site Data				VC/			.5% 12.9%		6% 97.42%
	rrier Height:	0.0 feet			ledium T	rucks: 84	.8% 4.9%	10.3	3% 1.84%
Barrier Type (0-W		0.0			Heavy T	rucks: 86	.5% 2.7%	10.8	3% 0.74%
Centerline Di		47.0 feet		Noise S	ource E	levations (in feet)		
Centerline Dist.		47.0 feet			Auto	s: 0.00)		
Barrier Distance		0.0 feet		Mediu	ım Truck	s: 2.29	7		
Observer Height (,	5.0 feet		Hea	vy Truck	s: 8.00	Grade A	djustme	ent: 0.0
	ad Elevation:	0.0 feet		I ano Er	uivalon	t Distance	(in foot)		
	ad Elevation: Road Grade:	0.0 feet		Lane Lu	Auto		. ,		
	Left View:	0.0%	_	Modii	ım Truck				
	Right View:	-90.0 degree 90.0 degree			vy Truck				
FHWA Noise Mod	el Calculation	ıs							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier A	tten l	Berm Atten
Autos:	66.51	1.09	().77	-1.20	-4	63 0	.000	0.000
Medium Trucks:	77.72	-16.15	(0.80	-1.20	-4	.87 0	.000	0.000
Heavy Trucks:	82.99	-20.11	(0.80	-1.20	-5	46 0	.000	0.000
Unmitigated Noise			barrier at	tenuation)					
VehicleType	Leq Peak Ho			Evening		Night	Ldn		CNEL
Autos:			35.3	63.5		57.5	66		66.7
Medium Trucks:			59.7	53.3		51.8	60		60.4
Heavy Trucks:			61.1	52.0		53.3	61		61.8
Vehicle Noise:	69	9.2	67.5	64.2	2	59.6	68	.2	68.6
Centerline Distant	ce to Noise C	ontour (in feet)		70 -ID 4	05	-104	CO -ID4		
			dn:	70 dBA 35		dBA 76	60 dBA 165		55 dBA 355
		-	Lan: IFI :	35		-	165 176		355
		Ch	ICL.	38 82			1/6		300

	FH	WA-RD-77-108	B HIG	HWAY	NOISE P	REDICT	ION M	ODEL			
Road Na	ario: Existing W me: California ent: n/o Simps	Av.				,,	Name: lumber:		o Diamant	е	
	SPECIFIC II	NPUT DATA			04- 0				L INPUT	S	
Highway Data					Site Cor	aitions	(Hard				
Average Dail	y Traffic (Adt):	17,900 vehicle	es					Autos:	15		
	ır Percentage:	10%				edium Tr					
	Hour Volume:	.,	es		He	eavy True	cks (3+	Axles):	15		
V	'ehicle Speed:	25 mph		f	Vehicle	Mix					
Near/Far L	ane Distance:	36 feet		1	Ver	icleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	-	9.6%	97.42%
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline L	Dist. to Barrier:	47.0 feet		F	Noise S	ource F	lovatio	ne (in f	oof)		
Centerline Dis	t. to Observer:	47.0 feet		F	140/36 0	Auto		0.000	JUL)		
Barrier Distance	e to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Heigh	t (Above Pad):	5.0 feet				vy Truck		1.006	Grade Ad	iuetmant	- 00
1	Pad Elevation:	0.0 feet			1100	ry much	J. C		Orado ria,	Juoumom	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	3.704			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43	3.501			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 43	3.521			
FHWA Noise Mo											
VehicleType	REMEL	Traffic Flow		stance	_	Road	Fres		Barrier Att		rm Atten
Autos				0.7		-1.20		-4.63		000	0.000
Medium Trucks				3.0		-1.20		-4.87		000	0.000
Heavy Trucks				3.0		-1.20		-5.46	0.0	000	0.000
Unmitigated Noi								_		1	
VehicleType	Leq Peak Ho		_	Leq E	vening		Night		Ldn		NEL
Autos		1.4	59.5		57.8		51		60.3		60.9
Medium Trucks		6.3	54.8		48.4		46		55.3	-	55.6
Heavy Trucks Vehicle Noise		9.5 4.3	58.1 62.7		49.1 58.7		50 54		58.7 63.3		58.8 63.7
Centerline Dista					30.7		34	.0	00.0	,	05.7
Centernine Dista	ince to Noise C	ontour (iii fee	'/	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		17		36		78	. 1	169
		С	NEL:		18	3	39		83	1	179

	FH	WA-RD-77-108	HIGH	1 YAWH	NOISE PI	REDICT	ION MO	ODEL			
	o: Existing W e: Warren Ro nt: s/o Esplan	i.					t Name: lumber:		o Diamante	e	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	34,600 vehicle	:S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tr	,				
Peak H	our Volume:	3,460 vehicle	:S		He	avy Tru	cks (3+	Axles):	15		
Vel	nicle Speed:	55 mph		H	Vehicle	Mix					
Near/Far Lar	ne Distance:	84 feet		F	Veh	icleType	Э	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		70.0 feet				Auto	s: C	0.000	-		
Barrier Distance t		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (,	5.0 feet			Heav	v Truck	s: 8	.006	Grade Ad	ustment	0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		-	Lane Eq				teet)		
F	Road Grade:	0.0%				Auto		6.223			
	Left View:	-90.0 degre				m Truck		6.065			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 56	3.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78			-0.8		-1.20		-4.72		100	0.00
Medium Trucks:	82.40			-0.8	-	-1.20		-4.88		100	0.000
Heavy Trucks:	86.40			-0.8		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise						,	A.P. 1.				
VehicleType Autos:	Leq Peak Ho	ur Leq Daj	70.4	Leq E	vening 68.6	Leq	Night 62	^	Ldn 71.2		VEL 71.8
Medium Trucks:		2.3 5.7	64.2		57.8		56		64.7	-	65.0
Heavy Trucks:		5.7	64.3		55.3		56		64.9		65.0
Vehicle Noise:		3.9	72.1		69.1		64		72.8		73.
Centerline Distanc	e to Noise C	ontour (in fee	f)								
Como mie Distanc	0.107.10736 0	omou. (III loo	,	70	dBA	65	dBA	1 (60 dBA	55	dBA
			Ldn:	10	78	2	33		501	1	080

FHV	/A-RD-77-108	HIGH	A YAWI	IOISE P	REDICT	ON MO	DDEL			
Scenario: Existing Wi Road Name: California A Road Segment: s/o Simpsoi	v. ,					Name: umber:		o Diamant	е	
SITE SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Site Cor	nditions	(Hard :	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	5,000 vehicle	S					Autos:	15		
Peak Hour Percentage:	10%			Me	edium Tru	ıcks (2	Axles):	15		
Peak Hour Volume:	500 vehicles	S		He	eavy Truc	cks (3+	Axles):	15		
Vehicle Speed:	25 mph		H	Vehicle	Mix					
Near/Far Lane Distance:	36 feet				icleType		Day	Evening	Night	Daily
Site Data						lutos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			M	edium Ti	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy Ti	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet		- 1	Noise S	ource El	evatio	ns (in f	eet)		
Centerline Dist. to Observer:	47.0 feet		F		Auto		.000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Truck	s: 2	297			
Observer Height (Above Pad):	5.0 feet			Hear	vy Trucks	s: 8	.006	Grade Ad	justment	0.0
Pad Elevation:	0.0 feet		_							
Road Elevation:	0.0 feet		- 4	Lane Eq	uivalent			feet)		
Road Grade:	0.0%				Autos		3.704			
Left View:	-90.0 degree				m Trucks		3.501			
Right View:	90.0 degree	es		Hea	vy Trucks	s: 43	3.521			
FHWA Noise Model Calculations	3		'							
VehicleType REMEL	Traffic Flow	Dis	tance		Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos: 58.73	-2.41		0.7		-1.20		-4.63	0.0	000	0.000
Medium Trucks: 70.80	-19.65		0.8	-	-1.20		-4.87		000	0.000
Heavy Trucks: 77.97	-23.60		0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise Levels (with			er atten	uation)						
VehicleType Leq Peak Hou			Leq E			Night		Ldn	_	NEL
Autos: 55	-	54.0		52.2		46	_	54.8	-	55.4
Medium Trucks: 50		49.2		42.9		41.	-	49.8	-	50.0
Heavy Trucks: 54.	•	52.5		43.5		44.		53.1		53.2
Vehicle Noise: 58.	8	57.1		53.2		49	.3	57.8	3	58.2
Centerline Distance to Noise Co	ntour (in feet)	70	-ID 4		-/D.4		20 -104		-/D 4

Monday, January 25, 2016

	FH	WA-RD-77-108	HIG	HWAY	NOISE P	REDICTI	ON M	ODEL			
Scenari	o: Existing W	ith Project				Project	Name.	Ranch	no Diamant	е	
	e: Warren Ro					Job Ni	ımber.	9792			
Road Segmen	nt: n/o Tres C	erritos Av.									
SITE S	SPECIFIC II	NPUT DATA			Site Cor	N nditions			L INPUT	S	
Average Daily	Troffic (Adt):	22 200 vehiele			0.10 00.	iantiono (Autos			
	Percentage:	10%	5		Ma	dium Tru	rke (2				
	our Volume:	3.330 vehicle	c			avy Truc		,			
	hicle Speed:	55 mph	3				ло (от	Axico).	. 10		
Near/Far I ar	,	84 feet			Vehicle						
iveai/rai Lai	ne Distance.	04 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%		9.6%	97.42%
Bar	rier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet			Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. I	to Observer:	70.0 feet				Autos		0.000	,		
Barrier Distance t	to Observer:	0.0 feet			Madiu	m Trucks		2.297			
Observer Height (Above Pad):	5.0 feet				/y Trucks		3.006	Grade Ad	liustment	0.0
Pa	ad Elevation:	0.0 feet				•				,	
Road Elevation:		0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%				Autos		5.223			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 56	6.065			
	Right View:	90.0 degre	es		Heav	y Trucks	: 56	6.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier At		m Atten
Autos:	71.78			-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	82.40			-0.		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40			-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise						1 1	li auta t	_	Ldn		NEL
VehicleType Autos:	Leq Peak Ho	ur Leq Day	70.2	Leq I	ening 68.5	Leq I	vignt 62	4	Lan 71.		NEL 71.0
Medium Trucks:		5.5	64.0		57.6		56		64.	-	64.8
Heavy Trucks:	-	5.6	64.1		55.1		56		64.	-	64.8
Vehicle Noise:		3.7	71.9		69.0		64		72.		73.
Centerline Distanc	e to Noise C	ontour (in feet	t)								
					dBA	65 ((60 dBA		dBA
			Ldn:	1	05	22	7		489	1,	053
		C	NEL:	1	13	24	4		526	1,	133

	FH	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Existing W me: Warren Ro ent: n/o Devon	d.					Name: lumber:		o Diamant	Э	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	35,300 vehicle	:S					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	3,530 vehicle	:S		He	avy Tru	cks (3+	Axles):	15		
\	ehicle Speed:	55 mph		ŀ	Vehicle	Miv					
Near/Far L	ane Distance:	84 feet		ŀ		icleType	. T	Dav	Evenina	Niaht	Dailv
Site Data					V C/		Autos:	77.5%	- 3	9.6%	. ,
		0.0 feet			М	edium T		84.8%		10.3%	
	arrier Height:	0.0 reet				Heavy T		86.5%		10.8%	
Barrier Type (0-	vvali, 1-Berm): Dist. to Barrier:	70.0 feet								10.070	0.1 170
	t, to Observer:	70.0 feet		ļ	Noise S	ource E	levatio	ıs (in f	eet)		
Barrier Distanc		0.0 feet				Auto		.000			
Observer Heigh		5.0 feet				m Truck		.297			
	Pad Flevation:	0.0 feet			Hear	vy Truck	s: 8	.006	Grade Adj	iustment	: 0.0
	oad Elevation:	0.0 feet		-	Lane Eq	uivalen	t Distar	ice (in	feet)		
	Road Grade:	0.0%				Auto		.223	,		
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre			Hea	vy Truck	s: 56	.081			
FHWA Noise Mo	del Calculation	ns									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos	: 71.78	3 2.66		-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	82.40	-14.58		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	86.40	-18.54		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi	se Levels (with	hout Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos		2.4	70.5		68.7		62.	-	71.3		71.9
Medium Trucks		5.8	64.3		57.9		56.		64.8		65.1
Heavy Trucks		5.8	64.4		55.3		56.	-	65.0		65.1
Vehicle Noise		4.0	72.2		69.2		64.	4	72.9	,	73.4
Centerline Dista	nce to Noise C	Contour (in fee	t)	70	dBA	65	dBA	-	60 dBA	EE	dBA
			I dn:		09		36	1 ,	508		095
		C	NEL:		18	_	54		547	,	178
		Ŭ				-				.,	

	HWA-RD-77-	108 HIG	HWAY I	NOISE P	REDICTIO	N MODEL			
Scenario: Existing Road Name: Warren Road Segment: s/o Flori	Rd.					ame: Ranci nber: 9792	ho Diamant	е	
SITE SPECIFIC	INPUT DAT	Α			NO	ISE MODI	EL INPUT	S	
Highway Data				Site Cor	nditions (H	lard = 10, S	oft = 15)		
Average Daily Traffic (Adt): 37,700 veh	icles				Autos	: 15		
Peak Hour Percentage	: 10%			Me	edium Truc	ks (2 Axles)	: 15		
Peak Hour Volume	e: 3,770 veh	icles		He	eavy Trucks	s (3+ Axles)	: 15		
Vehicle Speed	f: 55 mp	h	ŀ	Vehicle	Mix				
Near/Far Lane Distance	e: 84 fee	t	ŀ		nicleType	Day	Evening	Night	Daily
Site Data					Au	tos: 77.59	6 12.9%	9.6%	97.42%
Barrier Heigh	t: 0.0 fe	et		M	ledium Truc	cks: 84.89	% 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm					Heavy Truc	cks: 86.59	% 2.7%	10.8%	0.74%
Centerline Dist. to Barrie	r: 70.0 fe	et	H	Noise S	ource Elev	ations (in	feet)		
Centerline Dist. to Observe			ı		Autos:	0.000	,		
Barrier Distance to Observe				Mediu	m Trucks:	2.297			
Observer Height (Above Pad				Hea	vy Trucks:	8.006	Grade Ad	iustment	0.0
Pad Elevation	0.0 10			1 5-	b	V-4 (!	f4)		
Road Elevation	0.0 10	et	-	Lane Eq	Autos:	56,223	reet)		
Road Grade Left View	0.070			14-45	m Trucks:	56.065			
Leπ viev Right Viev	. 00.0 00				vy Trucks:	56.081			
FHWA Noise Model Calculat		J							
VehicleType REMEL	Traffic Flo	w Di	istance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos: 71		.94	-0.8		-1.20	-4.72		000	0.000
Medium Trucks: 82	40 -14	.30	-0.8	15	-1.20	-4.88	0.0	000	0.000
Heavy Trucks: 86	40 -18	.25	-0.8	15	-1.20	-5.28	0.0	000	0.000
Unmitigated Noise Levels (v	ithout Topo a	and barr	ier atter	nuation)					
VehicleType Leq Peak		Day	Leq E	vening	Leq Ni		Ldn		NEL
Autos:	72.7	70.8		69.0		62.9	71.6		72.2
Medium Trucks:	66.1	64.5		58.2		56.6	65.1		65.3
Heavy Trucks:	66.1	64.7		55.6		56.9	65.2		65.4
Vehicle Noise:	74.2	72.5		69.5	i	64.6	73.2	2	73.7
Centerline Distance to Noise	Contour (in	feet)							
				dBA	65 dE		60 dBA		dBA
		Ldn:		14	246		531	,	144
		CNEL:	1.	23	265		571	1,	231

	HWAY NOISE PREDICTION MODEL
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Florida Av.	Project Name: Rancho Diamante Job Number: 9792
SITE SPECIFIC INPUT DATA Highway Data	NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 26,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,650 vehicles Vehicle Speed: 55 mph	Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15
Near/Far Lane Distance: 84 feet	Vehicle Mix
Site Data	VehicleType Day Evening Night Daily Autos: 77.5% 12.9% 9.6% 97.42°
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0	Medium Trucks: 84.8% 4.9% 10.3% 1.84 Heavy Trucks: 86.5% 2.7% 10.8% 0.74
Centerline Dist. to Barrier: 70.0 feet	Noise Source Elevations (in feet)
Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade:	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Dis	stance Finite Road Fresnel Barrier Atten Berm Attern
Autos: 71.78 1.41	-0.87 -1.20 -4.72 0.000 0.00
Medium Trucks: 82.40 -15.83 Heavy Trucks: 86.40 -19.78	-0.85 -1.20 -4.88 0.000 0.00 -0.85 -1.20 -5.28 0.000 0.00
<u> </u>	
Unmitigated Noise Levels (without Topo and barri VehicleType Leg Peak Hour Leg Day	Leg Evening Leg Night Ldn CNEL
Autos: 71.1 69.2	67.5 61.4 70.0 70.
Medium Trucks: 64.5 63.0	56.7 55.1 63.6 63.
	54.1 55.4 63.7 63.
Heavy Trucks: 64.6 63.1	68.0 63.1 71.7 72
Heavy Trucks: 64.6 63.1 Vehicle Noise: 72.7 70.9	
Vehicle Noise: 72.7 70.9	
Vehicle Noise: 72.7 70.9	70 dBA 65 dBA 60 dBA 55 dBA
	70 dBA 65 dBA 60 dBA 55 dBA 90 195 420 904

Monday, January 25, 2016

	FH	WA-RD-77-	108 HIGH	A YAWI	IOISE PE	REDICTION	ON MC	DEL			
	io: Existing W e: Warren Ro nt: n/o Whittie	d.				Project I Job Nu			o Diamant	e	
	SPECIFIC II	NPUT DA	ГА		n: 0				L INPUT	s	
Highway Data					Site Con	ditions (Hard :				
Average Daily	. ,		icles					Autos:			
	Percentage:	10%				dium Tru					
	our Volume:	-,			He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	55 mp	h		Vehicle I	Wix					
Near/Far La	ne Distance:	84 fee	t	F		icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	77.5%	12.9%	9.6%	97.42%
Rai	rier Heiaht:	0.0 fe	et		Me	edium Tru	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tro	ıcks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	70.0 fe	et	H	Noiso Sa	ource Ele	watio	ac (in f	oot)		
Centerline Dist.	to Observer:	70.0 fe	et	Ľ.	VUISE SC	Autos		.000	eei)		
Barrier Distance	to Observer:	0.0 fe	et		A de elle	Autos n Trucks		.000			
Observer Height (Above Pad):	5.0 fe	et			n Trucks v Trucks	-	.006	Grade Ad	liuetman	t: 0.0
Pa	ad Elevation:	0.0 fe	et		пеач	y mucks	. 0	.006	Orade Ad	jusunen	. 0.0
Roa	ad Elevation:	0.0 fe	et	, i	Lane Eq	uivalent	Distar	ice (in	feet)		
1	Road Grade:	0.0%				Autos	: 56	.223			
	Left View:	-90.0 de	grees		Mediui	n Trucks	: 56	.065			
	Right View:	90.0 de	grees		Heav	y Trucks	: 56	.081			
FHWA Noise Mod	el Calculation	18									
VehicleType	REMEL	Traffic Flo		stance	Finite		Fres		Barrier At		rm Atten
Autos:	71.78		.92	-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	82.40		.32	-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-19	1.27	-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise											
VehicleType	Leq Peak Ho		Day	Leq E		Leq N			Ldn		NEL
Autos:	-	1.6	69.7		68.0		61.		70.	-	71.1
Medium Trucks:	-	5.0	63.5		57.2		55.	-	64.		64.3
Heavy Trucks:		5.1	63.6		54.6		55.	-	64.:		64.3
Vehicle Noise:	73	3.2	71.5		68.5		63.	6	72.	2	72.7
Centerline Distan	ce to Noise C	ontour (in	feet)								-
				70 c		65 d		- (60 dBA		5 dBA
			Ldn:	9	-	21			454		978
			CNEL:	10	15	22	7		488	1	,052

	FHW	A-RD-77-108	HIGH	WAY N	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Existing With ne: Warren Rd. nt: s/o Whittier	•					Name: umber:		o Diamante	e	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	7,400 vehicle:	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2 .	4xles):	15		
Peak H	lour Volume:	2,740 vehicles	S		He	eavy Truc	ks (3+ .	4xles):	15		
Ve	hicle Speed:	55 mph		H	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		-		icleType		Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%	12.9%	9.6%	97.42%
Par	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet		T,	Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist.		70.0 feet				Autos	s: 0.	000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2.	297			
Observer Height (5.0 feet			Hear	vy Trucks	s: 8.	006	Grade Ad	ustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		Ľ	Lane Eq	uivalent			feet)		
ı	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degree	es			m Trucks		.065			
	Right View:	90.0 degree	es		Hear	vy Trucks	56	.081			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	1.55		-0.8	7	-1.20		-4.72	0.0	00	0.000
Medium Trucks:	82.40	-15.68		-0.8	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.64		-0.8	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atten	nuation)						
VehicleType	Leq Peak Hour	Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	71.3	3	69.4		67.6		61.	5	70.2	2	70.8
Medium Trucks:	64.	7	63.2		56.8		55.	3	63.7	,	64.0
Heavy Trucks:	64.	7	63.3		54.2		55.	5	63.9)	64.0
Vehicle Noise:	72.	9	71.1		68.1		63.	3	71.8	3	72.3
Centerline Distant	ce to Noise Co	ntour (in feet)	70	10.4						- 15.4
			L		dBA	65 (1 6	0 dBA		5 dBA
			Ldn:	-	2	19			429		925
		CI	VEL:	9	9	21	14		462		995

	FHV	VA-RD-77-108	HIGH	WAY N	DISE P	REDICT	ION M	DDEL			
	Existing Wi Warren Rd. So Stetson						t Name. lumber.		o Diamant	e	
SITE S Highway Data	PECIFIC IN	PUT DATA			ita Car				L INPUT	s	
Average Daily T Peak Hour F Peak Ho	Percentage: our Volume: icle Speed:	23,300 vehicle: 10% 2,330 vehicle: 45 mph 84 feet			Me He 'ehicle	dium Tr avy Tru Mix	ucks (2 cks (3+	Autos: Axles): Axles):	15 15 15		
	e Distance.	04 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-Wa	ier Height: II, 1-Berm):	0.0 feet 0.0				edium T Heavy T		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dist		70.0 feet		۸	loise S	ource E	levatio	ns (in f	eet)		
Road R	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Hear ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	s: 2 s: 8 t Dista	0.000 0.297 0.006 0.006 0.223 0.065 0.081	Grade Ad	justment	÷ 0.0
		90.0 degree	7 5		1100	ry Truch					
VehicleType	REMEL	S Traffic Flow	Diet	ance	Einito	Road	Fres	nol	Barrier Att	on Po	m Atten
Autos: Medium Trucks:	68.46 79.45	1.72 -15.52	Dist	-0.87 -0.85		-1.20 -1.20	1163	-4.72 -4.88	0.0	000	0.000
Heavy Trucks:	84.25	-19.47		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	ıation)						
VehicleType L	eq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	68		66.2		64.5		58		67.0		67.6
Medium Trucks:	61	-	60.4		54.0		52		60.9	-	61.2
Heavy Trucks: Vehicle Noise:	62 70		61.3 68.2		52.3 65.1		53 60		61.9		62.0
Centerline Distance	e to Noise Co	ntour (in feet)								
Comoe Distance		,	l dn:	70 d			dBA 28	-	60 dBA 276		dBA
			VEL:	64			37		296		337

						NOISE P						
	o: Existing W		ect							o Diamant	e	
	e: Warren Ro						Job N	lumber:	9792			
Road Segmen	it: s/o Stetso	n Av. (N	1.)									
	SPECIFIC II	NPUT	DATA							L INPUT	S	
Highway Data						Site Co	nditions	(Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,200	vehicle	S					Autos:	15		
	Percentage:	10					edium Tr		,			
	our Volume:	, .	vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
	nicle Speed:		mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	84	feet		Ī	Vel	nicleType	9	Day	Evening	Night	Daily
Site Data								Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0) feet			N	ledium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0)				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		70.0) feet			Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.) feet				Auto		0.000			
Barrier Distance t) feet			Mediu	ım Truck	s: 2	.297			
Observer Height (,) feet			Hea	vy Truck	s: 8	3.006	Grade Ad	ljustment	: 0.0
	d Elevation:) feet		L		·					
	d Elevation:) feet		-	Lane Ed	uivalen		_ •	feet)		
F	Road Grade:		0%				Auto		5.223			
	Left View:) degre				m Truck		6.065			
	Right View:	90.0) degre	es		Hea	vy Truck	s: 5t	5.081			
FHWA Noise Mode												
VehicleType	REMEL		c Flow	Dis	stance		Road	Fres		Barrier At		m Atten
Autos:	68.46		1.51		-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	79.45		-15.73		-0.8	-	-1.20		-4.88		000	0.00
Heavy Trucks:	84.25		-19.68		-0.8	_	-1.20		-5.28	0.0	000	0.00
VehicleType	Levels (with Leg Peak Ho						Loc	Night		Ldn		NEL
Autos:		7.9	Leq Day	66.0	Ley E	vening 64.2		TVIGITE 58	2	66.i		67
Medium Trucks:	-	1.7		60.2		53.8		52	-	60.	-	61.
Heavy Trucks:		2.5		61.1		52.1		53		61.		61.
Vehicle Noise:	-	9.7		68.0		64.9		60		68.		69
Centerline Distance	e to Noise C	ontour	(in feet)								
					70	dBA	65	dBA	(00 dBA	55	dBA
				I dn:		7	- 4	24		267		75
				VEL:	-	17		33		286		617

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Scenario: Existing W Road Name: Warren R Road Segment: s/o Musta	,									
			Project N Job Nu			o Diamant	e			
SITE SPECIFIC I	NPUT DATA			Cito Con	NO ditions (l			L INPUT	s	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	19,700 vehicl 10% 1,970 vehicl 40 mph			Me	dium Truck avy Truck	cks (2	Autos: Axles):	15 15		
Near/Far Lane Distance:	84 feet		-		icleType		Day	Evening	Night	Dailv
Site Data Barrier Height:	0.0 feet 0.0			М			77.5% 84.8% 86.5%	12.9%	9.6% 10.3% 10.8%	97.42%
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer:	70.0 feet 70.0 feet				ource Ele	vatio	ns (in f		10.070	0.7470
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	0.0 feet 5.0 feet 0.0 feet				Autos: m Trucks: ry Trucks:	2	.000 .297 .006	Grade Ad	ljustment	: 0.0
Road Elevation:	0.0 feet			Lane Eq	uivalent l			feet)		
Road Grade: Left View: Right View:	0.0% -90.0 degr 90.0 degr				Autos: m Trucks: ry Trucks:	56	5.223 5.065 5.081			
FHWA Noise Model Calculation	ns									
VehicleType REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Ber	m Atten
Autos: 66.5			-0.8		-1.20		-4.72		000	0.000
Medium Trucks: 77.72 Heavy Trucks: 82.99			3.0- 3.0-		-1.20 -1.20		-4.88 -5.28		000	0.000
Unmitigated Noise Levels (wit	hout Topo an	d barri	er atte	nuation)						
VehicleType Leq Peak Ho			Leq E	vening	Leq N			Ldn		NEL
	5.9	64.1		62.3		56	_	64.	-	65.5
	9.9	58.4		52.1		50	-	59.	-	59.2
	1.3 8.0	59.8 66.2		50.8 63.0		52 58		60. 66.		60.5
	0.0			03.0		J0		06.	J	07.4
Vehicle Noise: 6 Centerline Distance to Noise C	Contour (in fee	et)	70	dBA	65 d	BA		60 dBA	55	dBA
	Contour (in fe	et) Ldn:		dBA 14	65 d		6	60 dBA 203		dBA 38

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	FH	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICT	ION MC	DEL			
Road Na	ario: Existing W me: Warren Ro ent: s/o Simpso	l.					Name: lumber:		o Diamante	Э	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	17,800 vehicle	S					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tri	ucks (2	Axles):	15		
Peak	Hour Volume:	1,780 vehicle	s		He	avy Truc	cks (3+	Axles):	15		
١	ehicle Speed:	40 mph		-	Vehicle	Mix					
Near/Far L	ane Distance:	84 feet		f		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	- /
	arrier Height:	0.0 feet			М	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
,, ,	Dist. to Barrier:	70.0 feet		ŀ	Noise S	ouroo El	lovetion	o (in f	2041		
Centerline Dis	t. to Observer:	70.0 feet		ŀ	NOISE 3	Auto:		000	ei)		
Barrier Distanc	e to Observer:	0.0 feet			Modiu	Auto: m Truck:		297			
Observer Heigh	t (Above Pad):	5.0 feet				m Truck: vy Truck:		006	Grade Ad	iustmont	. 0.0
_	Pad Elevation:	0.0 feet			пеа	ry Truck	s. o	.000	Grade Au	usunem	0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hear	y Truck	s: 56	.081			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Ber	m Atten
Autos				-0.8	37	-1.20		-4.72	0.0	000	0.000
Medium Trucks	: 77.72	-16.17		-0.8	35	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	82.99	-20.13		-0.8	35	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi	se Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	VEL
Autos			63.6		61.8		55.	-	64.4		65.0
Medium Trucks			58.0		51.6		50.		58.5		58.8
Heavy Trucks			59.4		50.4		51.	-	60.0		60.1
Vehicle Noise			65.8		62.5		58.	0	66.5	5	66.9
Centerline Dista	nce to Noise C	ontour (in feet	:)	70	-/D 4	05	-10.4		0 -ID4		-/0.4
			I dn:		dBA 11		dBA 88	1 6	190		dBA 09
		_	NFI:		+1 14	_	14		203		38
		C	VEL:	4	+4	9	14		203	4	-30

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	FHW	A-RD-77-108 HIGH	HWAY N	DISE PI	REDICT	ION MODE	_	
Road Name	o: Existing With e: Sanderson A t: n/o Stetson A	v.				t Name: Rar lumber: 979	icho Diamant 2	e
	PECIFIC INP	UT DATA					DEL INPUT	S
Highway Data			S	ite Cor	ditions	(Hard = 10,	Soft = 15)	
	Percentage:	,800 vehicles 10% ,380 vehicles 45 mph		He	avy Tru	Auto rucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lar		50 feet	ν	ehicle				
	ie Distance.	50 leet		Veh	icleTyp			Night Daily
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0			edium 1 Heavy 1		8% 4.9%	9.6% 97.42 10.3% 1.84 10.8% 0.74
Centerline Dis	t. to Barrier:	54.0 feet	۸	oise S	ource E	levations (ii	n feet)	
Roa	o Observer: Above Pad): d Elevation: d Elevation: Road Grade:	54.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees	L	Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	2.297 28: 8.006 25: 8.006 26: 48.125 28: 47.941	in feet)	ijustment: 0.0
FHWA Noise Mode							_	
VehicleType			stance	Finite	Road	Fresnel	Barrier Att	
Autos: Medium Trucks:	68.46 79.45	3.34 -13.90	0.15 0.17		-1.20 -1.20	-4.6 -4.8		0.0 0.0
Heavy Trucks:	84.25	-17.86	0.17		-1.20	-5.3		0.0
Unmitigated Noise	Levels (withou	ıt Topo and barri	er attenu	ation)				
VehicleType	Leq Peak Hour	Leq Day	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos:	70.7	68.8		67.1		61.0	69.0	6 70
Medium Trucks:	64.5	63.0		56.7		55.1	63.0	6 63
Heavy Trucks:	65.4			54.9		56.2	64.	
Vehicle Noise:	72.6	70.8		67.7		63.0	71.0	6 72
Centerline Distanc	e to Noise Con	tour (in feet)						
			70 d			dBA	60 dBA	55 dBA
		Ldn:	69			48	318	686
		CNEL:	74		1	59	342	736

	FH	WA-RD-77-108	HIGHW	AY N	OISE P	REDICT	ION MODEL		
	io: Existing W e: Sandersor nt: s/o Florida	Av.					Name: Rand lumber: 9792		
SITE	SPECIFIC II	NPUT DATA				1	IOISE MOD	EL INPUTS	
Highway Data				S	ite Cor	ditions	(Hard = 10, 3	Soft = 15)	
Average Daily	. ,	33,800 vehicle:	S			di Ta	Auto: ucks (2 Axles		
	Percentage:		_				cks (3+ Axles		
	our Volume:	3,380 vehicle	S		пе	avy IIu	CRS (3+ AXIES). 15	
	hicle Speed:	30 mph		ν	ehicle :	Mix			
Near/Far Lai	ne Distance:	50 feet			Veh	icleType	e Day	Evening	Night Daily
Site Data							Autos: 77.5	% 12.9%	9.6% 97.42%
Bar	rier Height:	0.0 feet			М	edium T	rucks: 84.8	% 4.9%	10.3% 1.84%
Barrier Type (0-W	. ,	0.0				Heavy T	rucks: 86.5	% 2.7%	10.8% 0.74%
Centerline Dis		54.0 feet		٨	loise S	ource E	levations (in	feet)	
Centerline Dist.		54.0 feet				Auto	s: 0.000	-	
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2.297		
Observer Height (,	5.0 feet			Heav	y Truck	s: 8.006	Grade Adju	stment: 0.0
	ad Elevation:	0.0 feet		L		·			
	ad Elevation:	0.0 feet		L	ane Eq		t Distance (ii	i feet)	
F	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degree				m Truck			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 47.959		
FHWA Noise Mode	el Calculation								
VehicleType	REMEL	Traffic Flow	Dista			Road	Fresnel	Barrier Atte	
Autos:	61.75			0.15		-1.20	-4.67		
Medium Trucks:	73.48			0.17		-1.20	-4.87		
Heavy Trucks:	79.92			0.17		-1.20	-5.39	0.00	0.000
Unmitigated Noise									
	Leq Peak Ho		_	eq Ev		Leq	Night	Ldn	CNEL
Autos:			63.9		62.1		56.1	64.7	65.3
Medium Trucks:			58.8		52.4		50.9	59.4	59.6
Heavy Trucks:			61.4		52.3		53.6	61.9	62.1
Vehicle Noise:	68	3.3	66.6		63.0		58.8	67.3	67.7
Centerline Distance	e to Noise C	ontour (in feet)	70 d	D/	65	dBA	60 dBA	55 dBA
			Ldn:	36			77	166	357
			Lan: VFI :	38			77 32	177	380
		Ci	vĽL.	38	')4	177	300

Monday, January 25, 2016

	- FH	WA-RD-77-10	6 HIGI	TWAY	NOISE PI	(EDICTIC	N MC	DEL			
Scenar	io: Existing W	ith Project				Project N	lame:	Ranch	o Diamant	e	
	e: Florida Av					Job Nu	mber:	9792			
Road Segme	nt: w/o Winch	ester Rd.									
	SPECIFIC II	NPUT DATA			Cito Con	NO ditions (i			L INPUT	S	
Highway Data					Site Con	aitions (i	Hara =				
Average Daily	. ,		es					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	.,	es		He	avy Truck	rs (3+	Axles):	15		
	hicle Speed:	50 mph		f	Vehicle I	Viix					
Near/Far La	ne Distance:	78 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						Au	ıtos:	77.5%	12.9%	9.6%	97.42%
Ra	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	76.0 feet		-							
Centerline Dist.		76.0 feet			Noise Sc	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height	(Above Pad):	5.0 feet				n Trucks:		.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	8	.006	Grade Ad	justment	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent l	Distar	ce (in	feet)		
	Road Grade:	0.0%		Ī		Autos:	65	.422			
	Left View:	-90.0 degr	299		Mediui	m Trucks:	65	.286			
	Right View:	90.0 degr			Heav	y Trucks:	65	.300			
FHWA Noise Mod	el Calculation	าร									
VehicleType	REMEL	Traffic Flow		stance	Finite		Fres		Barrier Att		m Atten
Autos:	70.20		-	-1.8	-	-1.20		-4.73		000	0.000
Medium Trucks:	81.00			-1.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-15.2	0	-1.8	34	-1.20		-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Topo an	d barri	er atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	ay .	Leq E	vening	Leq N	light		Ldn		NEL
Autos:	7:	3.1	71.2		69.5		63.	4	72.0	0	72.6
Medium Trucks:		6.7	65.2		58.8		57.		65.8		66.0
Heavy Trucks:		7.1	65.7		56.7		57.		66.3		66.4
Vehicle Noise:	7-	4.8	73.1		70.0		65.	3	73.8	В	74.3
Centerline Distan	ce to Noise C	ontour (in fee	et)					,			
			Į		dBA	65 d		(60 dBA		dBA
			Ldn:		36	294			633	,	363
		(ONFI:	1	46	316	3		680	1.	465

FHW	A-RD-77-108	HIGHWA	AY NO	DISE PE	REDICT	ON MO	DEL			
Scenario: Existing With Road Name: Florida Av. Road Segment: e/o Warren	,					Name: umber:		o Diamant	9	
SITE SPECIFIC INI	PUT DATA			· O				L INPUT	3	
Highway Data			3	ne Con	ditions					
Average Daily Traffic (Adt): 8		3					Autos:	15		
Peak Hour Percentage:	10%				dium Tri			15		
	8,660 vehicles	3		He	avy Truc	ks (3+)	Axles):	15		
Vehicle Speed:	50 mph		ν	ehicle l	Wix					
Near/Far Lane Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						lutos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Ti	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		N	loise Sc	ource El	evation	s (in fe	eet)		
Centerline Dist. to Observer:	70.0 feet				Auto	s: 0.	000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pad):	5.0 feet				y Truck		006	Grade Ad	ustmen	t: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
Road Grade:	0.0%				Auto		223			
Left View:	-90.0 degree	es			m Truck		065			
Right View:	90.0 degree	es		Heav	y Truck	s: 56.	081			
FHWA Noise Model Calculations										
// .	Traffic Flow	Distan			Road	Fresr		Barrier Att		rm Atten
Autos: 70.20	6.97		-0.87		-1.20		-4.72	0.0		0.000
Medium Trucks: 81.00	-10.27		-0.85		-1.20		-4.88		100	0.000
Heavy Trucks: 85.38	-14.23		-0.85		-1.20		-5.28	0.0	100	0.000
Unmitigated Noise Levels (without		barrier a	ttenu	ıation)			,		,	
VehicleType Leq Peak Hour			eq Ev		Leq	Night		Ldn		NEL
	1 '	73.2		71.4		65.4		74.0		74.6
Autos: 75.		37.2		60.8		59.3	3	67.7	•	68.0
Autos: 75." Medium Trucks: 68."	7	J1.2								68.4
Medium Trucks: 68.1 Heavy Trucks: 69.1	1 (67.7		58.6		59.9		68.2		
Medium Trucks: 68.1 Heavy Trucks: 69.1 Vehicle Noise: 76.8	8	67.7 75.0		72.0		59.9 67.2		75.8		
Medium Trucks: 68.1 Heavy Trucks: 69.1	8	67.7 75.0	70 di	72.0	65		2		3	76.2
Medium Trucks: 68.1 Heavy Trucks: 69.1 Vehicle Noise: 76.8	1 8 ntour (in feet,	67.7 75.0	70 di	72.0 BA		67.2	2	75.8	55	76.2

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PI	REDICT	TION MOD	EL			
Scenario: Road Name: Road Segment:		,					t Name: R Number: 9		Diamante	•	
	ECIFIC IN	IPUT DATA							L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard = 1	0, So	ft = 15)		
	. ,	8,500 vehicle 10% 850 vehicle 40 mph			He	avy Tru	A rucks (2 A icks (3+ A		15 15 15		
Near/Far Lane		36 feet		v	ehicle		- -		Constant	Mindel	D-#-
Site Data							Autos: 7	9ay 7.5%	Evening 12.9%	Night 9.6%	
Barrie	er Height:	0.0 feet				edium 7		4.8%		10.3%	
Barrier Type (0-Wall	l, 1-Berm):	0.0			1	Heavy 1	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dist.		47.0 feet		^	loise S	ource E	levations	(in fe	et)		
Road	Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		L	Heav	Auto m Truck yy Truck uivalen Auto	ks: 2.29 ks: 8.00 at Distance	97 06 e (in t	Grade Adju	ustment	: 0.0
R	Left View: Right View:	-90.0 degre 90.0 degre				m Truck ry Truck					
FHWA Noise Model											
VehicleType Autos:	REMEL 66.51	Traffic Flow -2.15	Dis	tance 0.77		Road -1.20	Fresne	4.63	Barrier Atte 0.0		m Atten 0.000
Medium Trucks:	77.72	-2.15 -19.38		0.77		-1.20		4.63 4.87	0.0		0.000
Heavy Trucks:	82.99	-23.34		0.80		-1.20		5.46	0.0		0.000
Unmitigated Noise L	evels (with	out Topo and	barrie	er atteni	uation)						
VehicleType Le	eq Peak Hou	ır Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	63		62.0		60.3		54.2		62.8		63.4
Medium Trucks:	57		56.4		50.1		48.5		57.0		57.2
Heavy Trucks:	59	.3	57.8		48.8		50.0		58.4		58.5
Vehicle Noise:	66		64.2		60.9		56.4		64.9		65.4
Centerline Distance	to Noise Co	ontour (in feet	:)								
			L	70 d			dBA	6	0 dBA		dBA
			Ldn:	22	-		47		100		216
		C	NEL:	23	3		50		107	2	231

	FH	WA-RD-77-108	HIGHWA	Y NOISI	PREDICT	ION MOI	DEL			
	e: Existing W e: Florida Av. t: e/o Myers	,				t Name: I lumber: S		o Diamante	e	
	PECIFIC IN	IPUT DATA						L INPUTS	5	
Highway Data				Site	Conditions	(Hard =	10, Sc	oft = 15)		
Average Daily 7	raffic (Adt):	70,600 vehicle	S			,	Autos:	15		
Peak Hour F	Percentage:	10%			Medium Tr					
Peak Ho	our Volume:	7,060 vehicle	S		Heavy Tru	cks (3+ A	(xles	15		
Veh	icle Speed:	35 mph		Vahir	le Mix					
Near/Far Lan	e Distance:	84 feet			/ehicleType	۵	Day	Evening	Night	Daily
Site Data							77.5%	Ü	9.6%	
Pari	ier Height:	0.0 feet			Medium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wa	-	0.0			Heavy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	t. to Barrier:	70.0 feet		Nois	Source E	levation	s (in fe	et)		
Centerline Dist. to	o Observer:	70.0 feet			Auto		000	,		
Barrier Distance to	o Observer:	0.0 feet		Me	dium Truck		297			
Observer Height (A	lbove Pad):	5.0 feet			eavy Truck		006	Grade Adj	iustmen	t: 0.0
Pa	d Elevation:	0.0 feet			•					
Road	d Elevation:	0.0 feet		Lane	Equivalen			feet)		
R	oad Grade:	0.0%			Auto					
	Left View:	-90.0 degree			dium Truck					
	Right View:	90.0 degree	es	H	eavy Truck	s: 56.0	081			
FHWA Noise Mode	I Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Distanc		nite Road	Fresn	_	Barrier Atte		rm Atter
Autos:	64.30			0.87	-1.20		-4.72	0.0		0.00
Medium Trucks:	75.75			0.85	-1.20		-4.88	0.0		0.00
Heavy Trucks:	81.57			0.85	-1.20		-5.28	0.0	000	0.0
Unmitigated Noise	•									
VehicleType I	Leq Peak Hot		68.0	g Evenin	g Leq 6.2	Night 60.1		Ldn 68.8		NEL 69
Autos: Medium Trucks:	69		68.0 62.6	-	6.2 6.2	54.7		68.8		69
Heavy Trucks:	66		64.5		6.∠ 5.5	54.7 56.7		65.1		65
Vehicle Noise:	72		70.4		6.9	62.6		71.1		71
Centerline Distance	e to Noise C	ontour (in feet)							
Diotano	5100 0	(111 1000		70 dBA	0.5	dBA	6	60 dBA	54	dBA
				/U UDA	60	UDA		IO UDA	- ~	
			Ldn:	83		78		383		826

Monday, January 25, 2016

Autos: 77.5% 12.9% 9.6% 9		FH	WA-RD-77-108	HIGHV	WAY N	OISE PI	REDICTI	ON M	DDEL			
Highway Data	Road Nar	ne: Grand Av.	•							no Diamant	е	
Average Daily Traffic (Adt): 34,000 vehicles Peak Hour Percentage: 10% 10% Medium Trucks (2 Axles): 15 15		SPECIFIC I	NPUT DATA			Site Con					S	
Site Data Autos: 77.5% 12.9% 96%	Average Daily Peak Hou Peak I	r Percentage: Hour Volume: ehicle Speed:	10% 3,400 vehicle 40 mph			Me He /ehicle i	dium Tru avy Truc Mix	icks (2 :ks (3+	Autos Axles) Axles)	: 15 : 15 : 15		
Barrier Height: 0.0 feet		and Distance.	04 1001			Veh						Daily 97.42%
Noise Nois	Ba						edium Tr	ucks:	84.89	6 4.9%	10.3%	1.84%
Barrier Distance to Observer: 0.00 feet Cheek Ch					1	Voise So	ource El	evatio	ns (in t	eet)		
Road Grade:	Barrier Distance Observer Height	to Observer: (Above Pad):	0.0 feet 5.0 feet				m Trucks	3: 2	.297	Grade Ad	ljustmen	t: 0.0
Left View:	Ro	oad Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
VehicleType		Left View:	-90.0 degre				m Trucks	s: 56	6.065			
Autos: 66.51 3.88 -0.87 -1.20 -4.72 0.000	HWA Noise Mod	del Calculation	ns									
Medium Trucks: 77.72 -13.36 -0.85 -1.20 -4.88 0.000 Heavy Trucks:	VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	snel	Barrier Att	ten Be	rm Atten
Heavy Trucks: 82.99 -17.32 -0.85 -1.20 -5.28 0.000												0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNE												0.000
Autos: 68.3 66.4 64.7 58.6 67.2 Medium Trucks: 62.3 60.8 54.4 52.9 61.3 Heavy Trucks: 63.6 62.2 53.2 54.4 62.8 Vehicle Noise: 70.3 68.6 65.3 60.8 69.3 Centerline Distance to Noise Contour (In feet) 70 dBA 65 dBA 60 dBA 55 dB	Inmitigated Nois	se Levels (with	hout Topo and	barrier	r atten	uation)						
Medium Trucks: 62.3 60.8 54.4 52.9 61.3 Heavy Trucks: 63.6 62.2 53.2 54.4 62.8 Vehicle Noise: 70.3 68.6 65.3 60.8 69.3 Centerline Distance to Noise Contour (In feet) 70 dBA 65 dBA 60 dBA 55 dB					Leq Ev		Leq					
Heavy Trucks: 63.6 62.2 53.2 54.4 62.8											_	67.8
Vehicle Noise: 70.3 68.6 65.3 60.8 69.3 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dB											-	61.6
70 dBA 65 dBA 60 dBA 55 dB											_	62.9 69.8
70 dBA 65 dBA 60 dBA 55 dB	Centerline Distar	nce to Noise C	Contour (in feet)								
Ldn: 63 136 292 630							65 (dBA		60 dBA	55	dBA
						-						
CNEL: 67 145 313 674			C	VEL:	67	7	14	15		313	(674

	FH	WA-RD-77-108	HIGI	HWAY N	IOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Existing W me: Grand Av. ent: w/o Calve					.,	Name: lumber:		o Diamant	е	
SITE Highway Data	SPECIFIC I	NPUT DATA			Site Cor				L INPUT	S	
• •					Site Coi	iaitions	(naru :				
		34,000 vehicle	es					Autos:	15		
	ır Percentage:	10%				edium Tr			15		
	Hour Volume:	-,	es		He	eavy Tru	cks (3+	Axles):	15		
	ehicle Speed:	40 mph		1	Vehicle	Mix					
Near/Far L	.ane Distance:	84 feet		F	Ver	icleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	-		97.42%
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline L	Dist. to Barrier:	70.0 feet		1	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dis	t. to Observer:	70.0 feet		F.	10,00	Auto		.000	,,,		
Barrier Distanc	e to Observer:	0.0 feet			Madiu	m Truck		.297			
Observer Heigh	t (Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustment	. 0.0
	Pad Elevation:	0.0 feet			rica	y IIUCK	s. o	.000	Orace Au	usuncin	. 0.0
R	oad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	5.081			
FHWA Noise Mo	del Calculation	ns		-							
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos				-0.87		-1.20		-4.72		000	0.000
Medium Trucks	s: 77.72	2 -13.36		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks				-0.85	-	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi								1			
VehicleType	Leq Peak Ho			Leg E			Night		Ldn	_	NEL
Autos		8.3	66.4		64.7		58.		67.:		67.8
Medium Trucks		2.3	60.8		54.4		52.	-	61.3	-	61.6
Heavy Trucks		3.6	62.2		53.2		54.		62.		62.9
Vehicle Noise		0.3	68.6		65.3		60	.8	69.	3	69.8
Centerline Dista	nce to Noise C	Contour (in fee	t)	70 0	4D A	65	dBA	-	60 dBA	55	dBA
			I dn:	70 6			36	0	292		30 30
		_	NFI:	6	-		36 45		313		374
		C	IVEL.	0	,		40		313		114

	FHW.	A-RD-77-108 HIGI	HWAY NO	DISE PF	REDICT	ION MOD	EL	
Road Name	o: Existing With e: Stetson Av. (\$ at: e/o SR-79 SB	S.)				Name: R lumber: 9	ancho Diamanto 792	e
	SPECIFIC INP	UT DATA					ODEL INPUT	S
Peak Hour I Peak Ho Vel Near/Far Lar	our Volume: 2 nicle Speed:	,900 vehicles 10% ,990 vehicles 50 mph 84 feet		Mei Hei 'ehicle I Vehi	dium Tr avy Tru Vlix icleType	All All All All All All All All All All	,	Night Daily 9.6% 97.42% 10.3% 1.84%
Barrier Type (0-Wa		0.0		F	leavy 7	rucks: 8	6.5% 2.7%	10.8% 0.74%
Centerline Dis		70.0 feet		nise Sc	urce F	levations	(in feet)	
Roa	o Observer: Above Pad): Id Elevation: Id Elevation: Road Grade:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees	L	ane Eq	y Truck uivalen Auto	s: 2.29 s: 8.00 t Distance s: 56.22 s: 56.06	Grade Adj e (in feet) 23	justment: 0.0
FHWA Noise Mode								
VehicleType			stance	Finite		Fresne		
Autos: Medium Trucks:	70.20 81.00	2.35 -14.89	-0.87 -0.85		-1.20 -1.20			0.000 0.000
Heavy Trucks:	85.38	-14.89	-0.85		-1.20			0.000
Unmitigated Noise	Levels (withou	ıt Topo and barri	er attenu	ation)				
VehicleType	Leq Peak Hour	Leq Day	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos:	70.5			66.8		60.8	69.4	
Medium Trucks:	64.1	62.6		56.2		54.6	63.1	
Heavy Trucks:	64.5	63.1		54.0		55.3	63.6	
Vehicle Noise:	72.2			67.4		62.6	71.2	2 71.6
Centerline Distanc	e to Noise Con	tour (in feet)						T
			70 di			dBA	60 dBA	55 dBA
		Ldn:	84			80	388	835
		CNEL:	90		1	93	417	897

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	TION MODE	L		
	o: Existing W e: Grand Av. nt: e/o Calver	•					t Name: Ra lumber: 979	ncho Diamar 92	nte	
SITE S	SPECIFIC II	NPUT DATA					NOISE MO	DEL INPU	TS	
Highway Data				5	Site Cor	nditions	(Hard = 10	, Soft = 15)		
	Traffic (Adt): Percentage: our Volume:	24,200 vehicle 10% 2,420 vehicle					Aui rucks (2 Axle icks (3+ Axle	es): 15		
Ve	hicle Speed:	40 mph		,	/ehicle	Miv				
Near/Far Lai	ne Distance:	84 feet				icleTyp	e Da	y Evening	Nic	ght Daily
Site Data					V ()			.5% 12.9%		9.6% 97.42%
	rier Height:	0.0 feet			М	edium 7	rucks: 84	.8% 4.9%		0.3% 1.84%
Barrier Type (0-W		0.0				Heavy 7	rucks: 86	.5% 2.7%	10	0.8% 0.74%
Centerline Dis	t. to Barrier:	70.0 feet			loise S	ource F	levations (n feet)		
Centerline Dist. Barrier Distance Observer Height (to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu Hea	Auto m Truck vy Truck	os: 0.000 (s: 2.297 (s: 8.006	Grade A	djustr	ment: 0.0
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distance	(in feet)		
F	Road Grade:	0.0%				Auto	os: 56.223	3		
	Left View: Right View:	-90.0 degre				m Truck vy Truck				
FHWA Noise Mode	el Calculation	18								
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresnel	Barrier A	tten	Berm Atten
Autos:	66.51	2.40		-0.87	,	-1.20	-4.	72 0	.000	0.000
Medium Trucks:	77.72	-14.84		-0.85	5	-1.20	-4.	88 0	.000	0.000
Heavy Trucks:	82.99	-18.80		-0.85	i	-1.20	-5.	28 0	.000	0.000
Unmitigated Noise	Levels (with	hout Topo and	barri	er atteni	uation)					
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Ev	rening	Leq	Night	Ldn		CNEL
Autos:			64.9		63.2		57.1	65		66.4
Medium Trucks:			59.3		53.0		51.4	59		60.1
Heavy Trucks:	62	2.1	60.7		51.7		52.9	61	.3	61.4
Vehicle Noise:	68	8.9	67.1		63.8		59.3	67	.8	68.3
Centerline Distance	e to Noise C	ontour (in feet)	70	-			00 101		ee 10.4
			L	70 d			dBA	60 dBA		55 dBA
			Ldn:	50			08	233		502
		C	NEL:	54	1	1	16	249		537

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	HWAY N	IOISE PE	REDICTI	ON MO	DDEL				
Scenar	io: Existing W	ith Project				Project	Name:	Ranch	no Diama	nte		
Road Nam	e: Stetson Av	/. (S.)				Job No	ımber:	9792				
Road Segme	nt: e/o SR-79	NB Ramps										
SITE Highway Data	SPECIFIC II	NPUT DATA			Sita Can	N ditions			L INPU	TS		
	T W (4 W)	00.400 111		- '	Site Con	uitions	naiu.					
,	. ,	30,100 vehicle	S					Autos				
	Percentage:	10%				dium Tru		,				
	lour Volume:	3,010 vehicle	S		He	avy Truc	ks (3+	Axles).	15			
	hicle Speed:	50 mph		1	Vehicle I	Mix						
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	g Nig	ght	Daily
Site Data						A	utos:	77.5%	6 12.99	6 9	9.6%	97.429
Ra	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.99	6 10	0.3%	1.849
Barrier Type (0-W		0.0			F	Heavy Tr	ucks:	86.5%	6 2.79	6 10	0.8%	0.749
Centerline Di	. ,	70.0 feet		-								
Centerline Dist.		70.0 feet		1	Noise Sc	ource Ele			eet)			
Barrier Distance	to Observer	0.0 feet				Autos		.000				
Observer Height		5.0 feet				m Trucks	-	.297				
	ad Flevation:	0.0 feet			Heav	y Trucks	:: 8	.006	Grade A	Adjustr	ment:	0.0
	ad Elevation:	0.0 feet		- 1	Lane Ea	uivalent	Distar	nce (in	feet)			
	Road Grade:	0.0%				Autos		.223	,			
	Left View:	-90.0 degre	20		Mediui	m Trucks		.065				
	Right View:	90.0 degre				y Trucks		3.081				
FHWA Noise Mod	al Calaulatia					-						
VehicleType	REMEL	Traffic Flow	Dis	stance	Finito	Road	Fres	nel	Barrier A	ltton	Rorr	n Atten
Autos:	70.20		Dic	-0.87		-1.20	1100	-4.72		0.000	DOM	0.00
Medium Trucks:	81.00			-0.8		-1.20		-4.88		0.000		0.00
Heavy Trucks:	85.38			-0.8	-	-1.20		-5.28		0.000		0.00
Unmitigated Nois	e Levels (with	hout Topo and	barri	er atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	′	Leg E	vening	Leq I	Vight		Ldn		C٨	IEL
Autos:	7	0.5	68.6		66.8		60	.8	69	9.4		70.
Medium Trucks:	6	4.1	62.6		56.2		54	.7	63	3.1		63.
Heavy Trucks:	6-	4.5	63.1		54.1		55	.3	63	3.7		63.
Vehicle Noise:	7:	2.2	70.5		67.4		62	.6	7	1.2		71.
Centerline Distan	ce to Noise C	ontour (in feet)									
			L	70 c		65 (60 dBA			dBA
			Ldn:	8-	4	18	31		389		83	39
		C	VEL:	9	0	19	94		418		90)1

	FH	WA-RD-77-108	B HIGI	I YAWH	NOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Existing W me: Stetson A ent: w/o Califo	v. (S.)				.,	Name: lumber:		o Diamant	е	
	SPECIFIC I	NPUT DATA			a: a				L INPUT	S	
Highway Data					Site Cor	aitions	(Hard :				
Average Dail	y Traffic (Adt):	30,100 vehicle	es					Autos:	15		
	ır Percentage:	10%				edium Tr					
	Hour Volume:	-,	es		He	eavy Tru	cks (3+	Axles):	15		
V	'ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far L	ane Distance:	84 feet			Ver	icleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	-	9.6%	97.42%
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	
Barrier Type (0-	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline L	Dist. to Barrier:	70.0 feet		+	Noise S	ource F	levatio	ns (in f	oet)		
Centerline Dis	t. to Observer:	70.0 feet		t		Auto		.000	301)		
Barrier Distance	e to Observer:	0.0 feet			Madiu	m Truck		.297			
Observer Heigh	t (Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iustment	. 00
1	Pad Elevation:	0.0 feet			1100	ry Truck	3. 0	.000	Orado ria,	Juoumom	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	5.081			
FHWA Noise Mo											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos				-0.8		-1.20		-4.72		000	0.000
Medium Trucks				-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks				-0.8	-	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi										1	
VehicleType	Leq Peak Ho	our Leq Da		Leq E	vening		Night		Ldn		NEL
Autos		0.5	68.6		66.8		60.		69.4		70.0
Medium Trucks		4.1	62.6		56.2		54.		63.1		63.4
Heavy Trucks Vehicle Noise		4.5	63.1 70.5		54.1 67.4		55. 62.		63.7 71.2		63.8 71.6
					07.4		02	.0	/1	-	/ 1.0
Centerline Dista	IICE TO NOISE C	ontour (in fee	')	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:	8	34	1	81		389		339
		С	NEL:	9	00	1	94		418	9	901

	FHV	WA-RD-77-108	HIGHWAY	NOISE P	REDICT	TION MOD	EL			
Road Nam	io: Existing Wi ne: Stetson Av. nt: e/o Street "	. (S.)				t Name: R Number: 9		Diamante	•	
SITE	SPECIFIC IN	IPUT DATA				NOISE M			3	
Highway Data				Site Cor	nditions	(Hard = 1	0, Soft	t = 15)		
Average Daily	Traffic (Adt): 3	37,800 vehicles				Α	utos:	15		
Peak Hour	Percentage:	10%		Me	edium Ti	rucks (2 Ax	des):	15		
Peak H	lour Volume:	3,780 vehicles		He	eavy Tru	icks (3+ A)	des):	15		
Ve	hicle Speed:	50 mph		Vehicle	Miv					
Near/Far La	ne Distance:	84 feet			nicleTyp	ο Γ	Day E	Evening	Night	Daily
Site Data				VC/			7.5%	12.9%	9.6%	,
					ledium 7		4.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	rrier Height:	0.0 feet 0.0			Heavy 1		6.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	70.0 feet								
Centerline Dist.		70.0 feet		Noise S	ource E	levations	(in fee	t)		
Barrier Distance		0.0 feet			Auto					
Observer Height (5.0 feet		Mediu	m Truck	ks: 2.29				
	ad Flevation:	0.0 feet		Hea	vy Truci	ks: 8.00	06 G	Grade Adji	ustment	0.0
	ad Elevation:	0.0 feet		Lane Ed	uivaler	t Distance	e (in fe	et)		
	Road Grade:	0.0%			Auto		•	,		
	I eft View:	-90.0 degree	s	Mediu	m Truck	ks: 56.0	65			
	Right View:	90.0 degree		Hea	vy Truck	ks: 56.0	B1			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	I B	arrier Atte	en Ber	m Atten
Autos:	70.20	3.37	-0	.87	-1.20		4.72	0.0	00	0.000
Medium Trucks:	81.00	-13.87	-0	.85	-1.20		4.88	0.0	00	0.000
Heavy Trucks:	85.38	-17.83	-0	.85	-1.20	4	5.28	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and I	barrier atte	enuation)						
VehicleType	Leq Peak Hou	, ,		Evening		Night	L	_dn		VEL
Autos:	71		9.6	67.8		61.8		70.4		71.0
Medium Trucks:	65		3.6	57.2		55.7		64.1		64.4
Heavy Trucks:	65		64.1	55.0		56.3		64.6		64.8
Vehicle Noise:	73	-	1.4	68.4		63.6		72.2	!	72.6
Centerline Distant	ce to Noise Co	ontour (in feet)								
) dBA		dBA		dBA		dBA
			.dn:	98	_	210		153	-	77
		CN	IEL:	105	2	226	4	187	1,	049

	FHWA	A-RD-77-108 HIG	HWAY N	OISE P	REDICT	ION MODEL		
Road Name	o: Existing With e: Stetson Av. (et: e/o California	S.)				Name: Rancho Diama iumber: 9792	nte	
SITE S	PECIFIC INP	UT DATA				IOISE MODEL INPU	TS	
Highway Data			S	Site Cor	ditions	(Hard = 10, Soft = 15)		
	Percentage:	,800 vehicles 10% ,780 vehicles 50 mph		He	avy Tru	Autos: 15 ucks (2 Axles): 15 cks (3+ Axles): 15		
Near/Far Lan	ne Distance:	84 feet		/ehicle	icleTyp	Day Evenin	g Nigh	ht Doile
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0		М		Autos: 77.5% 12.99 rucks: 84.8% 4.99	6 9.0 6 10.3	6% 97.42% 3% 1.84%
Centerline Dis	t. to Barrier:	70.0 feet		laisa S	ourco E	levations (in feet)		
Roa R	o Observer: Above Pad): d Elevation: d Elevation: Road Grade:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees 90.0 degrees	L	Heav ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	s: 2.297 s: 8.006 Grade / t Distance (in feet) s: 56.223 s: 56.065	Adjustm	ent: 0.0
FHWA Noise Mode	l Calculations							
VehicleType			istance		Road	Fresnel Barrier		Berm Atten
Autos:	70.20	3.37	-0.87		-1.20		0.000	0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-13.87 -17.83	-0.85 -0.85		-1.20 -1.20		0.000	0.000
Unmitigated Noise	Levels (withou	ıt Topo and bar	rier atteni	uation)				
	Leg Peak Hour	Leq Day	Leq Ev		Leq	Night Ldn		CNEL
Autos:	71.5	69.6	5	67.8	·	61.8 7	0.4	71.0
Medium Trucks:	65.1	63.6	3	57.2		55.7 6	4.1	64.4
Heavy Trucks:	65.5	64.1		55.0			4.6	64.8
Vehicle Noise:	73.2	71.4		68.4		63.6 7.	2.2	72.6
Centerline Distanc	e to Noise Con	tour (in feet)						
			70 d	IBA .	65	dBA 60 dBA		55 dBA
		Ldn			_	10 453		977
		CNEL	: 10	5	2	26 487		1,049

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGH	IWAY I	NOISE P	REDICTI	ON MO	ODEL			
	o: Existing W e: Stetson Av nt: e/o Mustan	r. (S.)				Project I Job Nu			o Diamant	e	
SITE S	SPECIFIC IN	NPUT DATA			Site Cor				L INPUT	S	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	33,500 vehicle: 10% 3,350 vehicle: 50 mph			Ме Не	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lar		84 feet		-	Vehicle	Mix icleType	Т	Day	Evening	Night	Dailv
Site Data					Ven		utos:	77.5%	-	9.6%	. ,
Bar Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		70.0 feet		-	Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. Barrier Distance of Observer Height (A	to Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks /y Trucks	c 0	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
	d Elevation:	0.0 feet		İ	Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%		Ī	·	Autos	: 56	5.223			
	Left View: Right View:	-90.0 degree				m Trucks ⁄y Trucks		6.065 6.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	70.20			-0.8	37	-1.20		-4.72		000	0.000
Medium Trucks:	81.00			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-18.35		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise			_							1	
	Leq Peak Ho			Leq E	vening	Leq I			Ldn		NEL
Autos:			69.1		67.3		61		69.	-	70.
Medium Trucks:	-		63.0		56.7		55 55		63.	-	63.8
Heavy Trucks: Vehicle Noise:			63.6 70.9		54.5 67.9		63		71.		64.2 72.1
Centerline Distanc	e to Noise C	ontour (in feet	1							-	
Contenine Distant	10 110/36 0	ontour (III leet		70	dBA	65 d	IBA		60 dBA	55	dBA
			Ldn:	(90	19	14		418	9	01
		CI	VEL:	9	97	20	19		449	g	68

	FH	WA-RD-77-108	HIGI	HWAY	NOISE P	REDICTI	ON MO	DDEL			
Road Na	nrio: Existing W me: Stetson Av ent: w/o Warre	/. (S.)					Name: umber:		o Diamant	е	
	SPECIFIC II	NPUT DATA			0:: 0				L INPUT	S	
Highway Data					Site Cor	ditions	(Hard :				
	. ,	33,500 vehicle	S					Autos:			
	r Percentage:	10%				dium Tru					
	Hour Volume:	.,	S		He	avy Truc	ks (3+	Axles):	15		
	ehicle Speed:	50 mph		ı	Vehicle	Mix					
Near/Far L	ane Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.69	6 97.42%
R	arrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-	-	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.89	6 0.74%
	ist. to Barrier:	70.0 feet			Noise S	ource El	evatio	ns (in f	eet)		
Centerline Dist		70.0 feet		İ		Autos	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2	.297			
Observer Height	. ,	5.0 feet			Hear	y Trucks	s: 8	.006	Grade Ad	iustmer	t: 0.0
	Pad Elevation:	0.0 feet									
R	oad Elevation:	0.0 feet			Lane Eq				feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degre				m Trucks		.065			
	Right View:	90.0 degre	es		Hear	y Trucks	s: 56	5.081			
FHWA Noise Mo	del Calculation	15									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Be	erm Atten
Autos				-0.8		-1.20		-4.72		000	0.000
Medium Trucks				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks				-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noi											
VehicleType	Leq Peak Ho		_	Leq E	vening	_	Night		Ldn		CNEL
Autos			69.1		67.3		61.	-	69.9		70.5
Medium Trucks			63.0		56.7		55.		63.6		63.8
Heavy Trucks			63.6		54.5		55.	-	64.1		64.2
Vehicle Noise			70.9		67.9		63.	.1	71.6	5	72.1
Centerline Dista	nce to Noise C	ontour (in feet)	70	-(D.4	05	-/0.4		20 -/04	-	C -(D.4
					dBA		dBA		60 dBA		5 dBA
		0	Ldn:		90		94		418		901
		C	VEL:		97	20	19		449		968

FRWA-RD-11-100 RIGHWAT NOISE F	PREDICTION MODEL
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.	Project Name: Rancho Diamante Job Number: 9792
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data Site Co	nditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 30,300 vehicles Peak Hour Percentage: 10% M	Autos: 15 ledium Trucks (2 Axles): 15
Peak Hour Volume: 3,030 vehicles H	leavy Trucks (3+ Axles): 15
Vehicle Speed: 50 mph	Mix
Maay/Fay Lang Distance: 94 feet	hicleType Day Evening Night Daily
Site Data	Autos: 77.5% 12.9% 9.6% 97.42%
Barrier Height: 0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%
	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%
Contorlino Diet to Berriery 70.0 feet	Source Elevations (in feet)
Centerline Dist. to Observer: 70.0 feet	Autos: 0.000
Barrier Distance to Observer: 0.0 feet	um Trucks: 2.297
Observer Height (Above Pad): 5.0 foot	avy Trucks: 8.006 Grade Adjustment: 0.0
Pad Elevation: 0.0 feet	avy Trucks. 8.006 Grade Adjustment. 6.6
Road Elevation: 0.0 feet Lane E	quivalent Distance (in feet)
Road Grade: 0.0%	Autos: 56.223
Left View: -90.0 degrees Media	um Trucks: 56.065
Right View: 90.0 degrees Hea	avy Trucks: 56.081
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite	e Road Fresnel Barrier Atten Berm Atten
Autos: 70.20 2.41 -0.87	-1.20 -4.72 0.000 0.000
Medium Trucks: 81.00 -14.83 -0.85	-1.20 -4.88 0.000 0.000
Heavy Trucks: 85.38 -18.79 -0.85	-1.20 -5.28 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier attenuation))
VehicleType Leq Peak Hour Leq Day Leq Evening	Leq Night Ldn CNEL
Autos: 70.5 68.6 66.9	
Medium Trucks: 64.1 62.6 56.2	
Heavy Trucks: 64.5 63.1 54.1	
Vehicle Noise: 72.2 70.5 67.4	4 62.7 71.2 71.7
Centerline Distance to Noise Contour (in feet)	
70 dBA	65 dBA 60 dBA 55 dBA
Ldn: 84 CNFI: 91	182 391 843 195 420 905

FH	WA-RD-77-108	HIGHW	AY NO	ISE PI	REDICT	ION MO	DEL			
Scenario: Existing W Road Name: Stetson Av Road Segment: e/o Warre	/. (S.)					t Name: lumber:		o Diamante	•	
SITE SPECIFIC II	NPUT DATA					NOISE N	IODE	L INPUTS	3	
Highway Data			Sit	te Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	30,300 vehicle	S					Autos:	15		
Peak Hour Percentage:	10%			Me	dium Ti	rucks (2 A	(xles	15		
Peak Hour Volume:	3,030 vehicle	s		He	avy Tru	icks (3+ A	(xles	15		
Vehicle Speed:	50 mph		Vo	hicle	Miv					
Near/Far Lane Distance:	84 feet				icleTyp	۵	Dav	Evening	Night	Dailv
Site Data				*011			77.5%		9.6%	. ,
Barrier Height:	0.0 feet			М	edium 7	rucks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wall, 1-Berm):	0.0			- 1	Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		No	oise So	ource E	levation	s (in fe	eet)		
Centerline Dist. to Observer:	70.0 feet				Auto		000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	ustmen	t: 0.0
Pad Elevation:	0.0 feet		-		·					
Road Elevation:	0.0 feet		La	ne Eq		t Distan		reet)		
Road Grade:	0.0%				Auto					
Left View:	-90.0 degre				m Truck					
Right View:	90.0 degre	es		Heav	ry Truck	rs: 56.	J81			
FHWA Noise Model Calculation	าร									
VehicleType REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos: 70.20			-0.87		-1.20		-4.72	0.0	00	0.000
Medium Trucks: 81.00			-0.85		-1.20		-4.88	0.0		0.000
Heavy Trucks: 85.38	-18.79		-0.85		-1.20		-5.28	0.0	00	0.000
Unmitigated Noise Levels (with	hout Topo and	barrier a	ttenua	ation)						
VehicleType Leq Peak Ho			eq Eve		Leq	Night		Ldn		NEL
		68.6		66.9		60.8		69.4		70.1
		62.6		56.2		54.7		63.2		63.4
,		63.1		54.1		55.3		63.7		63.8
Vehicle Noise: 7:	2.2	70.5		67.4		62.7		71.2		71.7
Centerline Distance to Noise C	ontour (in feet)								
			70 dB.	iA .		dBA	6	i0 dBA		i dBA
		Ldn:	84			82		391		343
	C	NEL:	91		1	95		420	9	905

Monday, January 25, 2016

	FH	WA-RD-77-1	08 HIG	1 YAWH	NOISE PI	REDICTION	ON MO	DDEL			
Scenar	io: Existing W	/ith Project				Project I	Vame:	Ranch	no Diamant	te	
Road Nam	e: Stetson A	v.				Job Nu	mber:	9792			
Road Segme	nt: e/o New S	tetson Av.									
SITE : Highway Data	SPECIFIC I	NPUT DAT	A.		Cita Can	No ditions (L INPUT	s	
					Site Con	iaitions (i	Hara :				
Average Daily	. ,		cles					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	3,590 vehic	cles		He	avy Truck	ks (3+	Axles).	15		
Ve	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	97.42%
Pa	rrier Heiaht:	0.0 fee			M	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			- 1	Heavy Tru	ıcks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di		70.0 fee		L							
Centerline Dist.		70.0 feet		L	Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height (5.0 fee			Mediu	m Trucks:	: 2	.297			
	ad Flevation:	0.0 fee			Heav	y Trucks:	: 8	.006	Grade Ac	djustmen:	t: 0.0
	ad Elevation:	0.0 fee			Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos		5.223	,		
	Left View:	-90.0 ded	rooc		Mediu	m Trucks:		6.065			
	Right View:	90.0 deg				y Trucks:		5.081			
	ragin view.	30.0 deg	1663		ricas	y Trucks.	. 50				
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flov		istance		Road	Fres		Barrier At		rm Atten
Autos:	70.20			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	81.00			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	3 -18.0	05	-0.8	5	-1.20		-5.28	0.	000	0.000
Unmitigated Noise	e Levels (with	hout Topo a	nd barr	ier atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq E	Day	Leq E	vening	Leq N	light		Ldn	С	NEL
Autos:	7	1.3	69.4		67.6		61	.6	70.	2	70.8
Medium Trucks:	6	4.9	63.3		57.0		55	.4	63.	9	64.1
Heavy Trucks:	6	5.3	63.9		54.8		56	.1	64.	4	64.5
Vehicle Noise:	7	3.0	71.2		68.2	,	63	.4	71.	9	72.4
Centerline Distan	ce to Noise C	ontour (in fe	eet)								
				70	dBA	65 d	BA		60 dBA	55	dBA
			Ldn:	9	14	20	3		438	9	944
			CNEL:	10	01	21	8		471	1	.014

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE P	REDICT	ION MO	DDEL			
Road Nam	io: Existing Wine: Stetson Av. nt: e/o Cawsto	•					Name: lumber:		o Diamant	е	
SITE :	SPECIFIC IN	PUT DATA			Site Cor				L INPUT	S	
					Site Coi	luluons	(Haru -				
Average Daily	. ,		S					Autos:			
	Percentage:	10%				edium Tr					
	lour Volume:	3,290 vehicle	S		He	eavy Tru	CKS (3+	Axies):	15		
	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						,	Autos:	77.5%	12.9%	9.6%	6 97.42%
Rai	rrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.39	6 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy T	rucks:	86.5%	2.7%	10.89	6 0.74%
Centerline Dis		70.0 feet		1	Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	70.0 feet		F		Auto	s: 0	.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (5.0 feet			Hear	vy Truck	s: 8	.006	Grade Ad	justmer	nt: 0.0
	ad Elevation:	0.0 feet				•					
	ad Elevation:	0.0 feet		1	Lane Eq			_ •	feet)		
ı	Road Grade:	0.0%				Auto		.223			
	Left View:	-90.0 degre				m Truck		.065			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 56	.081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:	70.20	2.76		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-14.47		-0.8	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-18.43		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	70	9	69.0		67.2		61.	2	69.8	3	70.4
Medium Trucks:	64	5	63.0		56.6		55.	1	63.5	5	63.8
Heavy Trucks:	64	9	63.5		54.4		55.	7	64.0)	64.2
Vehicle Noise:	72	.6	70.8		67.8		63	0	71.6	6	72.0
Centerline Distant	ce to Noise Co	ntour (in feet)	70	-/D.4		-/0.4		20 -/D4	-	C -/D 4
			Lala	70 0			dBA	6	60 dBA		5 dBA
		_	Ldn: NFI:	8	-		92 06		413 444		890 956
		C	VEL:	9	О	2	Ub		444		956

Scenario: Existing With Pr Road Name: 9th St. Road Segment: w/o Winchester	roject			D1					
SITE SPECIFIC INPUT	Rd.				t Name: lumber:		o Diamante	e	
Highway Data	T DATA		Site Con				L INPUT	3	
Average Daily Traffic (Adt): 20,60 Peak Hour Percentage: Peak Hour Volume: 2,00	10% 60 vehicles		Me	dium Tı	rucks (2 licks (3+	Autos: Axles):	15 15		
	25 mph 84 feet		Vehicle I	Wix					
	84 feet		Veh	icleTyp		Day	Evening	Night	Daily
	0.0 feet 0.0			edium T	Autos: rucks: rucks:	77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	97.429 1.849 0.749
Centerline Dist. to Barrier: 7	0.0 feet	ŀ	Noise Sc	urce F	levatio	ns (in f	oet)		
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	0.0 feet 0.0 feet 5.0 feet 0.0 feet			Auto m Truck y Truck uivalen	rs: 2	.000 .297 .006	Grade Adj	ustment	0.0
Left View: -9	0.0% 0.0 degrees 0.0 degrees			Auto m Truck y Truck	rs: 56	5.223 5.065 5.081			
FHWA Noise Model Calculations									
, , ,		Distance	Finite		Fres		Barrier Atte		m Atten
Autos: 58.73 Medium Trucks: 70.80	3.74 -13.50	3.0- 3.0-		-1.20 -1.20		-4.72 -4.88		100	0.00
Heavy Trucks: 77.97	-17.45	-0.8	35	-1.20		-5.28	0.0	00	0.00
Unmitigated Noise Levels (without	Topo and ba	rrier atte	nuation)						
VehicleType Leq Peak Hour	Leq Day		vening	Leq	Night		Ldn		VEL
Autos: 60.4	58.	-	56.7		50		59.3		59.
Medium Trucks: 55.2	53.		47.4		45		54.3		54.
Heavy Trucks: 58.5	57.		48.0		49	_	57.6		57.
Vehicle Noise: 63.3	61.	6	57.7		53	.8	62.3	3	62.
Centerline Distance to Noise Conto	ur (in feet)								
			dBA		dBA	1 6	0 dBA		dBA
	Ldi		21		46		100	_	15
	CNEL	L: 2	23		49		106	2	28

	FH\	WA-RD-77-108	HIGHW	/AY N	OISE PE	REDICT	ION MOI	DEL			
Road Nar	rio: Existing Wine: Stetson Avent: e/o Sander	. '				.,	Name: I lumber: 9		o Diamante	Э	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					site Con	aitions	(Hard =				
,	Traffic (Adt):		S					Autos:			
	Percentage:	10%					ucks (2 A	,			
	Hour Volume:	4,970 vehicles	S		He	avy Tru	cks (3+ A	xles):	15		
	ehicle Speed:	45 mph		1	/ehicle l	Иiх					
Near/Far La	ane Distance:	84 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	6 97.42%
Rs	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-V		0.0			F	leavy T	rucks:	86.5%	2.7%	10.89	6 0.74%
,, ,	ist. to Barrier:	70.0 feet		١,	Vaina Ce	uraa E	levations	/in f	0041		
Centerline Dist.	to Observer:	70.0 feet		- '	voise sc	Auto		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiuu	Auto n Truck		97			
Observer Height	(Above Pad):	5.0 feet				y Truck		006	Grade Adj	iuctmon	# 0.0
F	ad Elevation:	0.0 feet			пеач	у тиск	8. 0.0	000	Grade Auj	usunen	i. 0.0
Ro	ad Elevation:	0.0 feet		I	ane Eq	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.2	223			
	Left View:	-90.0 degree	es		Mediui	n Truck	s: 56.0	065			
	Right View:	90.0 degree	es		Heav	y Truck	s: 56.0	081			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	_	Barrier Atte	en Be	erm Atten
Autos:		5.01		-0.87		-1.20		-4.72	0.0		0.000
Medium Trucks:		-12.23		-0.85		-1.20		-4.88	0.0		0.000
Heavy Trucks:	84.25	-16.18		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Nois			barrier	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	′ L	.eq Eı	rening	Leq	Night		Ldn	(CNEL
Autos:			69.5		67.7		61.7		70.3		70.9
Medium Trucks:		-	63.7		57.3		55.8		64.2		64.5
Heavy Trucks:			64.6		55.6		56.8		65.2		65.3
Vehicle Noise:		-	71.5		68.4		63.7		72.2	2	72.7
Centerline Distan	ce to Noise C	ontour (in feet)	70	.D.4		1D.4				E 10.4
				70 c	IBA	65	dBA	(60 dBA	5	5 dBA

Ldn: CNEL: 212 227 457 490 984 1,055

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE PI	REDICTI	ON M	ODEL			
	o: Existing W	ith Project							o Diamant	е	
Road Name						Job Ni	ımber.	9792			
Road Segmen	t: e/o Winche	ester Rd.									
SITE S Highway Data	SPECIFIC IN	IPUT DATA			Site Con	N ditions			L INPUT	S	
Average Daily	Troffic (Adt):	11 600 vobiolo			0.10 00.	uniono	- rui u	Autos			
Peak Hour I		10%	•		Me	dium Tru	rks (2				
	our Volume:	1.160 vehicle				avy Truc		,			
	hicle Speed:	25 mph	•	L			NS (0+	Axico).	10		
Near/Far I ar		84 feet		L	Vehicle I						
	ie Distance.	04 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%		9.6%	
Bar	rier Height:	0.0 feet				edium Tr		84.8%		10.3%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ı	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	70.0 feet		- 1	Noise So	ource Ele	vatio	ns (in f	pet)		
Centerline Dist. t	to Observer:	70.0 feet		F	10,00 0	Autos		0.000	501)		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks		2.297			
Observer Height (/	Above Pad):	5.0 feet				y Trucks		3.006	Grade Ad	liustment	0.0
Pa	d Elevation:	0.0 feet		L						,	
Roa	d Elevation:	0.0 feet		L.	Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%				Autos	: 56	5.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56	6.065			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56	3.081			
FHWA Noise Mode					_						
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier At		m Atten
Autos:	58.73			-0.8		-1.20		-4.72		000	0.00
Medium Trucks:	70.80			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	77.97			-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	Levels (with Leg Peak Hou					Leq I	liabt	1	Ldn		NEL
VehicleType Autos:	Leq Peak Hot		56.0	Leq E	vening 54.2	Leq I	vigrit 48	2	Lan 56.		VEL 57.4
Medium Trucks:			51.2		44.9		43	-	51.	-	52.0
Heavy Trucks:	56		54.6		45.5		43		55.	-	55.3
Vehicle Noise:			59.1		55.2		51		59.		60.2
Centerline Distanc	e to Noise C	ontour (in feet)								
				70 d		65 (- (60 dBA		dBA
			Ldn:	1	-	3:	_		68		46
		-	VFI:	1	^	3			72		55

Monday, January 25, 2016

	FHV	WA-RD-77-108	HIGH	IWAY I	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: Year 2019 ne: Winchester nt: s/o Florida	Rd.	t			.,	Name: umber:		o Diamante	е	
	SPECIFIC IN	IPUT DATA			Site Cor				L INPUT	S	
Highway Data					Site Coi	iuitions	(naru =				
Average Daily	. ,		S					Autos:	15		
	Percentage:	10%				edium Tri			15		
	lour Volume:	2,500 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	hicle Speed:	55 mph		Ī	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		Ī	Vel	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.69	6 97.42%
Rai	rrier Heiaht:	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.39	% 1.84%
Barrier Type (0-W		0.0				Heavy Ti	rucks:	86.5%	2.7%	10.89	% 0.74%
Centerline Dis	st. to Barrier:	47.0 feet		ŀ	Noise S	ource Fl	evation	e (in fa	not)		
Centerline Dist.	to Observer:	47.0 feet		ŀ	110/30 0	Auto		000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height (Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	iuetmai	at: 0.0
Pa	ad Elevation:	0.0 feet			Hea	y much	s. 0	.000	Orace Au	usunci	n. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distar	ce (in	feet)		
i i	Road Grade:	0.0%				Auto	s: 43	.704			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43	.501			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 43	.521			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten
Autos:	71.78	1.16		0.7	77	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	82.40	-16.08		0.8	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	86.40	-20.04		3.0	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	72	.5	70.6		68.8		62.	В	71.4	1	72.0
Medium Trucks:	65	.9	64.4		58.1		56.	5	65.0)	65.2
Heavy Trucks:	66	.0	64.5		55.5		56.	В	65.1	l	65.2
Vehicle Noise:	74	.1	72.3		69.4		64.	5	73.1	ļ	73.5
Centerline Distant	ce to Noise Co	ontour (in feet)								
					dBA		dBA	1 6	60 dBA	5	5 dBA
			Ldn:		75		62		349		752
		CI	VEL:	8	B1	1	74		375		809

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICT	TION MO	DEL			
	e: Patterson A		t				t Name: Number:		no Diamant	е	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Peak H	Percentage: our Volume:	10% 1,360 vehicle		3	Ме	edium Tr	rucks (2 icks (3+	Autos. Axles).	15		
	nicle Speed:	40 mph		ν	ehicle	Mix					
Near/Far Lar	ne Distance:	12 feet			Vel	icleTyp	е	Day	Evening	Night	,
Barrier Type (0-W		0.0 feet 0.0				edium 7	Autos: Frucks: Frucks:	77.5% 84.8% 86.5%	6 4.9%	9.69 10.39 10.89	% 1.84%
Centerline Dist		22.0 feet 22.0 feet		Ν	oise S	ource E	levatio	ıs (in f	eet)		
Barrier Distance t Observer Height (Pa Roa	do Observer: Above Pad): de Elevation: de Elevation: Road Grade: Left View:	0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Hea ane Eq Mediu	Auto m Truck	ks: 2 ks: 8 nt Distar ps: 21 ks: 21	.000 .297 .006 	Grade Ad	justmei	nt: 0.0
	Right View:	90.0 degre	es		пеа	vy Truck	18. 21	.310			
FHWA Noise Mode		Traffic Flow	Dista		F1-11-	D/	Fres		D	0	
VehicleType Autos:	REMEL 66.51	-0.10	Dista	nce 5.32	Finite	Road -1.20		-4.34	Barrier Att	000 Bi	erm Atten 0.000
Medium Trucks:	77.72	-17.34		5.44		-1.20		-4.85		000	0.000
Heavy Trucks:	82.99	-21.30		5.43		-1.20		-6.07		000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	/ L	eq Ev	ening	Leq	Night		Ldn	-	CNEL
Autos:	70	0.5	68.6		66.9		60.	8	69.4	1	70.0
Medium Trucks:	64		63.1		56.7		55.	_	63.7		63.9
Heavy Trucks:	65		64.5		55.5		56.		65.1		65.2
Vehicle Noise:	72		70.8		67.5		63.	0	71.6	5	72.0
Centerline Distanc	e to Noise Co	ontour (in feet)					-			
			느	70 dl			dBA		60 dBA	5	5 dBA
			Ldn: NFI:	28 30			60 64		130 139		279 299
		Ci	VEL:	30		'	04		139		299

FH	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICTION	ом ис	DEL			
Scenario: Year 2019 Road Name: Wincheste Road Segment: n/o 9th St.	r Rd.	t				Name: F Imber: 9		Diamante	e	
SITE SPECIFIC II	NPUT DATA				N	OISE N	IODE	LINPUT	S	
Highway Data			S	ite Cor	nditions (Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt):	29,100 vehicle	s				-	Autos:	15		
Peak Hour Percentage:	10%			Me	edium Tru	cks (2 A	xles):	15		
Peak Hour Volume:	2,910 vehicle	S		He	eavy Truci	ks (3+ A	xles):	15		
Vehicle Speed:	45 mph		V	ehicle	Miv					
Near/Far Lane Distance:	36 feet		-		icleType	T.	Dav	Evening	Night	Daily
Site Data							77.5%	12.9%	9.6%	-
Barrier Height:	0.0 feet			M	edium Tru	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	47.0 feet		N	oise S	ource Ele	evations	s (in fe	et)		
Centerline Dist. to Observer:	47.0 feet				Autos.	: 0.0	000			
Barrier Distance to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height (Above Pad):	5.0 feet			Hear	vy Trucks	: 8.0	006	Grade Adj	ustmen	: 0.0
Pad Elevation:	0.0 feet					Di-1	- /! /			
Road Elevation:	0.0 feet		Li	ane Eq	uivalent		_	eet)		
Road Grade:	0.0%			1.4II.	Autos					
Left View:	-90.0 degre				m Trucks					
Right View:	90.0 degre	es		неа	vy Trucks.	: 43.5	021			
FHWA Noise Model Calculation	,									
VehicleType REMEL	Traffic Flow		ance	Finite	Road	Fresn	_	Barrier Att		rm Atten
Autos: 68.46			0.77		-1.20		-4.63	0.0		0.000
Medium Trucks: 79.45			0.80		-1.20		-4.87	0.0		0.000
Heavy Trucks: 84.25			0.80		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho			Leq Eve		Leq N			Ldn		NEL
	0.7 4.5	68.8 63.0		67.1 56.6		61.0 55.1		69.6 63.5		70.2 63.8
	4.5 5.3	63.0		56.6		55.1 56.1		63.5		63.8
	2.6	70.8		67.7		63.0		71.5		72.0
Centerline Distance to Noise C	ontour (in fee									
	(111 1001	_	70 dE	ВА	65 d	IBA .	6	0 dBA	55	dBA
	60		12	8		276		595		
	CNEL:					64 138 296 638				

Monday, January 25, 2016

	FH\	WA-RD-77-108	HIG	HWAY	NOISE P	REDICTION	ON MO	ODEL			
	e: California /		ct			Project I Job Nu			o Diamant	е	
SITE S	SPECIFIC IN	IPUT DATA			Site Cor	Nonditions (L INPUT	s	
Average Daily Peak Hour Peak H Vel	Percentage: our Volume: hicle Speed:	10% 1,280 vehicle 40 mph			Me	edium True eavy Truci	cks (2	Autos: Axles):	15 15		
Near/Far Lar	ne Distance:	36 feet			Ver	icleType		Day	Evening	Night	Daily
Site Data Bar Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				Ai ledium Tru Heavy Tru		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dis	st. to Barrier:	47.0 feet			Noise S	ource Ele	vatio	ns (in f	eet)		
Centerline Dist. a Barrier Distance a Observer Height (A	to Observer:	47.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediu	Autos m Trucks vy Trucks	: 0	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%				Autos	: 43	3.704			
	Left View: Right View:	-90.0 degre				m Trucks. vy Trucks.		3.501 3.521			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	66.51	-0.37		0.7	77	-1.20		-4.63	0.0	000	0.000
Medium Trucks:	77.72	-17.61		0.8	30	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-21.56		0.8	30	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V	Leq E	vening	Leq N	light		Ldn	C	NEL
Autos:	65		63.8		62.1		56		64.	-	65.2
Medium Trucks:		0.7	58.2		51.8		50		58.	-	59.0
Heavy Trucks:		.0	59.6		50.6		51		60.		60.3
Vehicle Noise:	67	7.7	66.0		62.7		58	.2	66.	7	67.2
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			[dBA	65 d		(60 dBA		dBA
		_	Ldn:		28	61			132	_	84
		С	NEL:		30	65)		141	3	04

	FH\	WA-RD-77-10	8 HIGI	1 YAWH	NOISE PI	REDICT	ION MO	DEL					
Road Nar	rio: Year 2019 ne: California A ent: s/o Stowe I	۸v.	ct				Name: I lumber: !		o Diamante	е			
	SPECIFIC IN	IPUT DATA							L INPUT	S			
Highway Data					Site Con	ditions	•						
Average Daily	Traffic (Adt):	17,700 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%					ucks (2 A	,	15				
Peak I	Hour Volume:	1,770 vehicle	es		He	avy Truc	cks (3+ A	Axles):	15				
Ve	ehicle Speed:	40 mph		F	Vehicle i	Mix							
Near/Far La	ane Distance:	36 feet		H		icleType	,	Dav	Evenina	Niaht	Dailv		
Site Data					*0//			77.5%		9.6%			
	rrier Height:	0.0 feet			Me	edium Tı		84.8%		10.3%	1.84%		
	-	0.0 reet 0.0				Heavy Ti	rucks:	86.5%		10.8%			
Barrier Type (0-V	vali, 1-Berm): ist. to Barrier:	0.0 47.0 feet								10.070	0.7 170		
		47.0 feet			Noise Source Elevations (in feet) Autos: 0.000								
	Centerline Dist. to Observer: 47.0 feet arrier Distance to Observer: 0.0 feet						s: 0.0	000					
Observer Height		5.0 feet			Mediu	m Truck	s: 2.2	297					
	(ADOVE Pau). Pad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	006	Grade Adj	iustment.	0.0		
	ad Elevation:	0.0 feet			Lane Eq	uivalon	t Dietani	co (in i	foot)				
	Road Grade:	0.0%		H	Luno Lq	Auto							
	Left View:	-90.0 deare	200		Madiu	m Truck:							
	Right View:	90.0 degre				vy Truck							
	ragni view.	30.0 degre	563		11001	ry rruon	3. 40.	021					
FHWA Noise Mod			,										
VehicleType	REMEL	Traffic Flow		stance		Road	Fresn		Barrier Att		m Atten		
Autos:		1.04		0.7		-1.20		-4.63		000	0.000		
Medium Trucks:				0.8		-1.20		-4.87		000	0.000		
Heavy Trucks:	82.99	-20.15	5	0.8	0	-1.20		-5.46	0.0	000	0.000		
Unmitigated Nois		-											
VehicleType	Leq Peak Hou		,	Leq E	vening	_	Night		Ldn		VEL		
Autos:			65.2		63.5		57.4		66.0		66.6		
Medium Trucks:	-		59.6		53.3		51.7		60.2	-	60.4		
Heavy Trucks: Vehicle Noise:			61.0 67.4		52.0 64.1		53.2 59.6		61.6		61.7		
• 0oic 140i3c.			•		34.1		00.0		00.		00.0		
Contorline Distan			/										
Centerline Distan	00 10 110/30 0	,		70	dBA	65	dBA	6	60 dBA	55	dBA		
Centerline Distan	ce to Morse of	,	Ldn:		dBA 5		dBA '6	6	163		dBA 52		

		WA-RD-77-1		HIVAT I	IOISE FI						
	o: Year 2019 e: California	Without Proj	ect				t Name: Jumber:		o Diamante	9	
Road Segmen						JOD I	umber.	9192			
		NPUT DATA					IOICE	MODE	L INPUT		
Highway Data	PECIFIC II	NPUI DAI	•		Site Con					<u> </u>	
Average Daily	Traffic (Adt):	18.600 vehic	les					Autos:	15		
Peak Hour I	. ,	10%			Me	dium Tı	ucks (2	Axles):	15		
	our Volume:	1,860 vehic	les		He	avy Tru	cks (3+	Axles):	15		
Vet	nicle Speed:	25 mph		-	Vehicle i	Miv					
Near/Far Lar	ne Distance:	36 feet		H		icleType	9	Dav	Evening	Night	Daily
Site Data							Autos:	77.5%	-	9.6%	
Rar	rier Height:	0.0 feet			Me	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			F	leavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	47.0 feet			Noise So	ource E	levation	ns (in fe	eet)		
Centerline Dist. t	o Observer:	47.0 feet				Auto		.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck		.297			
Observer Height (/	,	5.0 feet			Heav	y Truck	s: 8	.006	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet				•		-			
	d Elevation:	0.0 feet			Lane Eq				eet)		
F	Road Grade:	0.0%				Auto		3.704			
	Left View:	-90.0 deg				m Truck		3.501			
	Right View:	90.0 deg	rees		Heav	ry Truck	s: 43	3.521			
FHWA Noise Mode	l Calculation	ns									
VehicleType	REMEL	Traffic Flov		stance		Road	Fres		Barrier Atte		m Atten
Autos:	58.73			0.7		-1.20		-4.63	0.0		0.000
Medium Trucks:	70.80			0.8	-	-1.20		-4.87	0.0		0.000
Heavy Trucks:	77.97			0.8	-	-1.20		-5.46	0.0	100	0.000
Unmitigated Noise								_		1	
	Leq Peak Ho		,	Leq E	vening	Leq	Night		Ldn		VEL
Autos: Medium Trucks:	-	1.6 6.5	59.7 54.9		57.9 48.6		51. 47.	-	60.5 55.5		61.1 55.1
Heavy Trucks:		9.7	58.3		48.6		50.	-	58.8		58.9
Vehicle Noise:		4.5	62.8		58.9		55.	_	63.5		63.9
Centerline Distanc					50.5		55.		00.0	•	00.
Cernerinie Distanc	e to Noise C	ontour (in te	ei)	70	dBA	65	dBA	6	0 dBA	55	dBA
			I dn:		7		37		81	1	73

	FHV	/A-RD-77-108	HIGH	IWAY N	IOISE P	REDICT	ON MO	DEL			
	io: Year 2019 \		:t						o Diamant	е	
	e: California A					Job N	umber:	9792			
Road Segmer	nt: s/o Stetson	Av. (S.)									
	SPECIFIC IN	PUT DATA			0				L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily			S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru		,			
Peak H	our Volume:	1,860 vehicle	S		He	avy Truc	cks (3+)	4xles):	15		
	hicle Speed:	40 mph		- 1	Vehicle	Mix					
Near/Far Lai	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	77.5%	12.9%	9.6%	97.429
Rar	rier Height:	0.0 feet			М	edium Tı	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	-	0.0			1	Heavy Ti	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	st. to Barrier:	47.0 feet		- 17	Voise S	ource El	evation	s (in f	oet)		
Centerline Dist.	to Observer:	47.0 feet		F.	10,00 0	Auto:		000	,,,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		006	Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet		L						Juoumoni	. 0.0
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos		704			
	Left View:	-90.0 degre	es			m Trucks		501			
	Right View:	90.0 degre	es		Heav	y Trucks	s: 43.	521			
FHWA Noise Mode	el Calculation	5									
VehicleType	REMEL	Traffic Flow		tance	_	Road	Fresi		Barrier Att		m Atten
Autos:	66.51	1.26		0.77		-1.20		-4.63		000	0.00
Medium Trucks:	77.72	-15.98		0.80		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-19.94		0.80)	-1.20		-5.46	0.0	000	0.00
Unmitigated Noise								,			
,,	Leq Peak Hou	- , ,		Leq E		_	Night		Ldn		NEL
Autos:	67.		65.4		63.7		57.6		66.2		66.
Medium Trucks:	61.	-	59.8		53.5		51.9	-	60.4	•	60.
Heavy Trucks: Vehicle Noise:	62.		61.2 67.6		52.2 64.3		53.4 59.8		61.8	_	61. 68.
					04.0		35.0	,	00.	,	00.
Centerline Distanc	ce to Noise Co	ntour (in feet	9	70 c	iBA	65	dBA	(60 dBA	55	dBA
			Ldn:	3	6	7	8	-	169	3	864

Monday, January 25, 2016

	FHV	VA-RD-77-108	HIGH	1 YAWH	IOISE P	REDICTIO	ON MO	DDEL			
Scenar	io: Year 2019	Without Project				Project N	Vame:	Ranch	o Diamant	е	
	e: California A					Job Nu	mber:	9792			
Road Segme	nt: s/o Simpso	n Rd.									
	SPECIFIC IN	IPUT DATA			Cito Con	NO ditions (i			L INPUT	S	
Highway Data				-	Site Con	aitions (i	Hard				
Average Daily	. ,	5,400 vehicles	3					Autos:			
	Percentage:	10%				dium Truc		,			
	lour Volume:	540 vehicles	3		He	avy Truck	rs (3+	Axles):	15		
Ve	hicle Speed:	25 mph		F	Vehicle I	Wix					
Near/Far La	ne Distance:	36 feet		F		icleType		Day	Evening	Night	Daily
Site Data						AL	ıtos:	77.5%	12.9%	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-W		0.0			F	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	47.0 feet									
Centerline Dist.		47.0 feet		-	Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height		5.0 feet				n Trucks:		.297			
	ad Flevation:	0.0 feet			Heav	y Trucks:	: 8	.006	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		- 1	Lane Ea	uivalent l	Dista	nce (in	feet)		
	Road Grade:	0.0%		<u> </u>		Autos		3.704	,		
	Left View:	-90.0 degree	ae .		Mediu	n Trucks:		3.501			
	Right View:	90.0 degree				y Trucks:		3.521			
FHWA Noise Mod					Len		_		5 . 4.		***
VehicleType Autos:	REMEL 58.73	Traffic Flow -2.07	DIS	stance 0.7		-1.20	Fres	-4.63	Barrier Att	non Bei	m Atten 0.000
Medium Trucks:				0.7		-1.20		-4.87			
	70.80 77.97	-19.31 -23.27		0.8	-	-1.20		-4.87 -5.46		000	0.000
Heavy Trucks:						-1.20		-3.40	0.1	500	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	_		Ldn		NEL
Autos:	56	'	54.3		52.6		46		55.		55.7
Medium Trucks:	51		49.6		43.2		41		50.		50.4
Heavy Trucks:	54		52.9		43.8		45		53.		53.6
Vehicle Noise:	59	.1	57.5		53.5		49	.6	58.	1	58.5
Centerline Distan	ce to Noise Co	ontour (in feet))								
			L		dBA	65 d		(60 dBA		dBA
			Ldn:	8	-	16			35		76
		CI	IFI:	8	3	17			37		81

Monday, January 25, 2016

	F	HWA	-RD-77-108	HIGH	I YAWI	NOISE P	REDICT	ION MO	DDEL				
Road Na	ario: Year 201 nme: Warren F nent: s/o Espla	Rd.	,					Name: lumber:		o Diamante	е		
	SPECIFIC	INP	UT DATA							L INPUT	S		
Highway Data						Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)			
Average Dail	ly Traffic (Adt):	34,	900 vehicles	6					Autos:				
Peak Ho	ur Percentage:		10%				dium Tr		,				
Peak	Hour Volume:	3,	490 vehicles	3		He	avy Tru	cks (3+	Axles):	15			
1	/ehicle Speed:		55 mph		H	Vehicle	Mix						
Near/Far L	ane Distance:		84 feet		ŀ		icleType	,	Dav	Evenina	Niaht	Dailv	
Site Data								Autos:	77.5%	- 3	9.6%	. ,	
	arrier Height:	_	0.0 feet			М	edium T	rucks:	84.8%		10.3%		
Barrier Type (0-	-		0.0 reet				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%	
	Dist. to Barrier		70.0 feet		-					-1			
Centerline Dis	t. to Observer		70.0 feet			Noise Source Elevations (in feet) Autos: 0.000							
Barrier Distanc	arrier Distance to Observer: 0.0 feet												
Observer Heigh	bserver Height (Above Pad): 5.0 feet						m Truck		.297				
	Pad Elevation.		0.0 feet			Hear	y Truck	s: 8	.006	Grade Adj	ustment	: 0.0	
	oad Elevation.		0.0 feet		Ī	Lane Eq	uivalen	t Distar	ice (in	feet)			
	Road Grade.		0.0%				Auto	s: 56	.223				
	Left View.		-90.0 degree	es		Mediu	m Truck	s: 56	.065				
	Right View		90.0 degree	es		Hear	y Truck	s: 56	.081				
FHWA Noise Mo	del Calculation	ons											
VehicleType	REMEL	7	raffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten	
Auto	s: 71.7	8	2.61		-0.8	7	-1.20		-4.72	0.0	000	0.000	
Medium Trucks	s: 82.4	10	-14.63		-0.8	15	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks	s: 86.4	10	-18.59		-0.8	15	-1.20		-5.28	0.0	000	0.000	
Unmitigated No.	ise Levels (wi	thou	t Topo and	barri	er attei	nuation)							
VehicleType	Leq Peak H	_	Leq Day	_	Leq E	vening	Leq	Night		Ldn	_	NEL	
Auto		72.3		70.4		68.7		62.	-	71.2	-	71.8	
Medium Trucks		65.7		64.2		57.9		56.	3	64.8		65.0	
Heavy Trucks		65.8		64.3		55.3		56.	-	64.9		65.0	
Vehicle Noise	-	73.9		72.1		69.2		64.	3	72.9	,	73.3	
Centerline Dista	nce to Noise	Con	tour (in feet,	1	70	dΒΔ	6E	dRΔ	-	60 dBA	55	dBA	
													
	CNEL:					117 252 543 1,169							

Average Daily Traffic (Adt): 35,900 vehicles		FHWA	-RD-77-108 HIG	HWAY N	OISE PF	REDICT	ION MODEL		
Average Daily Traffic (Adt): 35,900 vehicles Peak Hour Percentage: 10% Autos: 15 Autos: 15	Road Nam	e: Warren Rd.	•					ho Diamante	
Average Daily Traffic (Adt): 35,900 vehicles Peak Hour Potencentage: 10% Peak Hour Potencentage: 3,590 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet Vehicle Mix	SITE	SPECIFIC INP	UT DATA				NOISE MOD	EL INPUTS	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15	Highway Data			S	ite Con	ditions	(Hard = 10, S	Soft = 15)	
Vehicle Speed: S5 mph Near/Far Lane Distance: 84 feet S6 mph Vehicle Mix Vehicle Type Day Evening Night Daily Daily Night Daily Site Data Autos: 77.5% 12.9% 9.6% 97.42% Night	Peak Hour	Percentage:	10%				rucks (2 Axles	: 15	
Near/Far Lane Distance: 84 feet VehicleType Day Evening Night Daily							ono (01 7 5000)		
Site Data Autos: 77.5% 12.9% 9.6% 97.42%				V					
Barrier Height: 0.0 feet		io Diotarioo.	0.1.1001		Vehi		,	-	,
Heavy Trucks: 86.5% 2.7% 10.8% 0.749									
Noise Source Elevations (in feet)									
Centerline Dist. to Observer: Barrier Distance to Observer: Dose	,, ,	. ,			r	ieavy i	rucks: 86.5	% 2.1%	10.8% 0.74%
Barrier Distance to Observer:				٨	loise Sc	urce E	levations (in	feet)	
Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0 feet						Auto	s: 0.000		
Pad Elevation:					Mediur	n Truck	s: 2.297		
Road Elevation:		,			Heav	y Truck	s: 8.006	Grade Adjus	stment: 0.0
Road Grade							4 Di-4 (I-	f4\	
Left View:				L	ane Equ			reet)	
Fried Fight View: 90.0 degrees Heavy Trucks: 56.081	,				A 4 45				
VehicleType									
VehicleType	FHWA Noise Mode	el Calculations							
Autos: 71.78 2.73 -0.87 -1.20 -4.72 0.000 0.00			raffic Flow Di	stance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Heavy Trucks: 86.40	Autos:	71.78	2.73	-0.87	,	-1.20	-4.72	0.00	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	Medium Trucks:	82.40	-14.51	-0.85	;	-1.20	-4.88	0.00	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 72.4 70.5 68.8 62.7 71.3 72.2 Medium Trucks: 65.8 64.3 58.0 56.4 64.9 65. Heavy Trucks: 65.9 64.5 55.4 56.7 65.0 65. Vehicle Noise: 74.0 72.3 69.3 64.4 73.0 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1111 239 514 1,107	Heavy Trucks:	86.40	-18.47	-0.85	,	-1.20	-5.28	0.00	0.000
Autos: 72.4 70.5 68.8 62.7 71.3 72. Medium Trucks: 65.8 64.3 58.0 56.4 64.9 65. Heavy Trucks: 65.9 64.5 55.4 56.7 65.0 65. Vehicle Noise: 74.0 72.3 69.3 64.4 73.0 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 111 239 514 1,107	Unmitigated Noise	e Levels (withou	t Topo and barr	ier atteni	uation)				
Medium Trucks: 65.8 64.3 58.0 56.4 64.9 65. Heavy Trucks: 65.9 64.5 55.4 56.7 65.0 65. Vehicle Noise: 74.0 72.3 69.3 64.4 73.0 73. Centerline Distance to Noise Contour (in feet) Ldn: 1111 239 514 1,107				Leq Ev	-	Leq	•		
Heavy Trucks: 65.9 64.5 55.4 56.7 65.0 65. Vehicle Noise: 74.0 72.3 69.3 64.4 73.0 73. Centerline Distance to Noise Contour (in feet) Ldn: 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 1111 239 514 1,107									72.0
Vehicle Noise: 74.0 72.3 69.3 64.4 73.0 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 111 239 514 1,107									65.1
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 111 239 514 1,107	· · · · ·								65.2
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 111 239 514 1,107					69.3		64.4	73.0	73.5
Ldn: 111 239 514 1,107	Centerline Distant	e to Noise Con	tour (in feet)						
CNEL: 119 257 553 1,191									
			CNEL:	119	9	2	257	553	1,191

	FH\	WA-RD-77-108	HIGHWA	Y NC	ISE PR	EDICTIO	N MOE	EL			
Road Nan	io: Year 2019 ne: Warren Ro nt: n/o Tres C		t			Project Na Job Nun			Diamante	9	
	SPECIFIC IN	NPUT DATA							LINPUTS	3	
Highway Data				Si	te Con	ditions (H	ard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	33,500 vehicle	S				Α	utos:	15		
	Percentage:	10%				dium Truck		/	15		
	lour Volume:	3,350 vehicle	S		Hea	avy Trucks	(3+ A	xles):	15		
	hicle Speed:	55 mph		Ve	ehicle N	<i>lix</i>					
Near/Far La	ne Distance:	84 feet			Vehi	cleType	I	Day	Evening	Night	Daily
Site Data						Aut	os: 7	7.5%	12.9%	9.6%	97.42%
Ва	rrier Height:	0.0 feet			Me	dium Truc	ks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-VI		0.0			H	leavy Truc	ks: 8	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	70.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist.	to Observer:	70.0 feet			0.00 00	Autos:	0.0	•	01)		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	2.2				
Observer Height	. ,	5.0 feet				y Trucks:	8.0		Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet		ŀ.							
	ad Elevation:	0.0 feet		Lá	ne Equ	iivalent D		_	eet)		
	Road Grade:	0.0%				Autos:	56.2				
	Left View: Right View:	-90.0 degre				n Trucks: y Trucks:	56.0 56.0				
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresne	el l	Barrier Atte	en Bei	rm Atten
Autos:	71.78	2.43	-1	0.87		-1.20	-	4.72	0.0	00	0.000
Medium Trucks:	82.40	-14.81	-1	0.85		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	86.40	-18.77	-	0.85		-1.20	-	5.28	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier at	tenu	ation)						
VehicleType	Leq Peak Ho			q Eve	ening	Leq Ni	_		Ldn		NEL
Autos:			70.2		68.5		62.4		71.0		71.6
Medium Trucks:			64.0		57.7		56.1		64.6		64.8
Heavy Trucks:			64.2		55.1		56.4		64.7		64.9
Vehicle Noise:		***	72.0		69.0		64.1		72.7		73.2
Centerline Distan	ce to Noise C	ontour (in feet		70 dE	BA T	65 dB	A I	6	0 dBA	55	dBA
			Ldn:	106		228			491		.057
	CNEL:				114 245 528 1,137						

Monday, January 25, 2016

	FH	WA-RD-	77-108 H	liGHW/	AY NO	DISE PF	REDICTION	ON MC	DEL			
	io: Year 2019 ie: Warren Ri nt: n/o Florida	d.	Project				Project I Job Nu			o Diamant	te	
	SPECIFIC I	NPUT [DATA							L INPUT	s	
Highway Data					S	ite Con	ditions (Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	27,100	vehicles						Autos:			
Peak Hour	Percentage:	109	6				dium Trud					
Peak H	lour Volume:	2,710	vehicles			He	avy Truck	ks (3+	Axles):	15		
Ve	hicle Speed:	55	mph		ν	ehicle l	Лix					
Near/Far La	ne Distance:	84	feet		Ė		cleType		Day	Evening	Night	Daily
Site Data							A	utos:	77.5%	12.9%	9.6%	97.42%
Rai	rrier Heiaht:	0.0	feet			Me	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				F	leavy Tru	ıcks:	86.5%	2.7%	10.8%	0.74%
Centerline Di			feet		-							
Centerline Dist.			feet		Λ	oise Sc	urce Ele			eet)		
Barrier Distance			feet				Autos:		.000			
Observer Height ((Above Pad):	5.0	feet				n Trucks:		.297			
	ad Elevation:		feet			Heav	y Trucks:	: 8	.006	Grade Ac	ljustmen	t: 0.0
	ad Elevation:		feet		L	ane Ea	uivalent	Distar	ice (in	feet)		
	Road Grade:	0.0					Autos		.223	,		
	Left View:		degrees			Mediur	n Trucks:		.065			
	Right View:		degrees			Heav	y Trucks:	: 56	.081			
FHWA Noise Mod	el Calculation	ns										
VehicleType	REMEL	Traffic	Flow	Distan	ce	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos:	71.78		1.51		-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	82.40		-15.73		-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40)	-19.69		-0.85		-1.20		-5.28	0.	000	0.000
Unmitigated Noise	e Levels (with	hout Top	oo and b	arrier a	ttenı	ıation)						
VehicleType	Leq Peak Ho	our L	.eq Day	Le	eq Ev	ening	Leq ∧	light		Ldn	(NEL
Autos:	7	1.2	69	9.3		67.6		61.	5	70.	1	70.7
Medium Trucks:	6	4.6		3.1		56.8		55.	2	63.	7	63.9
Heavy Trucks:	6	4.7	63	3.2		54.2		55.	5	63.	8	63.9
Vehicle Noise:	7	2.8	7	1.0		68.1		63.	2	71.	8	72.2
Centerline Distan	ce to Noise C	ontour	(in feet)									
					70 di	BA	65 d	BA .		60 dBA	55	5 dBA
			Lo	dn:	92		19	8		426		918
			CNE	EL:	99		21	3		458		988

FH	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DDEL			
Scenario: Year 2019 Road Name: Warren Ro Road Segment: s/o Florida	i.	t				Name: umber:		o Diamant	е	
SITE SPECIFIC II	NPUT DATA			n: 0				L INPUT	s	
Highway Data				Site Con	aitions	(Hard :				
Average Daily Traffic (Adt):	38,500 vehicles	3					Autos:			
Peak Hour Percentage:	10%				dium Tri					
Peak Hour Volume:	3,850 vehicles	3		He	avy Truc	cks (3+	Axles):	15		
Vehicle Speed:	55 mph		1	Vehicle I	Mix					
Near/Far Lane Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data					-	Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			F	Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	70.0 feet		1	Voise So	ource El	evatio	ns (in f	eet)		
Centerline Dist. to Observer:	70.0 feet				Auto:	s: 0	.000			
Barrier Distance to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8	.006	Grade Ad	justmen	t: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet			Lane Eq				feet)		
Road Grade:	0.0%				Auto		.223			
Left View:	-90.0 degree				m Truck		.065			
Right View:	90.0 degree	es		Heav	y Truck	s: 56	5.081			
FHWA Noise Model Calculation	-									
VehicleType REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		rm Atten
Autos: 71.78			-0.87		-1.20		-4.72		000	0.000
Medium Trucks: 82.40			-0.85	-	-1.20		-4.88		000	0.000
Heavy Trucks: 86.40	-18.16		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho		_	Leg Ev		Leq	Night		Ldn		NEL
		70.8		69.1		63.	-	71.6	-	72.3
		64.6		58.3		56.		65.2	_	65.4
		64.8 72.6		55.7 69.6		57. 64	-	65.3 73.3		65.5 73.8
Centerline Distance to Noise C								. 0		. 5.0
Contonino Dictance to Noise O	omour (m reet)	, 	70 c	lBA	65	dBA	6	60 dBA	55	dBA
		Ldn:	11	6	2	50		538	1	,160
	CI	VFI:	12	5	21	69		579	- 1	.248

Scenario: Year 2019 Without Road Name: Warren Rd.	Project						mante		
Road Segment: s/o Whittier Av.				00074	umber. 51	J2			
SITE SPECIFIC INPUT	ATA	Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9792 Job Number: 9793 Job Number:	PUTS		_				
Highway Data		5	Site Con	ditions	(Hard = 10	, Soft =	15)		Т
Average Daily Traffic (Adt): 28,600	vehicles				Au	tos: 15	5		
Peak Hour Percentage: 10%	6		Me	dium Tr	ucks (2 Axi	es): 15	5		
Peak Hour Volume: 2,860	vehicles		He	avy Tru	cks (3+ Axi	es): 15	5		
Vehicle Speed: 55	mph	1	/ehicle	Wix					_
Near/Far Lane Distance: 84	feet		Veh	icleType	. Da	y Eve	ning N	light Dai	ily
Site Data					Autos: 77	.5% 12	2.9%	9.6% 97.4	2%
Barrier Height: 0.0	feet		Me	edium T	rucks: 84	.8% 4	1.9%	1.8	14%
Barrier Type (0-Wall, 1-Berm): 0.0			F	leavy T	rucks: 86	.5% 2	2.7%	10.8% 0.7	'4%
Centerline Dist. to Barrier: 70.0	feet	,	Voise So	ource E	levations (in feet)			_
Centerline Dist. to Observer: 70.0	feet	F							_
Barrier Distance to Observer: 0.0	feet		Mediu	n Truck	s: 2.29	7			
	feet		Heav	y Truck	s: 8.00	Grad	de Adjus	tment: 0.0	
	feet	١.			4 Di-4	(i f4)			_
	feet	-	ane Eq						_
			Modiu			-			
	degrees					-			
FHWA Noise Model Calculations									_
VehicleType REMEL Traffic	Flow Dis	tance	Finite	Road	Fresnel	Barri	er Atten	Berm Atte	en
Autos: 71.78	1.74	-0.87	,	-1.20	-4	72	0.000	0.0	00
Medium Trucks: 82.40	-15.50	-0.85	5	-1.20	-4	88	0.000	0.0	00
Heavy Trucks: 86.40	-19.45	-0.85	5	-1.20	-5	28	0.000	0.0	00
Unmitigated Noise Levels (without Top									
., , ,	.eq Day	Leg Ev		Leq	Ü	Ldn		CNEL	
Autos: 71.5							70.4	-	71.
Medium Trucks: 64.9							63.9	-	64.
Vehicle Noise: 73.0							64.0 72.0		72.
			68.3		63.4		72.0	- /	2.3
Centerline Distance to Noise Contour	(in feet)	70	·D.4		10.4	00.15		EE 10.4	_
	Later						А	55 dBA 952	_
			-	_		–		1.024	
		10	~					1,024	

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE P	REDICTI	ON MC	DEL			
	e: Warren Rd		t				Name: umber:		o Diamant	е	
	SPECIFIC IN	IPUT DATA			a:. a				L INPUT	s	
Highway Data					Site Cor	ditions	Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	30,900 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru		,			
Peak H	our Volume:	3,090 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
	hicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far Lai	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							utos:	77.5%	12.9%	9.6%	97.429
Rar	rier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis		70.0 feet		1	Noise S	ource El	evation	s (in f	eet)		
Centerline Dist.		70.0 feet				Autos		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2	297			
Observer Height (,	5.0 feet			Heav	v Trucks	: 8.	006	Grade Ad	justment	0.0
	nd Elevation:	0.0 feet		_							
	ad Elevation:	0.0 feet		1	Lane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degre				m Trucks		.065			
	Right View:	90.0 degre	es		Heav	y Trucks	: 56	.081			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	tance	_	Road	Fres		Barrier Att		m Atter
Autos:	71.78	2.08		-0.87		-1.20		-4.72		000	0.00
Medium Trucks:	82.40	-15.16		-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-19.12		-0.85		-1.20		-5.28	0.0	000	0.00
Unmitigated Noise											
,,	Leq Peak Hou		_	Leq E		Leq			Ldn		NEL
Autos:	71		69.9		68.1		62.		70.7		71
Medium Trucks:	65		63.7		57.3		55.	-	64.2	_	64
Heavy Trucks: Vehicle Noise:	65 73		63.8 71.6		54.8 68.7		56. 63.	_	64.4 72.3		64 72
Centerline Distanc	e to Noise Co	ontour (in feet	•)								
		(111 1001		70 c	dBA	65 (IBA	(60 dBA	55	dBA
			Ldn:	10	00	21	6		465	1,	002
			NFI:		08		32		500		078

Monday, January 25, 2016

	FH	WA-RD-77-	108 HIGH	HWAY N	IOISE PE	REDICTION	ON MC	DDEL			
Scenar	io: Year 2019	Without Pro	oject			Project I	Vame:	Ranch	no Diamant	te	
	e: Warren Ro					Job Nu	mber:	9792			
Road Segme	nt: s/o Stetso	n Av. (N.)									
	SPECIFIC II	NPUT DAT	ГА		04- 0	No ditions (L INPUT	S	
Highway Data				,	Site Con	uilions (naru :				
Average Daily	. ,		icles					Autos:			
	Percentage:	10%				dium Tru		,			
	lour Volume:				He	avy Truci	ks (3+	Axles).	15		
	hicle Speed:	45 mp		1	Vehicle I	Mix					
Near/Far La	ne Distance:	84 fee	t		Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	97.42%
Pa	rrier Heiaht:	0.0 fe	nt		Me	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0	5 1		F	Heavy Tru	ıcks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Di	. ,	70.0 fee	at	-							
Centerline Dist.		70.0 fee		1	Noise So	ource Ele			eet)		
Barrier Distance		0.0 fee				Autos		.000			
Observer Height		5.0 fee				m Trucks		.297			
	ad Flevation:	0.0 fee			Heav	y Trucks.	: 8	.006	Grade Ac	djustmen	: 0.0
	ad Elevation:	0.0 fee		- 1	Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0 16	51	F		Autos		.223	,		
	Left View:	-90.0 de	arooc		Mediu	m Trucks		.065			
	Right View:	90.0 de				y Trucks		.081			
	rugin view.	30.0 de	grees		ricav	y Trucks.	. 50	.001			
FHWA Noise Mod	el Calculation	าร									
VehicleType	REMEL	Traffic Flo		stance		Road	Fres		Barrier At		rm Atten
Autos:	68.46		.74	-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	79.45			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-19	.45	-0.8	5	-1.20		-5.28	0.	000	0.000
Unmitigated Nois	e Levels (with	hout Topo a	and barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq	Day	Leq E	vening	Leq N	light		Ldn		NEL
Autos:	6	B.1	66.2		64.5		58.	4	67.	0	67.6
Medium Trucks:	6	1.9	60.4		54.0		52.	5	60.	9	61.2
Heavy Trucks:	6	2.7	61.3		52.3		53.	5	61.	9	62.0
Vehicle Noise:	7	0.0	68.2		65.1		60.	4	68.	9	69.4
Centerline Distan	ce to Noise C	ontour (in	feet)								
				70 c	dBA	65 d	BA		60 dBA	55	dBA
			Ldn:	6	0	12	8		276		595
			CNEL:	6	4	13	8		296	6	339

	FHW	/A-RD-77-108	HIGHV	WAY N	OISE PI	REDICTI	ON MO	DEL			
Road Nam	io: Year 2019 V ne: Warren Rd. nt: s/o Stetson	,	t				Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	3,400 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	icks (2 i	4xles):	15		
Peak H	lour Volume:	2,340 vehicle	S		He	eavy Truc	ks (3+)	4xles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType		Dav	Evenina	Niaht	Daily
Site Data							utos:	77.5%		9.6%	. ,
Po-	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		70.0 feet		1	Voise S	ource El	evation	s (in fe	eet)		
Centerline Dist.		70.0 feet				Autos	s: 0.	000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2.	297			
Observer Height (5.0 feet			Heav	vy Trucks	s: 8.	006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet			ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degre	es			m Trucks		065			
	Right View:	90.0 degree	es		Heav	vy Trucks	56.	.081			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	1.74		-0.87	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	79.45	-15.50		-0.85	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-19.45		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrier	r atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leg E	ening/	Leq	Night		Ldn	C	NEL
Autos:	68.	1	66.2		64.5		58.4	4	67.0)	67.6
Medium Trucks:	61.	9	60.4		54.0		52.	5	60.9	9	61.2
Heavy Trucks:	62.		61.3		52.3		53.		61.9		62.0
Vehicle Noise:	70.	0	68.2		65.1		60.4	4	68.9	9	69.4
Centerline Distant	ce to Noise Co	ntour (in feet)	70 -	ID A	65	JD A	_	20 4D4	-	- ADA
			l dn:	70 d		65 (t	276		5 dBA 595
			Lan: VFI :	6	-	13			296		595 639
		Ci	vĽL.	6	*	13	ю		230		uud

		WA-RD-77-1		HWAT N	IOISE PI									
			ject				t Name: lumber:		Diamante	9				
Road Segmen	t: s/o Simpso	on Rd.												
	Scenario: Year 2019 Without Project ad Name: Warren Rd. Segment: s/o Simpson Rd. Stitte Specific INPUT DATA ata ata a Daily Traffic (Adt): 18,100 vehicles k Hour Percentage: 10% Peak Hour Volume: 1,810 vehicles Vehicle Speed: 40 mph (Far Lane Distance: 84 feet Barrier Height: 0.0 feet pe (G-Wall, 1-Berm): 0.0 rifine Dist. to Barrier: 70.0 feet pe Dist. to Doserver: 70.0 feet pe Dist. to Doserver: 70.0 feet pe Dist. to Doserver: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees pe REMEL Traffic Flow Dista Autos: 66.51 1.14 Trucks: 77.72 1.6.10 Trucks: 92.0.6 Autos: 65.6 Autos: 65.6 Ga.7 Trucks: 59.6 Ga.7 Trucks: 59.6 Ga.7 Trucks: 59.6 Ga.7 Trucks: 59.6 Ga.7 Trucks: 59.6 Ga.7						L INPUT	5						
Highway Data					Site Con	ditions	(Hard:	= 10, So	ft = 15)					
Average Daily	Fraffic (Adt):	18,100 vehi	cles					Autos:	15					
Peak Hour	Percentage:	10%			Me	dium Ti	rucks (2	Axles):	15					
Peak H	our Volume:	1,810 vehi	cles		He	avy Tru	cks (3+	Axles):	15					
Vel	nicle Speed:	40 mph	1	-	Vehicle i	Mix								
Near/Far Lar	e Distance:	84 feet			Veh	icleTyp	е	Day	Evening	Night	Daily			
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%			
Bar	rier Heiaht:	0.0 fee	ŧt		Me	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%			
		0.0			F	Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline Dis	t. to Barrier:	70.0 fee	t	- 1	Noise So	ource E	levatio	ns (in fe	et)					
			-			Auto		.000	,					
		0.0 fee	t		Mediu	m Truck		.297						
	,		-		Heav	y Truck	s: 8	.006	Grade Adj	ustment	0.0			
			-	-					,					
			t	Ľ	Lane Eq				eet)					
F					14-4	Auto m Truck		i.223 i.065						
								6.081						
	Right view:	90.0 de(grees		Heav	ry Truck	(S. 50	.081						
				·										
VehicleType				stance		Road	Fres		Barrier Atte		m Atten			
				-0.8		-1.20		-4.72	0.0		0.000			
Medium Trucks:	–			-0.8	-	-1.20		-4.88	0.0		0.000			
Heavy Trucks:				-0.8		-1.20		-5.28	0.0	100	0.000			
								1						
			,	Leq E	vening 61.9	Leq	Night 55		Ldn 64.5		NEL 65.1			
Medium Trucks:					51.7		50.	-	58.6		58.8			
Heavy Trucks:					50.4		51.		60.0		60.2			
Vehicle Noise:					62.6		58		66.6					
Centerline Distanc	e to Noise C	ontour (in f	eet)					-						
Contonine Distanc	0.07.0136 0	omour (III I		70 0	dBA	65	dBA	6	0 dBA	55	dBA			
			Ldn:	4	1		89		192	4	14			

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DDEL			
Road Nam	e: Warren Rd		ct				Name: lumber:		o Diamant	e	
	### Page Daily Traffic (Adt): 20,000 vehicles ### Peak Hour Percentage: 10% ### Peak Hour Volume: 2,000 vehicles ### Vehicle Speed: 40 mph ### Barrier Height: 0.0 feet ### Type (0-Wall, 1-Berm): 0.0 ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 0.0 feet ### Distance to Observer: 0.0 feet ### Pad Elevation: 0.0 feet ### Road Elevation: 0.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Elevations ### REMEL Traffic Flow Distance ### Distance House						L INPUT	s			
Highway Data				5	Site Cor	nditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	20,000 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	2,000 vehicle	s		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	84 feet		F		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.429
Bai	rrier Heiaht:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.849
		0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	st. to Barrier:	70.0 feet			Voisa S	ource E	lovation	ne (in f	oot)		
Centerline Dist.	to Observer:	70.0 feet		,	V UISE 3	Auto		.000	bei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height ((Above Pad):	5.0 feet				vy Truck		.006	Grade Ad	liuetman	+ nn
Pa	ad Elevation:	0.0 feet			1100	vy mach	3. 0	.000	0,000,10	juouriori	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in	feet)		
, and a	Road Grade:	0.0%				Auto		.223			
	Left View:					m Truck		.065			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 56	.081			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos:	66.51	1.57		-0.87	7	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	77.72	-15.67		-0.85	5	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	82.99	-19.62		-0.85	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType				Leq Ev			Night		Ldn	_	NEL
					62.3		56.		64.	-	65
Medium Trucks:					52.1		50.	-	59.	-	59
Heavy Trucks:					50.9		52.		60.		60.
Vehicle Noise:					63.0	1	58.	.5	67.	D	67.
Centerline Distant	ce to Noise C	ontour (in feet	t)	70	10.4		10.4			-	
			Later	70 a			dBA	(60 dBA		dBA
		_	Ldn: NFI:				95 02		205		442 473
		C	IVEL:	41	,	1	02		220		+13

Monday, January 25, 2016

	FH	WA-RD-	77-108 HI	GHWAY	NOISE PI	REDICTION	ON MC	DEL			
	io: Year 2019 ne: Sandersor nt: s/o Florida	n Av.	Project			Project N Job Nu			o Diamant	е	
	SPECIFIC II	NPUT D	ATA						L INPUT	S	
Highway Data					Site Con	ditions (
Average Daily	. ,							Autos:			
	Percentage:	10%				dium Truc					
	lour Volume:	-,	ehicles/		He	avy Truck	ks (3+.	Axles):	15		
Ve	hicle Speed:	30 ı	mph		Vehicle	Mix					
Near/Far La	ne Distance:	50 f	eet		Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Rai	rrier Heiaht:	0.0	feet		M	edium Tru	ıcks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tru	ıcks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		54.0	feet		M-1 0	ource Ele		- /! #	41		
Centerline Dist.	to Observer:	54.0	feet		Noise S				eet)		
Barrier Distance	to Observer:	0.0	feet			Autos:		000 297			
Observer Height (Above Pad):	5.0	feet			m Trucks:			Grade Ad	ii rotmo na	
Pi	ad Elevation:	0.0	feet		Heav	y Trucks:	. 8.	006	Grade Ad	jusimem	. 0.0
Roa	ad Elevation:	0.0	feet		Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.09	%			Autos:	: 48	125			
	Left View:	-90.0	degrees		Mediu	m Trucks:	47	.941			
	Right View:	90.0	degrees		Heav	y Trucks:	47	959			
FHWA Noise Mod	el Calculation	ns									
VehicleType	REMEL	Traffic	Flow	Distance	Finite	Road	Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	61.75		5.14		15	-1.20		-4.67		000	0.000
Medium Trucks:	73.48		-12.10	0.	17	-1.20		-4.87		000	0.000
Heavy Trucks:	79.92	2	-16.06	0.	17	-1.20		-5.39	0.0	000	0.000
Unmitigated Noise	e Levels (with	hout Top	o and ba	rrier atte	nuation)						
VehicleType	Leq Peak Ho	our L	eq Day	Leq	Evening	Leq N	light		Ldn	С	NEL
Autos:	6	5.8	63	.9	62.2		56.	1	64.7	7	65.3
Medium Trucks:	-	0.3	58		52.5		50.	-	59.4		59.6
Heavy Trucks:	6	2.8	61	.4	52.4		53.	6	62.0)	62.1
Vehicle Noise:	6	8.3	66	.7	63.0		58.	В	67.3	3	67.8
Centerline Distan	ce to Noise C	ontour (in feet)								
				70	dBA	65 d	BA.	6	60 dBA	55	dBA
			Ld	n:	36	77	7		167		359
			CNE	L:	38	82	2		178	3	883

Monday, January 25, 2016

	FH	IWA-R	RD-77-108	HIGH	A YAWI	IOISE P	REDICT	ION MO	DDEL			
Road Na	ario: Year 2019 nme: Sanderson nent: n/o Stetso	n Av.	out Project				.,	Name: lumber:		o Diamant	е	
	E SPECIFIC I	NPUT	T DATA			04- 0				L INPUT	S	
Highway Data					- 1	Site Cor	nditions	(Hara :				
-	ly Traffic (Adt):			3					Autos:	15		
	ur Percentage:		10%				edium Tr					
	Hour Volume:	-,	10 vehicles	8		He	eavy Tru	cks (3+	Axles):	15		
	/ehicle Speed:		15 mph			Vehicle	Mix					
Near/Far L	.ane Distance:	5	50 feet		F	Ver	icleType	9	Dav	Evening	Night	Dailv
Site Data						Autos: 77.5% 12.9% 9.6%					97.42%	
	arrier Height:	-	0.0 feet			Medium Trucks: 84.8% 4.9% 10.3%						1.84%
Barrier Type (0-		-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline I	Dist. to Barrier:	54	4.0 feet		- h	Noise S	ource E	levatio	ns (in fe	opt)		
Centerline Dis	t. to Observer:	54	4.0 feet		F	10,00	Auto		.000	,,,		
Barrier Distance	e to Observer:	(0.0 feet			Madiu	m Truck		.297			
Observer Heigh	t (Above Pad):	5	5.0 feet				vy Truck		.006	Grade Ad	iuetmant	- 00
	Pad Elevation:	(0.0 feet			rica	y IIUCK	s. o	.000	Orace Au	usunon	. 0.0
R	oad Elevation:	(0.0 feet		1	Lane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	(0.0%				Auto	s: 48	.125			
	Left View:	-90	0.0 degree	es		Mediu	m Truck	s: 47	.941			
	Right View:	90	0.0 degree	es		Hear	vy Truck	s: 47	.959			
FHWA Noise Mo	del Calculatio	ns										
VehicleType	REMEL	Tra	ffic Flow	Dis	stance	Finite	Road	Fres		Barrier Att	en Bei	m Atten
Auto	s: 68.46	3	3.38		0.1	5	-1.20		-4.67	0.0	000	0.000
Medium Trucks	s: 79.45	5	-13.86		0.17	7	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	s: 84.25	5	-17.82		0.17	7	-1.20		-5.39	0.0	000	0.000
Unmitigated No.		_	Topo and	barri	er atten	uation)			_		_	
VehicleType	Leq Peak Ho	our	Leq Day	_	Leq E	vening	Leq	Night		Ldn		NEL
Auto		8.0		68.9		67.1		61.		69.7		70.3
Medium Trucks	s: 6	4.6	(63.1		56.7		55.	.1	63.6	6	63.8
Heavy Trucks		5.4		70.9		54.9		56.		64.6		64.7 72.1
Vehicle Noise		2.6				67.7		63	. 1	71.6)	12.
Centerline Dista	nce to Noise C	onto	ur (in feet)	1	70 (HRA	65	dBA	-	60 dBA	55	dBA
				l dn:	6			49	1 -	320		S90
				IFI:	7.	-		4 3		344		740
			Ci				'			U 1-1	,	.5

	FH	WA-RD-77-108	HIGH	N YAWI	OISE P	REDICT	TION M	ODEL			
Road Name	e: Florida Av.	•	t				t Name. Number.		o Diamante	9	
	### Page Daily Traffic (Adt): 86,900 vehicles Peak Hour Percentage: 10% Peak Hour Percentage: 10% Vehicle Speed: 50 mph ### Barrier Height: 50 mph ### Barrier Height: 0.0 feet ### Type (0-Wall, 1-Barm): 70.0 feet ### Type (0-Wall, 1-Barm): 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Distance to Observer: 70.0 feet ### Pad Elevation: 0.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Distance to Observer: 70.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Distance to Observer: 70.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Distance to Observer: 70.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Distance to Observer: 70.0 feet ### Road Grade: 0.0% ### Left View: 90.0 degrees ### Road Grade: 0.0% ### Distance to Observer: 70.0 feet ### Road Grade: 0.0% ### Road Gr						L INPUT	S			
Highway Data					Site Cor	nditions	(Hard		oft = 15)		
,	. ,		:S					Autos:	15		
							,	Axles):			
		.,	:S		He	eavy Iru	icks (3+	Axles):	15		
				1	/ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet			Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			M	edium 7	rucks:	84.8%	4.9%	10.3%	1.84%
	-	0.0				Heavy 1	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	70.0 feet		1	Voise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. t	o Observer:	70.0 feet				Auto		0.000	,		
		0.0 feet			Mediu	m Truck		2.297			
	,				Hear	vy Truck	ks: 8	3.006	Grade Adj	iustment.	0.0
							4 DI-4-	/!	E4)		
				-	Lane Eq	uivaier Auto		nce (in 5.223	reet)		
F					Modiu	Auto m Truci		5.223 6.065			
						m muci vy Truck		5.081			
						,					
VehicleType			Die	tanco	Einito	Road	Fres	enol	Barrier Att	on Por	m Atten
				-0.87		-1.20	1100	-4.72		000	0.00
Medium Trucks:				-0.85		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-14.21		-0.85	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	<i>y</i>	Leg Ev	/ening	Leq	Night		Ldn		NEL
					71.5		65		74.0		74.
Medium Trucks:					60.8		59		67.7		68.
Heavy Trucks:					58.7		59		68.3		68.
Vehicle Noise:					72.0		67	.2	75.8	3	76.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 c			dBA	(0 dBA		dBA
		_	Ldn:	17	-		366		790	,	701
		С	NEL:	18	3	3	394		848	1,	828

Correct	o. Voor 2012	Mithout Dr-!-	-4			Droine: A	lame:	Donal	Diame		
	o: Year 2019 e: Florida Av.	Without Project	ZI.			Job Nur			Diamant	е	
Road Segmen						JOD IVUI	IIDEI.	3132			
				- 1						_	
Highway Data	SPECIFIC II	NPUT DATA			Site Cor	nditions (F			L INPUT	5	
Average Daily	Troffio (Adt):	60 600 vehicle			One our	iuitions (i	iai a -	Autos:	15		
	Percentage:	10%	:5		1.40	dium Truc	V0 12		15		
	our Volume:	6.960 vehicle				avy Truck		,	15		
	hicle Speed:	50 mph	,,,	L		•	0 (0.	7 151100).			
Near/Far Lai		78 feet			Vehicle			_			- ·
a:- a -					ven	icleType	tos:	Day 77.5%	Evening 12.9%	Night 9.6%	Daily
Site Data						Au edium Trui		84.8%		10.3%	
	rier Height:	0.0 feet				eaium Trui Heavy Trui				10.3%	
Barrier Type (0-W		0.0			,	neavy IIu	UKS.	00.5%	2.170	10.0%	0.747
Centerline Dis		76.0 feet			Noise S	ource Elev	/atior	ns (in fe	et)		
Centerline Dist. Barrier Distance		76.0 feet 0.0 feet				Autos:	0	.000			
		5.0 feet			Mediu	m Trucks:	2	.297			
Observer Height (nd Flevation:	0.0 feet			Heav	y Trucks:	8	.006	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet		į.	Lane Eo	uivalent E	Distar	nce (in f	eet)		
	Road Grade:	0.0%				Autos:		422	,		
•	Left View:	-90.0 degre	es		Mediu	m Trucks:	65	.286			
	Right View:	90.0 degre			Heav	y Trucks:	65	.300			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atter
Autos:	70.20	6.02	!	-1.8	5	-1.20		-4.73	0.0	000	0.00
Medium Trucks:	81.00	-11.22	!	-1.8	4	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-15.18	i	-1.8	4	-1.20		-5.25	0.0	000	0.00
Unmitigated Noise			$\overline{}$	-							
,,	Leq Peak Ho				vening	Leq Ni			Ldn		NEL
Autos:		3.2	71.3		69.5		63.		72.		72.
Medium Trucks:		5.7	65.2		58.9		57.	-	65.8	-	66
Heavy Trucks:	-	7.2	65.7		56.7		58.	-	66.3		66.
Vehicle Noise:		1.9	73.1		70.1		65.	3	73.8	5	74.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	dBA	65 dE	2/	6	0 dBA	55	dBA
			I dn:		37	295		- 0	635		369
			Luii.	1.	,,	290	,		000	Ι,	505
		0	NFI:	1.	47	317	,		682	1	470

Monday, January 25, 2016

	FH	IWA-RD-77-10	8 HIG	HWAY	NOISE P	REDICTION	ON MO	ODEL						
Road Nam	e: Florida Av	٠.	ect			Project I Job Nu			o Diamant	е				
	### Barrier Height: 0.0 feet ### Centerline Dist. to Barrier: 70.0 feet ### 70.0 feet				Site Cor	Nonditions (L INPUT	s				
Average Daily Peak Hour	Percentage:	10%			Ме	edium Truci eavy Truci	cks (2	Autos: Axles):	15 15					
					Vehicle	Mix icleType		Day	Evening	Night	Daily			
Site Data			Autos: 77.5% 12.9% 9.6% 9 0.0 feet							97.42%				
								84.8% 86.5%		10.3% 10.8%	1.84% 0.74%			
					Noise S	ource Ele	vatio	ns (in f	eet)					
Barrier Distance Observer Height (.	to Observer: (Above Pad):	0.0 feet 5.0 feet				Autos m Trucks y Trucks	: 2	0.000 2.297 3.006	Grade Ad	justment.	0.0			
					Lane Eq	uivalent	Dista	nce (in	feet)					
F	Road Grade:	0.0%				Autos	: 56	5.223						
						m Trucks. /y Trucks		6.065 6.081						
FHWA Noise Mode	el Calculation	ns												
VehicleType				istance		Road	Fres		Barrier Att		m Atten			
				-0.8		-1.20		-4.72		000	0.00			
Medium Trucks: Heavy Trucks:				-0.8 -0.8		-1.20 -1.20		-4.88 -5.28		000	0.00			
Unmitigated Noise	e Levels (with	hout Topo an	d barı	rier atte	nuation)									
VehicleType	Leq Peak Ho	our Leq Da	ay	Leq I	vening	Leq N	light		Ldn	CI	VEL			
Autos:	6	9.9	68.0	1	66.2		60	.2	68.8	3	69.4			
Medium Trucks:	-	4.1	62.6		56.2		54	.7	63.		63.4			
Heavy Trucks:	6	6.0	64.5		55.5		56	.8	65.	1	65.2			
Vehicle Noise:	7:	2.1	70.4		66.9		62	.6	71.	1	71.			
Centerline Distanc	ce to Noise C	Contour (in fee	et)		10.4	0.5					·D.4			
			Later		dBA 83	65 d		(60 dBA		dBA			
			Ldn: CNFI:		83 88	17 19	-		384 410	-	28 84			
		(JIVEL.		00	19	U		410	8	04			

	FH	WA-RD-77-10	8 HIG	I YAWH	NOISE PI	REDICT	ION MO	DEL			
Road Na	rio: Year 2019 me: Stowe Rd. ent: w/o Califor	,	ect				Name: umber:		o Diamante	е	
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Dail	/ Traffic (Adt):	9,000 vehicl	es					Autos:	15		
Peak Hou	r Percentage:	10%			Me	dium Tr	ucks (2 i	4xles):	15		
Peak	Hour Volume:	900 vehicl	es		He	avy Tru	cks (3+)	4xles):	15		
V	ehicle Speed:	40 mph		t	Vehicle	Mix					
Near/Far L	ane Distance:	36 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	77.5%		9.6%	- /
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-	-	0.0			1	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%
	ist to Barrier:	47.0 feet		L							
Centerline Dis		47.0 feet		-	Noise S				eet)		
Barrier Distanc	to Observer:	0.0 feet				Auto		000			
Observer Heigh	bserver Height (Above Pad):					m Truck		297			
	• '				Heav	y Truck	s: 8.	006	Grade Ad	ustment.	0.0
R	Pad Elevation: (Road Elevation: (Lane Eq	uivalen	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43.	704			
	Left View:	-90.0 degr	ees		Mediu	m Truck	s: 43.	501			
	Right View:	90.0 degr	ees		Heav	y Truck	s: 43.	521			
FHWA Noise Mo	del Calculation	18									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos	: 66.51	-1.9	0	0.7	7	-1.20		-4.63	0.0	000	0.000
Medium Trucks	: 77.72	-19.1	4	0.8	0	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	: 82.99	-23.0	9	0.8	0	-1.20		-5.46	0.0	000	0.000
Unmitigated Noi			d barrı	ier atter	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	vening	Leq	Night		Ldn		VEL
Autos		1.2	62.3		60.5		54.	-	63.1		63.7
Medium Trucks		3.2	56.7		50.3		48.8	-	57.2	-	57.5
Heavy Trucks Vehicle Noise		9.5	58.1 64.5		49.0 61.2		50.3	_	58.7 65.2		58.8 65.6
Centerline Dista					01.2		50.1		00.2	_	05.0
Centernile Dista	ice to Noise C	omour (III let	=:/	70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:	2	22	4	-8	•	104	2	24
	CNEL:			_	24	_	2		112		40

	FH	WA-RD-77-108	HIGHV	VAY N	DISE P	REDICT	TON MOD	EL			
	e: Grand Av.	Without Project t Av.	t				t Name: R lumber: 9		Diamante	•	
SITE S	PECIFIC II	NPUT DATA					NOISE M			3	
Highway Data				S	ite Cor	ditions	(Hard = 1	10, Sof	t = 15)		
	Percentage: our Volume:	10% 3,490 vehicle					A rucks (2 A rucks (3+ A		15 15 15		
	nicle Speed:	40 mph		ν	ehicle	Mix					
Near/Far Lar	e Distance:	84 feet			Veh	icleTyp	e [Day	vening	Night	Daily
Site Data								7.5%	12.9%	9.6%	
Ran	rier Height:	0.0 feet			М	edium 1	rucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0				Heavy 7	rucks: 8	86.5%	2.7%	10.8%	0.74%
Centerline Dis		70.0 feet			·- · 0		levations	/! f	41		
Centerline Dist. t	o Observer:	70.0 feet		N	ioise S			•	rt)		
Barrier Distance t	o Observer:	0.0 feet				Auto					
Observer Height ()	Above Pad):	5.0 feet				m Truck			Grade Adji	un4man	
Pa	d Elevation:	0.0 feet			Hea	y Truck	s: 8.0	06	raue Auji	usunen	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivaler	t Distanc	e (in fe	et)		
F	Road Grade:	0.0%				Auto	s: 56.2	23			
	Left View:	-90.0 degre	es		Mediu	m Truck	rs: 56.0	65			
	Right View:	90.0 degre	es		Hear	y Truck	s: 56.0	81			
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	el E	arrier Atte	en Be	rm Atten
Autos:	66.51	3.99		-0.87		-1.20	-	4.72	0.0	00	0.000
Medium Trucks:	77.72	-13.25		-0.85		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	82.99	-17.21		-0.85		-1.20	-	5.28	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ıation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ I	Leq Ev	ening	Leq	Night	I	.dn	С	NEL
Autos:	68	3.4	66.5		64.8		58.7		67.3		67.9
Medium Trucks:	62	2.4	60.9		54.5		53.0		61.5		61.7
Heavy Trucks:	63	3.7	62.3		53.3		54.5		62.9		63.0
Vehicle Noise:	70).4	68.7		65.4		60.9	•	69.4		69.9
Centerline Distanc	e to Noise C	ontour (in feet)								
				70 dl	BA	65	dBA	60	dBA	55	dBA
			Ldn:	64		1	38	2	97		641
		Ci	VEL:	69		1	48	3	318	(686

FH	WA-RD-77-108 H	HIGHWAY	NOISE P	REDICTIO	ON MODE	L	
Scenario: Year 2019 Road Name: Grand Av. Road Segment: e/o Patter:	,				Vame: Ra mber: 979	ncho Diamant 92	e
SITE SPECIFIC I	NPUT DATA					DEL INPUT	S
Highway Data			Site Cor	ditions (Hard = 10), Soft = 15)	
Average Daily Traffic (Adt):	34,900 vehicles				Au	tos: 15	
Peak Hour Percentage:	10%		Me	dium Trud	cks (2 Axle	es): 15	
Peak Hour Volume:	3,490 vehicles		He	avy Truck	ks (3+ Axle	es): 15	
Vehicle Speed:	40 mph		Vehicle	Miv			
Near/Far Lane Distance:	84 feet			icleType	Da	y Evening	Night Daily
Site Data						.5% 12.9%	9.6% 97.42%
Barrier Height:	0.0 feet		М	edium Tru	icks: 84	.8% 4.9%	10.3% 1.849
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	icks: 86	.5% 2.7%	10.8% 0.74%
Centerline Dist. to Barrier:	70.0 feet		Noise S	ource Fle	vations (in foot)	
Centerline Dist. to Observer:	70.0 feet		710,00 0	Autos			
Barrier Distance to Observer:	0.0 feet		Madiu	m Trucks			
Observer Height (Above Pad):	5.0 feet			vy Trucks:			ljustment: 0.0
Pad Elevation:	0.0 feet						,
Road Elevation:	0.0 feet		Lane Eq		Distance	. ,	
Road Grade:	0.0%			Autos:		-	
Left View:	-90.0 degrees	3		m Trucks:			
Right View:	90.0 degrees	3	Heav	y Trucks:	56.08	1	
FHWA Noise Model Calculation	าร						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Berm Atten
Autos: 66.51	3.99	-0.8	87	-1.20	-4.	72 0.0	0.00
Medium Trucks: 77.72		-0.8		-1.20			0.00
Heavy Trucks: 82.99	-17.21	-0.8	85	-1.20	-5.	28 0.0	0.00
Unmitigated Noise Levels (with		arrier atte	nuation)				
VehicleType Leq Peak Ho			ening	Leq N		Ldn	CNEL
		6.5	64.8		58.7	67.	
		0.9	54.5		53.0	61.	
,		2.3	53.3		54.5	62.	
Vehicle Noise: 7	0.4 6	8.7	65.4		60.9	69.	4 69.
Centerline Distance to Noise C	ontour (in feet)						
			dBA	65 d		60 dBA	55 dBA
			64	13		297	641
	CN	EL:	69	14	В	318	686

Monday, January 25, 2016

	FH	WA-RD-77-10	8 HIGH	I YAWI	NOISE PI	REDICTIO	N MODE	L		
Road Nam	e: Grand Av.		ect				lame: Rai nber: 979	ncho Diaman 92	te	
SITE	SPECIFIC I	NPUT DATA	l.					DEL INPUT	s	
Highway Data	Average Daily Traffic (Adt): 25,200 vehicles Peak Hour Percentage: 10% Peak Hour Percentage: 10% Peak Hour Volume: 2,520 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet Data Barrier Height: 0.0 feet rier Type (0-Wall, 1-Berm): 70.0 feet enterline Dist. to Barrier: 70.0 feet enterline Dist. to Observer: 70.0 feet enterline Dist. to Observer: 0.0 feet server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.00 feet Road Grade: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees VA Noise Model Calculations which Type REMEL Traffic Flow Die Autos: 66.51 2.57					ditions (F	lard = 10	, Soft = 15)		
	. ,		es		Mo	dium Trud	Aut			
						dium Truc avy Truck		/-		
		,	es		He	avy rruck	S (3+ AXI	es): 15		
					Vehicle I	Mix				
Near/Far La	ne Distance:	84 feet			Veh	icleType	Da	y Evening	Night	Daily
Site Data						Au	tos: 77	.5% 12.9%	9.69	% 97.42%
Bai	rrier Heiaht:	0.0 feet			M	edium Tru	cks: 84	.8% 4.9%	10.39	% 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 86	.5% 2.7%	10.89	% 0.74%
					Noise So	ource Ele	vations (i	n feet)		
						Autos:	0.000)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297	,		
	, , , , , , , , , , , , , , , , , , , ,				Heav	y Trucks:	8.006	Grade Ad	ljustmei	nt: 0.0
	Pad Elevation: 0.0 feet			Į.						
					Lane Eq	uivalent L		,		
						Autos:	56.223			
						m Trucks:				
	Right View:	90.0 degr	ees		Heav	y Trucks:	56.081			
FHWA Noise Mod	el Calculatio	ns								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier At	ten B	erm Atten
Autos:	66.5	1 2.5	7	-0.8	37	-1.20	-4.	72 0.	000	0.000
Medium Trucks:	77.72	2 -14.6	6	-0.8	35	-1.20	-4.	88 0.	000	0.000
Heavy Trucks:	82.99	9 -18.6	2	-0.8	35	-1.20	-5.	28 0.	000	0.000
Unmitigated Noise	e Levels (wit			er atter	nuation)					
VehicleType	Leq Peak Ho	our Leq Da	ay	Leq E	vening	Leq N	ight	Ldn	-	CNEL
Autos:	6	7.0	65.1		63.4		57.3	65.	9	66.5
Medium Trucks:	6	1.0	59.5		53.1		51.6	60.	0	60.3
Heavy Trucks:	6	2.3	60.9		51.9		53.1	61.	5	61.6
Vehicle Noise:	6	9.0	67.3		64.0		59.5	68.	0	68.5
Centerline Distant	ce to Noise C	Contour (in fe	et)							
			L		dBA	65 dE		60 dBA	5	5 dBA
			Ldn:	-	52	111		239		516
		(CNEL:	5	55	119	9	256		552

	FH	IWA-RD-77-10	B HIGI	1 YAWH	NOISE P	REDICT	ION M	ODEL			
Road Na	ario: Year 2019 me: Stetson A ent: e/o SR-79		ct			, ,	Name: lumber:		o Diamant	Э	
	SPECIFIC I	NPUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	31,200 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	3,120 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
١	/ehicle Speed:	50 mph		H	Vehicle	Mix					
Near/Far L	.ane Distance:	84 feet		H		icleType	,	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	-	9.6%	. ,
	arrier Height:	0.0 feet			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-	-	0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline L	Dist. to Barrier:	70.0 feet		F	Noise S	ourco E	lovatio	ne (in f	not)		
Centerline Dis	t. to Observer:	70.0 feet		H	WOISE S	Auto.		0.000	cei)		
Barrier Distanc	e to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Heigh	t (Above Pad):	5.0 feet				vy Truck		1.006	Grade Ad	iuetmant	- 00
	Pad Elevation:	0.0 feet			rica	ry Truck	s. c	.000	Orace Au	usuncin	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	6.223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	6.065			
	Right View:	90.0 degre	es		Hear	y Truck	s: 56	6.081			
FHWA Noise Mo	del Calculatio	ns									
VehicleType	REMEL	Traffic Flow		stance	_	Road	Fres		Barrier Att		rm Atten
Autos				-0.8	•	-1.20		-4.72		000	0.000
Medium Trucks				-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks	85.38	3 -18.66		-0.8	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noi	se Levels (wit	hout Topo and	barri	ier atter	nuation)						
VehicleType	Leq Peak Ho	our Leq Da	y	Leg E	vening	Leq	Night		Ldn	С	NEL
Autos	s: 7	0.7	68.8		67.0		60	.9	69.6	3	70.2
Medium Trucks	s: 6	4.2	62.7		56.4		54	.8	63.3	3	63.5
Heavy Trucks	s: <u>6</u>	4.7	63.2		54.2		55	.5	63.8	3	63.9
Vehicle Noise	9: 7	2.4	70.6		67.6		62	.8	71.3	3	71.8
Centerline Dista	nce to Noise C	Contour (in fee	t)								
			[dBA		dBA	(60 dBA		dBA
		_	Ldn:	-	6		85		399		359
		C	NEL:	9	2	1	99		429	٤	923

	FHV	VA-RD-77-108 HI	SHWAY N	IOISE PF	REDICT	ION MOD	EL	
Road Nam	io: Year 2019 \ e: Stetson Av. nt: w/o Californ					t Name: R lumber: 9	Rancho Diamanto 1792	•
SITE	SPECIFIC IN	PUT DATA					ODEL INPUT	S
Highway Data				Site Con	ditions	(Hard = 1	10, Soft = 15)	
Average Daily	Traffic (Adt): 3	31,900 vehicles				Α	utos: 15	
Peak Hour	Percentage:	10%		Me	dium Tı	ucks (2 A	xles): 15	
Peak H	our Volume:	3,190 vehicles		He	avy Tru	cks (3+ A	xles): 15	
Ve	hicle Speed:	50 mph	H	Vehicle I	Mix			
Near/Far Lai	ne Distance:	84 feet	-		cleTyp	e [Day Evening	Night Daily
Site Data							77.5% 12.9%	9.6% 97.42%
Rai	rier Heiaht:	0.0 feet		Me	edium 7	rucks: 8	34.8% 4.9%	10.3% 1.84%
Barrier Type (0-W		0.0		F	leavy 7	rucks: 8	36.5% 2.7%	10.8% 0.74%
Centerline Dis	st. to Barrier:	70.0 feet		Noise Sc	urce F	levations	(in feet)	
Centerline Dist.	to Observer:	70.0 feet	F	10,00 00	Auto			
Barrier Distance	to Observer:	0.0 feet		Mediur	n Truck			
Observer Height (,	5.0 feet			y Truck		06 Grade Ad	ustment: 0.0
	ad Elevation:	0.0 feet	F					
	ad Elevation:	0.0 feet	H.	Lane Eq			e (in feet)	
,	Road Grade:	0.0%		A 4 15	Auto			
	Left View:	-90.0 degrees			n Truck			
	Right View:	90.0 degrees		Heav	y Truck	S: 56.0	81	
FHWA Noise Mode	el Calculation:	s	•					
VehicleType	REMEL		Distance	Finite		Fresne		
Autos:	70.20	2.63	-0.8		-1.20		4.72 0.0	
Medium Trucks:	81.00	-14.61	-0.8		-1.20			0.000
Heavy Trucks:	85.38	-18.56	-0.8		-1.20		5.28 0.0	0.000
Unmitigated Noise			_					
VehicleType	Leq Peak Hou			vening	Leq	Night	Ldn	CNEL
Autos:	70.		-	67.1		61.0	69.7	
Medium Trucks:	64.			56.5		54.9	63.4 63.9	
Heavy Trucks: Vehicle Noise:	64. 72.			54.3 67.7		55.6 62.9	71.4	
			1	07.7		6∠.9	/1.4	/1.9
Centerline Distance	e to Noise Co	ontour (in feet)	T =-				00 104	55 104
				dBA		dBA	60 dBA	55 dBA
		Ldr. CNFI		7 4		88	405 435	872
		CNEL	9	4	2	.02	435	937

	FH'	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DEL			
	e: Stetson Av		t				t Name: lumber:		o Diamante	•	
SITE S Highway Data	SPECIFIC II	NPUT DATA			ita Cor		NOISE I		L INPUTS	3	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	31,900 vehicle: 10% 3,190 vehicle: 50 mph			Ме Не	edium Tr eavy Tru		Autos: (xles):	15 15		
Near/Far Lar		84 feet		١	ehicle	Mix nicleType	2	Dav	Evening	Night	Daily
Site Data	-111-1-1-1	0.0 feet					Autos:	77.5% 84.8%	12.9%	9.6%	97.42%
Barrier Type (0-W	rier Height: all. 1-Berm):	0.0 reet 0.0				Heavy T	rucks:	86.5%	2.7%	10.8%	
Centerline Dis	. ,	70.0 feet			loise S	ource F	levation	s (in f	oet)		
Roa	to Observer: Above Pad): ad Elevation: ad Elevation:	70.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		L	Hea		s: 2.5 s: 8.0 t Distant		Grade Adj	ustmen	t: 0.0
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Auto m Truck vy Truck	s: 56.	065			
VehicleType	REMEI	Traffic Flow	Die	stance	Cinito	Road	Fresn	ol.	Barrier Atte	on Bo	rm Atten
Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	2.63 -14.61	Die	-0.87 -0.85 -0.85		-1.20 -1.20 -1.20		-4.72 -4.88 -5.28	0.0 0.0 0.0	00	0.000 0.000 0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	′	Leg Ev	ening	Leq	Night		Ldn	С	NEL
Autos: Medium Trucks:	64	1.3	68.9 62.8		67.1 56.5		61.0 54.9		69.7 63.4		70.3 63.6
Heavy Trucks: Vehicle Noise:			63.3 70.7		54.3 67.7		55.6 62.9		63.9 71.4		64.0 71.9
Centerline Distance	a to Noisa C	ontour (in feet	1								
Centerine Distanc	e to Horse o		Ldn:	70 d	,	1	dBA 88	(60 dBA 405		372
		CI	VEL:	94	ŀ	2	102		435		937

Monday, January 25, 2016

	FHW	A-RD-77-108	HIGHW	AY N	OISE PF	REDICTI	ON M	ODEL			
Scenario: Road Name: Road Segment:	Stetson Av. (. ,				Project I Job Nu			o Diamant	e	
SITE SP Highway Data	ECIFIC INF	UT DATA		5	ite Con	N ditions (L INPUT	s	
Average Daily Tra Peak Hour Pe Peak Hour Vehicl	rcentage: r Volume: 4 le Speed:	10% 4,110 vehicles 50 mph			Me	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lane	Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrie Barrier Type (0-Wall,	er Height: 1-Berm):	0.0 feet 0.0				A edium Tri Heavy Tri		77.5% 84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Dist. t		70.0 feet		٨	loise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. to 0 Barrier Distance to 0 Observer Height (Abo	Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks ry Trucks	: 2	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Road I	Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
L	ad Grade: Left View: ight View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks y Trucks	: 56	3.223 3.065 3.081			
FHWA Noise Model C	Calculations										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier At	ten Ber	m Atten
Autos:	70.20	3.73		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-13.51		-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-17.46		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise Lo			oarrier a	ttenı	uation)						
	eq Peak Hour			q Ev	ening	Leq I			Ldn		NEL
Autos:	71.9		0.0		68.2		62		70.	-	71.4
Medium Trucks:	65.4		3.9		57.6		56		64.	-	64.7
Heavy Trucks: Vehicle Noise:	65.9 73.6		1.8		55.4 68.8		56 64		65. 72.	-	65.1 73.0
			1.0		00.0		04	.0	72.		70.0
		ntour (in feet)									
Centerline Distance t	to Noise Coi	, ,		70 d	BA	65.0	IBA .		30 dBA	.55	dBA
Centerline Distance t	to Noise Coi		dn:	70 d		65 c			60 dBA 479		dBA 033

	FHW	/A-RD-77-108	HIGH	YAW	NOISE P	REDICTI	ON MC	DEL			
Road Nam	io: Year 2019 V ne: Stetson Av. nt: e/o Street "C	(S.)	t				Name: umber:		o Diamante	е	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 4	0,200 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	ıcks (2	Axles):	15		
Peak H	lour Volume:	4,020 vehicle	S		He	eavy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		F	Vehicle	Mix					
Near/Far La	ne Distance:	84 feet		t		nicleType		Dav	Evenina	Niaht	Daily
Site Data							lutos:	77.5%		9.6%	
Po-	rrier Height:	0.0 feet			М	ledium Tr	ucks:	84.8%	4.9%	10.3%	6 1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	6 0.74%
Centerline Di		70.0 feet		Ī	Noise S	ource El	evation	ıs (in fe	eet)		
Centerline Dist.		70.0 feet		Ī		Autos	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2	297			
Observer Height (. ,	5.0 feet			Hear	vy Trucks	s: 8	006	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		L	Lane Eq	uivalent		_ •	feet)		
	Road Grade:	0.0%				Autos		.223			
	Left View:	-90.0 degre	es			m Trucks		.065			
	Right View:	90.0 degre	es		Hear	vy Trucks	s: 56	.081			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	3.63		-0.8	7	-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-13.60		-0.8	15	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-17.56		-0.8	15	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou			Leg E	vening		Night		Ldn	_	CNEL
Autos:	71.	-	69.9		68.1		62.		70.7		71.3
Medium Trucks:	65.	3	63.8		57.5		55.	9	64.4	1	64.6
Heavy Trucks: Vehicle Noise:	65. 73.		64.3 71.7		55.3 68.7		56. 63.		64.9 72.4		65.0 72.9
Centerline Distant		-			00.7		03.	<i>3</i>	12.4	•	12.8
Centernile Distant	ce to Moise Co	inoui (iii ieet		70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:	1	02	2	19		472	1	,018
		Ci	VEL:	1	09	23	36		507	1	,093

	FHWA	-RD-77-108 H	IIGHW	AY NO	DISE P	REDICT	TION MOD	EL			
Scenario: Year Road Name: Stets Road Segment: w/o V	n Av. (S	5.)					t Name: F Number: 9		o Diamante	•	
SITE SPECIF	C INP	JT DATA					NOISE N	ODE	L INPUTS	3	
Highway Data				Si	ite Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (A Peak Hour Percenta Peak Hour Volu	ge:	600 vehicles 10% 560 vehicles					rucks (2 A icks (3+ A	/			
Vehicle Spe	,	50 mph					10110 (0171				
Near/Far Lane Distar		84 feet		Ve	ehicle						
		011000			Ver	icleTyp		Day	Evening	Night	Daily
Site Data				-		edium 1		77.5%		9.69	
Barrier Heig		0.0 feet				eaium i Heavv 1		34.8% 36.5%		10.39	
Barrier Type (0-Wall, 1-Be		0.0				neavy i	TUCKS.	00.0%	2.170	10.07	0.74%
Centerline Dist. to Bar		70.0 feet		N	oise S	ource E	levations	(in f	eet)		
Centerline Dist. to Obser		70.0 feet				Auto	os: 0.0	00			
Barrier Distance to Obser		0.0 feet			Mediu	m Truck	ks: 2.2	97			
Observer Height (Above P	,	5.0 feet			Hear	y Truck	ks: 8.0	06	Grade Adj	ustmer	nt: 0.0
Pad Elevai Road Elevai		0.0 feet		1:	ano Fo	uivələr	t Distanc	o (in	foot)		
Road Elevai Road Gra		0.0 feet 0.0%		Le	ane Ly	Auto			ieei)		
Left V		0.0% 90.0 degrees			Madiu	m Truck					
Right V		90.0 degrees				y Truck					
FHWA Noise Model Calcul	ations										
VehicleType REME	L T	raffic Flow	Distan	ice	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	0.20	3.11		-0.87		-1.20		4.72	0.0	00	0.000
Medium Trucks:	1.00	-14.13		-0.85		-1.20		4.88	0.0	00	0.000
Heavy Trucks:	5.38	-18.09		-0.85		-1.20		5.28	0.0	00	0.000
Unmitigated Noise Levels											
VehicleType Leq Pea		Leq Day		eq Eve			Night		Ldn		CNEL
Autos:	71.2		9.3		67.6		61.5		70.1		70.8
Medium Trucks:	64.8	-	3.3		56.9		55.4		63.9		64.1
Heavy Trucks:	65.2		3.8		54.8		56.0		64.4		64.5
Vehicle Noise:	72.9		1.2		68.1		63.4		71.9	1	72.4
Centerline Distance to No.	se Cont	our (in feet)	_								
			. L	70 dE	ЗA		dBA	6	0 dBA		5 dBA
			dn:	94		_	202		436		938
		CN	EL:	101		2	217		468	1	,008

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICTI	ION MC	DEL			
	e: Stetson Av	. ,	ot				Name: umber:		o Diamant	е	
SITE :	SPECIFIC IN	NPUT DATA			ita Car	N nditions			L INPUT	S	
Average Daily Peak Hour	Traffic (Adt): Percentage: our Volume:	35,300 vehicle 10% 3,530 vehicle			Мє	edium True	ucks (2	Autos: Axles):	15 15		
	hicle Speed:	50 mph		ν	'ehicle	Mix					
Near/Far Lai	ne Distance:	84 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			M	ledium Ti	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet		۸	loise S	ource El	levation	s (in f	eet)		
Centerline Dist.		70.0 feet				Autos		000	,		
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2	297			
Observer Height (.	,	5.0 feet			Hea	vy Trucks	s: 8.	006	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		,	ono Fo	ivalant	Dieten	oo (in	foot)		
	ad Elevation: Road Grade:	0.0 feet 0.0%			ane Eq	uivalent Auto:		223	ieei)		
,	l eft View:	-90.0 degre			Modiu	m Trucks		.065			
	Right View:	90.0 degre				vy Truck		.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	3.07		-0.87		-1.20		-4.72	0.0	000	0.000
Medium Trucks:	81.00	-14.17		-0.85		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-18.13		-0.85		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	ıation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V	Leq Ev	ening	Leq	Night		Ldn	(NEL
Autos:		1.2	69.3		67.5		61.	-	70.1		70.7
Medium Trucks:	-	1.8	63.3		56.9		55.		63.8	-	64.1
Heavy Trucks:		5.2	63.8		54.7		56.		64.3		64.5
Vehicle Noise:	72	2.9	71.2		68.1		63.	3	71.9	9	72.3
Centerline Distance	ce to Noise C	ontour (in fee	t)								
			L	70 d			dBA	(60 dBA		5 dBA
		_	Ldn:	93			01		433		933
		С	NEL:	100	J	2	16		465	1	,002

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION M	ODEL			
	e: Stetson Av						Name: lumber:		no Diamant	е	
SITE S	SPECIFIC II				N	IOISE	MODE	L INPUT	S		
Highway Data				S	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	31,200 vehicles	8					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles)	15		
Peak H	our Volume:	3,120 vehicles	3		He	avy Tru	cks (3+	Axles)	15		
Vel	hicle Speed:	50 mph		ı	/ehicle	Mix					
Near/Far Lar	ne Distance:	84 feet		F	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	
Rar	rier Height:	0.0 feet			M	edium T	rucks:	84.89	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			I	Heavy T	rucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet		^	loise So	ource E	levatio	ns (in t	eet)		
Centerline Dist.	to Observer:	70.0 feet		Ė		Auto		0.000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		2.297			
	bserver Height (Above Pad): Pad Elevation:					y Truck		3.006	Grade Ad	iustment	: 0.0
	Pad Elevation:			L							
	Road Elevation:			L	ane Eq				feet)		
F	Road Grade:	0.0%				Auto		5.223			
	Left View:	-90.0 degree				m Truck		3.065			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 56	5.081			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Distai			Road	Fres		Barrier Att		rm Atten
Autos:	70.20			-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	81.00			-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-18.66		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise										_	
	Leq Peak Ho			eq Ev	rening	Leq	Night		Ldn		NEL
Autos:			8.8		67.0		60		69.6	-	70.2
Medium Trucks:	-		62.7		56.4		54		63.3	-	63.5
Heavy Trucks: Vehicle Noise:			63.2 70.6		54.2 67.6		55 62		63.8 71.3		63.9 71.8
					57.0		02	.0	71.	,	71.0
Centerline Distanc	e to Noise C	ontour (in feet	'	70 d	IBA .	65	dBA		60 dBA	55	dBA
			🗀								
			Ldn:	86	3	1.	85		399		359

Autos: 77.5% 12.9% 9.6% 97.4%		FHW	A-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MO	DEL			
Autos: 15 Autos: 15 Autos: 15 Autos: 15 Autos: 15 Peak Hour Percentage: 10% Autos: 3,120 vehicles Peak Hour Volume: 3,120 vehicles Vehicle Speed: 50 mph Vehicle Mix	Road Nam	e: Stetson Av.	(S.)	t						o Diamant	е	
Average Daily Traffic (Adt): 31,200 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Type Day Evening Night Dail Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Type Day Evening Night Dail Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Type Day Evening Night Dail Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Dail Near Type Near/Far Lane Distance No feet Near/Far Lane Distance No feet Near/Far Lane Distance No feet Near/Far Lane Distance No feet Near Pad Elevation: 0.00 feet Noise Source Elevations No feet Noise Near Pad Elevation: 0.00 feet Noise Near Pad Elevation: 0.00 feet Near Pad Elevation: 0.00 fe		SPECIFIC INI	PUT DATA								S	
Peak Hour Percentage:	Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Peak Hour Volume: Vehicle Speed: So mph Vehicle Mix	Average Daily	Traffic (Adt): 3	1,200 vehicles	S					Autos:	15		
Vehicle Speed: Near/Far Lane Distance: 84 feet Vehicle Mix Vehicle Type Day Evening Night Dail	Peak Hour	Percentage:	10%									
Near/Far Lane Distance: 84 feet Vehicle MIX Vehicle Type Day Evening Night Dail	Peak H	lour Volume:	3,120 vehicles	S		He	avy Tru	cks (3+	Axles):	15		
Site Data	Ve	hicle Speed:	50 mph		-	Vehicle	Mix					
Site Data	Near/Far La	ne Distance:	84 feet			Veh	icleTvpe	9	Dav	Evenina	Niaht	Dailv
Barrier Trype (C-Wall, 1-Berm): 0.0 feet Centerline Dist. to Doserver: 70.0 feet Centerline Dist. to Observer: 70.0 feet Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Centerline Dist. to Observer: 70.0 feet Autos: 0.000 Centerline Dist. for Observer: 70.0 feet Autos: 0.000 Centerline Dist. for Observer: 70.0 feet Autos: 0.000 Centerline Dist. for Observer: 70.0 feet Centerline	Site Data											. ,
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 0.7-Centerline Dist. to Dasrrier Type (0-Wall, 1-Berm): 70.0 feet Centerline Dist. to Dasrrier Type (0-Wall, 1-Berm): 70.0 feet Barrier Distance to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Heavy Trucks: 8.006 Grade Adjustment: 0.0 feet Road Grade: 0.0% Heavy Trucks: 56.223	Par	rrior Hojaht:	0.0 foot			М	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer: Barrier Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: O.0 feet Content of Distance to Observer: Observ						ı	Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Autos: 0.000 Aut	Centerline Dis	st. to Barrier:	70.0 feet		1	Noise S	ource E	levatio	ns (in fe	eet)		
Barrier Distance to Observer: 0.0 feet	Centerline Dist.	to Observer:	70.0 feet		-							
Pad Elevation:	Barrier Distance	to Observer:	0.0 feet			Mediu						
Pad Elevation: 0.0 feet	Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8	.006	Grade Ad	liustmen	: 0.0
Road Grade: 0.0% Autos: 56.223 Medium Trucks: 56.065	Pa	ad Elevation:	0.0 feet								,	
Left View:					1	Lane Eq				feet)		
FHWA Noise Mode Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atte Bern Atte Remainder Trucks: 81.00 -14.71 -0.85 -1.20 -4.72 0.000 0.00	I											
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Attent Berm Atte		Left View:	-90.0 degree	es								
VehicleType		Right View:	90.0 degree	es		Heav	ry Truck	s: 56	.081			
Autos: 70.20 2.53 -0.87 -1.20 -4.72 0.000 0.00000000000000000000000000	FHWA Noise Mode	el Calculations										
Medium Trucks: 81.00 -14.71 -0.85 -1.20 -4.88 0.000 0.00 Heavy Trucks: 85.38 -18.66 -0.85 -1.20 -5.28 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation: Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.7 68.8 67.0 60.9 69.6 7.0 Medium Trucks: 64.2 62.7 56.4 54.8 63.3 64.9 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 63.0 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7.00 Trucks: 70.7 70.6 70.6 70.6 70.8 Medium Trucks: 70.7 70.6 70.6 70.6 70.8 Medium Trucks: 70.7 70.6 70.6 70.6 70.8 Medium Trucks: 70.7 70.6 70.6 70.6 Medium Trucks: 70.7 70.6 70.6 70.6 Medium Trucks: 70.7 70.6 70.6 70.6 Medium Trucks: 70.7 70.6 70.6 Medium Trucks: 70.7 70.6 70.6 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks: 70.7 70.7 Medium Trucks:	VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Be	m Atten
Heavy Trucks: 85.38 -18.66 -0.85 -1.20 -5.28 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: 70.7 68.8 67.0 60.9 69.6 77. Medium Trucks: 64.2 62.7 56.4 54.8 63.3 66 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7												0.000
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.7 68.8 67.0 60.9 69.6 7 Medium Trucks: 64.2 62.7 56.4 54.8 63.3 6 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7		81.00				-						0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.7 68.8 67.0 60.9 69.6 7.7 Medium Trucks: 64.2 62.7 56.4 54.8 63.3 6 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7							-1.20		-5.28	0.0	000	0.000
Autos: 70.7 68.8 67.0 60.9 69.6 7 Medium Trucks: 64.2 62.7 56.4 54.8 63.3 6 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7									_			
Medium Trucks: 64.2 62.7 56.4 54.8 63.3 6 Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7	,,,		- 1 - 7		Leg E							
Heavy Trucks: 64.7 63.2 54.2 55.5 63.8 6 Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7												70.2
Vehicle Noise: 72.4 70.6 67.6 62.8 71.3 7									-			63.5
												63.9 71.8
	Centerline Distance	ce to Noise Co	ntour (in feet)								
70 dBA 65 dBA 60 dBA 55 dBA			. ,,		70 c	/BA	65	dBA	6	0 dBA	55	dBA
Ldn: 86 185 399 859				Ldn:	8	6	1	85		399	8	359
CNEL: 92 199 429 923			CI	VEL:	9:	2	1	99		429	9	923

		WA-RD-77-108						
		Without Projec					cho Diamante	
	ne: Stetson Av				Job I	lumber: 979	2	
Road Segme	nt: e/o Cawsto	on Av.						
	SPECIFIC IN	IPUT DATA					DEL INPUTS	
Highway Data				Site Co	nditions	(Hard = 10,	Soft = 15)	
Average Daily	Traffic (Adt):	33,600 vehicle:	3			Auto	os: 15	
Peak Hour	Percentage:	10%				ucks (2 Axle	-/	
Peak F	lour Volume:	3,360 vehicles	3	H	leavy Tru	icks (3+ Axle	s): 15	
	hicle Speed:	50 mph		Vehicle	Mix			
Near/Far La	ne Distance:	84 feet		Ve	hicleTyp	e Da	/ Evening	Night Daily
Site Data						Autos: 77.	5% 12.9%	9.6% 97.42%
Ra	rrier Height:	0.0 feet		1	∕ledium 1	rucks: 84.	8% 4.9%	10.3% 1.84%
Barrier Type (0-W		0.0 1661			Heavy 1	rucks: 86.	5% 2.7%	10.8% 0.74%
Centerline Di		70.0 feet		M-1	> -		- 64)	
Centerline Dist.	to Observer:	70.0 feet		Noise :		levations (ii	1 reet)	
Barrier Distance	to Observer:	0.0 feet			Auto			
Observer Height	(Above Pad):	5.0 feet			um Truci		Crada Adii	otmont: 0.0
P	ad Elevation:	0.0 feet		Hea	avy Truci	s: 8.006	Grade Adju	stment: 0.0
Ro	ad Elevation:	0.0 feet		Lane E	quivaler	t Distance (in feet)	
	Road Grade:	0.0%			Auto	s: 56.223		
	Left View:	-90.0 degree	es	Medi	um Truci	s: 56.065		
	Right View:	90.0 degree	es	Hea	avy Truci	s: 56.081		
FHWA Noise Mod	el Calculation	ıs						
VehicleType	REMEL	Traffic Flow	Distan		e Road	Fresnel	Barrier Atte	
Autos:	70.20	2.85		0.87	-1.20	-4.7		
Medium Trucks:		-14.38		0.85	-1.20	-4.8		
Heavy Trucks:	85.38	-18.34	-	0.85	-1.20	-5.2	28 0.00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenuation)			
VehicleType	Leq Peak Hou	, ,		q Evening		Night	Ldn	CNEL
Autos:			69.1	67.	-	61.3	69.9	70.
Medium Trucks:	-		63.1	56.		55.2	63.6	63.8
Heavy Trucks:			63.6	54.	-	55.8	64.1	64.3
Vehicle Noise:	72	2.7	70.9	67.	9	63.1	71.7	72.
Centerline Distan	ce to Noise C	ontour (in feet)					
				70 dBA	65	dBA	60 dBA	55 dBA
			Ldn: IFI :	90 97		95	419 450	903 970

	FHV	VA-RD-77-108	HIGH	WAY N	OISE P	REDICTI	ом ис	DEL			
Road Nam	io: Year 2019 v e: Stetson Av. nt: e/o New Ste		t				Name: imber:		o Diamant	Э	
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	Site Cor	ditions (Hard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt): 3	36,800 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	our Volume:	3,680 vehicle	S		He	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	50 mph		ı	/ehicle	Mix					
Near/Far La	ne Distance:	84 feet		-		icleType		Dav	Evenina	Niaht	Dailv
Site Data							utos:	77.5%			97.42%
Rai	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	70.0 feet			Inisa S	ource Ele	vation	e (in fa	of)		
Centerline Dist.	to Observer:	70.0 feet			10/30 0	Autos		000	ici)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m 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		L	.ane Eq	uivalent			eet)		
I	Road Grade:	0.0%				Autos		223			
	Left View:	-90.0 degre	es			m Trucks		065			
	Right View:	90.0 degre	es		Heav	y Trucks	: 56.	081			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fresi		Barrier Att		m Atten
Autos:	70.20	3.25		-0.87		-1.20		-4.72		000	0.000
Medium Trucks:	81.00	-13.99		-0.85		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-17.94		-0.85	5	-1.20		-5.28	0.0	000	0.000
Unmitigated Noise											
VehicleType	Leq Peak Hou	., .,	_	Leq Ev		Leq I			Ldn		NEL
Autos:	71		69.5		67.7		61.7		70.3		70.9
Medium Trucks:	65		63.5		57.1		55.5		64.0		64.2
Heavy Trucks: Vehicle Noise:	65 73		64.0 71.3		54.9 68.3		56.2 63.5		64.5 72.1		64.1 72.1
Centerline Distance	e to Noise Co	ontour (in feet)								
Comornia Distant	,0 10 ,10/36 00	mou (m reet		70 d	IBA	65 c	IBA .	6	0 dBA	55	dBA
			Ldn:	96	,	20	7		445		59
			Luii.	90)	20	/		445	8	33

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	WAY	NOISE PI	REDICTI	ON M	ODEL			
	e: Stetson Av		t			Project I Job Nu			o Diamant	e	
SITE S	SPECIFIC II	NPUT DATA			Site Con				L INPUT	S	
Average Daily i Peak Hour I Peak Ho	. ,	50,000 vehicle: 10% 5,000 vehicle: 45 mph			Me He	dium Tru avy Truc	cks (2	Autos: Axles):	15 15		
Near/Far Lar		84 feet			Vehicle I	icleType		Day	Evening	Night	Dailv
Site Data					VCII		utos:	77.5%	-	9.6%	. ,
Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium Tr Heavy Tr		84.8% 86.5%		10.3% 10.8%	1.84% 0.74%
Centerline Dis		70.0 feet			Noise So	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. t Barrier Distance t Observer Height (o Observer:	70.0 feet 0.0 feet 5.0 feet 0.0 feet				Autos m Trucks /y Trucks	: 2	0.000 2.297 3.006	Grade Ad	ljustment	: 0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
F	Road Grade:	0.0%		ı		Autos	: 56	6.223			
	Left View: Right View:	-90.0 degree				m Trucks ⁄y Trucks		6.065 6.081			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier At	ten Ber	m Atten
Autos:	68.46			-0.8		-1.20		-4.72		000	0.000
Medium Trucks:	79.45			-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25			-0.8		-1.20		-5.28	0.0	000	0.000
Unmitigated Noise								_			
VehicleType Autos:	Leq Peak Ho		69.5	Leq E	vening 67.8	Leq I	vignt 61	7	Ldn 70.:		NEL 70.9
Medium Trucks:			63.7		57.3		55		64.	-	64.5
Heavy Trucks:			64.6		55.6		56		65.	_	65.3
Vehicle Noise:			71.5		68.4		63		72.		72.
Centerline Distanc	e to Noise C	ontour (in feet)								
		,		70	dBA	65 c			60 dBA	55	dBA
			Ldn:		99	21	-		459		88
		CI	VEL:	1	06	22	8.		492	1,	060

Monday, January 25, 2016

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MO	DEL			
Road Na	rio: Year 2019 me: 9th St. ent: w/o Winch	Without Project nester Rd.	ct				Name: lumber: !		o Diamante	e	
SITE	SPECIFIC II	NPUT DATA				ı	IOISE N	IODE	L INPUT	5	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Peak Hou	r Traffic (Adt): r Percentage: Hour Volume:	21,000 vehicle 10% 2,100 vehicle					ucks (2 A		15		
V	ehicle Speed:	25 mph		-	/- I- I- I-		•				
Near/Far L	ane Distance:	84 feet			Vehicle	iviix nicleType		Dav	Evening	Night	Doilu
Site Data					ver			77.5%		9.69	Daily 6 97.42%
						edium T		84.8%		10.39	
Barrier Type (0-1	Arrier Height:	0.0 feet 0.0				Heavy T		86.5%		10.89	
	ist, to Barrier:	70.0 feet		ļ.							
Centerline Dist		70.0 feet		1	Voise S		levation		eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height		5.0 feet				m Truck		297			
	Pad Elevation:	0.0 feet			Hear	vy Truck	s: 8.0	006	Grade Adj	ustmer	nt: 0.0
Ro	oad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 56.	223			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.0	065			
	Right View:	90.0 degre	ees		Hear	vy Truck	s: 56.0	081			
FHWA Noise Mod	del Calculation	ns									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos	: 58.73	3.82		-0.87	7	-1.20		-4.72	0.0	100	0.000
Medium Trucks	: 70.80	-13.41		-0.8	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks	: 77.97	7 -17.37		-0.8	5	-1.20		-5.28	0.0	00	0.000
Unmitigated Nois	se Levels (with	hout Topo and	l barri	er atten	uation)						
VehicleType	Leq Peak Ho	our Leq Da	y	Leq E	ening	Leq	Night		Ldn	(CNEL
Autos	: 60	0.5	58.6		56.8		50.8		59.4	i	60.0
Medium Trucks	: 5	5.3	53.8		47.5		45.9		54.4	ļ	54.6
Heavy Trucks	: 5	8.6	57.1		48.1		49.3		57.7	,	57.8
Vehicle Noise	: 6	3.4	61.7		57.8		53.9	1	62.4		62.8
Centerline Distar	nce to Noise C	Contour (in fee	t)								
				70 c			dBA	6	60 dBA		5 dBA
			Ldn:	2	_		17		101		218
	CNEL:					23 50 107 231					231

Monday, January 25, 2016			

	FHV	VA-RD-77-108	HIGHV	VAY N	OISE PI	REDICTI	ON MO	DEL			
Road Nam	io: Year 2019 \ e: 9th St. nt: e/o Winche	•	t				Name: umber:		o Diamante	Э	
SITE	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	2,400 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 i	Axles):	15		
Peak H	our Volume:	1,240 vehicles	3		He	avy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	25 mph		-	/ehicle	Miv					
Near/Far La	ne Distance:	84 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data							lutos:	77.5%	12.9%	9.6%	97.42%
Rai	rier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	-	0.0			- 1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	. ,	70.0 feet		١,	Vaisa C	ource El	ovetler	o (in f	2041		
Centerline Dist.	to Observer:	70.0 feet			voise so	Autos		000	et)		
Barrier Distance	to Observer:	0.0 feet			Modius	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		006	Grade Ad	iustmont	. 0.0
Pa	ad Elevation:	0.0 feet			пеач	ry Trucks	s. o.	000	Grade Auj	usunen	0.0
Roa	ad Elevation:	0.0 feet		I	ane Eq	uivalent	Distan	ce (in	feet)		
ı	Road Grade:	0.0%				Autos	56.	.223			
	Left View:	-90.0 degree	es		Mediu	m Trucks	56.	.065			
	Right View:	90.0 degree	es		Heav	y Trucks	56.	.081			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	58.73	1.54		-0.87	7	-1.20		-4.72	0.0	000	0.00
Medium Trucks:	70.80	-15.70		-0.85	5	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	77.97	-19.66		-0.85	5	-1.20		-5.28	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	, ,	Leq E	rening	Leq	Night		Ldn	C	NEL
Autos:	58.	_	56.3		54.5		48.	-	57.1		57.
Medium Trucks:	53.	-	51.5		45.2		43.0	-	52.1		52.3
Heavy Trucks:	56.	-	54.8		45.8		47.		55.4		55.
Vehicle Noise:	61.	.1	59.4		55.5		51.0	6	60.1		60.
Centerline Distance	ce to Noise Co	ntour (in feet)								
			L	70 c		65 (1 6	60 dBA		dBA
			Ldn: VFI :	15	-	3	-		71 75		53 63

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APPENDIX 8.1:

ON-SITE TRAFFIC NOISE CALCULATIONS



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Scenario: Backyard With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 318

Project Name: Rancho Diamante

SITE SPECIFIC II Highway Data	NPUT DATA	NOI Site Conditions (Ha	SE MODE ard = 10, So		5	-
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	10%	Medium Trucks Heavy Trucks Vehicle Mix VehicleType	,		Night	Daily
Site Data Barrier Height:	6.0 feet	Auto Medium Truck	os: 77.5% ks: 84.8%	12.9% 4.9%	9.6% 10.3%	97.42% 1.84%
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	10.0 feet 5.0 feet	Noise Source Eleva Autos: Medium Trucks: Heavy Trucks:	ations (in fe 1,499.200 1,501.497		10.8%	0.74%
Pad Elevation: Road Elevation: Barrier Elevation: Road Grade:	1,499.2 feet	Lane Equivalent Di Autos: Medium Trucks: Heavy Trucks:	istance (in 1 111.735 111.610 111.523	feet)		
FHWA Noise Model Calculation	ns	Finite Dead		Damian Au	D	A ((a) a

	VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
L	Autos:		3.63	-5.34	-1.20	0.12	-6.160	-9.160
		=				***-		
	Medium Trucks:		-13.60	-5.33	-1.20	0.09	-5.900	-8.900
	Heavy Trucks:	83.02	-17.56	-5.33	-1.20	0.03	-5.300	-8.300

Unmitigated Nois	e Levels (withou	t Topo and barr	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	58.7	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	69.1	67.3	64.8	59.5	68.0	68.6

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.2	58.4	52.3	61.0	61.6
Medium Trucks:	52.8	51.2	44.9	43.3	51.8	52.0
Heavy Trucks:	53.6	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	63.1	61.3	58.7	53.4	62.0	62.5

Project Name: Rancho Diamante

Scenario: Backyard With Wall Road Name: Stetson Av. e/o "C Street"

Job Number: 9792 Lot No: 324 Analyst: A. Wolfe

					,	ary ou	7 11 77 01			
SITE SPECIFI	C INPUT	DATA			NC)ISE I	MODE	L INPUT	S	
Highway Data				Si	ite Conditions (F	Hard =	: 10, Sc	oft = 15)		
Average Daily Traffic (Ad	t): 40,200) vehicle	s				Autos:	15		
Peak Hour Percentag	ge: 10)%			Medium Truc	ks (2)	Axles):	15		
Peak Hour Volum	ne: 4,020) vehicle	s		Heavy Truck	s (3+)	Axles):	15		
Vehicle Spee	ed: 50) mph		V	ehicle Mix					
Near/Far Lane Distand	ce: 74	1 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Αι	ıtos:	77.5%	12.9%	9.6%	97.42%
Barrier Heig	ht: 6.	.0 feet			Medium Tru	icks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berr					Heavy Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barri	,	.0 feet		N	oisa Sourca Ela	vation	s (in fa	not)		
Centerline Dist. to Observ	er: 124.	.0 feet		Noise Source Elevations (in feet) Autos: 1,498.700						
Barrier Distance to Observ	er: 10.	.0 feet			Medium Trucks:	•				
Observer Height (Above Pa	d): 5.	.0 feet			Heavy Trucks:	•		Grade Ad	iustment	
Pad Elevation	on: 1,501.	.9 feet			rieavy rrucks.	1,500	0.700	Orace Au	astriciit	. 0.0
Road Elevation	on: 1,498.	.7 feet		Le	ane Equivalent L	Distan	ce (in i	feet)		
Barrier Elevation	on: 1,501.	.9 feet			Autos:	118	8.270			
Road Grad	de: 0.	.0%			Medium Trucks:	118	8.099			
					Heavy Trucks:	11	7.885			
FHWA Noise Model Calcula	tions									
VehicleType REME	L Traff	fic Flow	Distance		Finite Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos: 7	1.12	3.63	-5.	71	-1.20		0.15	-6.4	100	-9.400
Medium Trucks: 78	8.79	-13.60	- 5.	70	-1.20		0.12	- 6.1	60	-9.160
Heavy Trucks: 83	3.02	-17.56	-5.0	69	-1.20		0.05	-5.5	500	-8.500
Unmitigated Noise Levels (without To	opo and	barrier atte	nu	ation)					

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	67.8	65.9	64.2	58.1	66.7	67.3							
Medium Trucks:	58.3	56.8	50.4	48.9	57.3	57.6							
Heavy Trucks:	58.6	57.1	48.1	49.4	57.7	57.8							
Vehicle Noise:	68.7	66.9	64.5	59.1	67.7	68.2							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	61.4	59.5	57.8	51.7	60.3	60.9						
Medium Trucks:	52.1	50.6	44.3	42.7	51.2	51.4						
Heavy Trucks:	53.1	51.6	42.6	43.9	52.2	52.3						
Vehicle Noise:	62.5	60.7	58.1	52.8	61.4	61.9						

Scenario: Backyard With Wall Road Name: Stetson Av. e/o "C Street"

oad Name: Stetson Av. e/o "C Lot No: 241 Project Name: Rancho Diamante

SITE SPECIFIC	NPUT DATA		NOISE MODEL INPUTS							
Highway Data			Site Conditions	(Hard	= 10, Sc	ft = 15)				
Average Daily Traffic (Adt):	40,200 vehicles	S			Autos:	15				
Peak Hour Percentage:	10%		Medium Tr	ucks (2	2 Axles):	15				
Peak Hour Volume:	4,020 vehicles	S	Heavy Tru	cks (3-	+ Axles):	15				
Vehicle Speed:	•		Vehicle Mix							
Near/Far Lane Distance:	74 feet		VehicleType	Э	Day	Evening	Night	Daily		
Site Data				Autos:	77.5%	12.9%	9.6%	97.42%		
Barrier Height:	0.0 feet		Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-Wall, 1-Berm):			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%		
Centerline Dist. to Barrier:	194.0 feet		Noise Source E	levatio	ons (in fe	eet)				
Centerline Dist. to Observer:	204.0 feet				02.660	- /				
Barrier Distance to Observer:	10.0 feet		Medium Truck	•						
Observer Height (Above Pad):	5.0 feet		Heavy Truck	•		Grade Adj	ustment:	0.0		
Pad Elevation:	1,501.9 feet		Tieavy Truck	is. 1,0	10.000	Orado riaj	doimoni.	0.0		
Road Elevation:	1,502.7 feet		Lane Equivalen	t Dista	nce (in f	eet)				
Barrier Elevation:	1,501.9 feet		Auto	s: 2	00.661					
Road Grade:	0.0%		Medium Truck	s: 2	00.626					
			Heavy Truck	s: 2	00.652					
FHWA Noise Model Calculation	ns									
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Atte	en Beri	m Atten		

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-9.16	-1.20	-1.11	0.000	0.000
Medium Trucks:	78.79	-13.60	-9.15	-1.20	-1.17	0.000	0.000
Heavy Trucks:	83.02	-17.56	-9.16	-1.20	-1.31	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	64.4	62.5	60.7	54.7	63.3	63.9						
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1						
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4						
Vehicle Noise:	65.3	63.5	61.0	55.7	64.2	64.8						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	64.4	62.5	60.7	54.7	63.3	63.9							
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1							
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4							
Vehicle Noise:	65.3	63.5	61.0	55.7	64.2	64.8							

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 211

Job Number: 9792

Analyst: A. Wolfe

SITE	SPECIFIC IN	PUT DATA				NOISE	MODE	L INPUT	S	
Highway Data				Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 3	35,300 vehicles	S				Autos:	15		
Peak Hour	Percentage:	10%		Ме	edium Tr	rucks (2	Axles):	15		
Peak H	lour Volume:	3,530 vehicles	s	He	avy Tru	icks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	74 feet			nicleType	e	Day	Evening	Night	Daily
Site Data						Autos:	77.5%			97.42%
Rai	rrier Height:	6.0 feet		M	ledium 7	Trucks:	84.8%	4.9%	10.3%	
Barrier Type (0-W		0.0			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis		140.0 feet		N-1 0			(' f	4)		
Centerline Dist.		150.0 feet		Noise S			•	eet)		
Barrier Distance	to Observer:	10.0 feet		1 / a ali		os: 1,50				
Observer Height (Above Pad):	5.0 feet				ks: 1,50		Grade Ad	iustmont	
Pá	ad Elevation:	1,502.4 feet		неа	vy Truck	ks: 1,51	0.706	Grade Auj	Justinent	. 0.0
Roa	ad Elevation:	1,502.7 feet		Lane Eq	uivalen	t Distar	ice (in i	feet)		
Barri	er Elevation:	1,502.4 feet			Auto	os: 14	5.192			
I	Road Grade:	0.0%		Mediu	m Truck	rs: 14	5.115			
				Hea	vy Truck	rs: 14	5.092			
FHWA Noise Mode	el Calculations	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.12	3.07	- 7.	05	-1.20		0.09	-5.9	900	-8.900
Medium Trucks:	78.79	-14.17	- 7.	04	-1.20		0.07	-5.7	700	-8.700
Heavy Trucks:	83.02	-18.13	-7.	04	-1.20		0.03	-5.3	300	-8.300
Unmitigated Noise	e Levels (with	out Topo and	barrier atte	nuation)						
VehicleType	Leq Peak Hou			Evening		Night		Ldn		NEL
Autos:	65		64.0	62.3		56.		64.8		65.4
Medium Trucks:	56		54.9	48.5		47.		55.4		55.7
Heavy Trucks:	56		55.2	46.2		47.		55.8		55.9
Vehicle Noise:	66	.8	65.0	62.6		57.	2	65.8	3	66.3
Mitigated Noise Le	•									
VehicleType	Leq Peak Hou			Evening		Night		Ldn		NEL
Autos:	60	.0	58.1	56.4		50.	3	58.9	9	59.5

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

50.7

51.4

61.0

42.8

40.9

56.7

41.3

42.1

51.4

49.7

50.5

60.0

50.0

50.6

60.5

49.2

49.9

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 150

Job Number: 9792

Analyst: A. Wolfe

SITE	SPECIFIC INF	PUT DATA			NOISE MODEL INPUTS						
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 35	5,300 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 A	(xles	15		
Peak H	lour Volume: 3	3,530 vehicle	s		He	avy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	nne Distance:	74 feet				icleType	,	Day	Evening	Night	Daily
Site Data								77.5%	_	9.6%	_
	rrier Height:	6.0 feet			М	edium Ti		84.8%		10.3%	
Barrier Type (0-W	•	0.0			ı	Heavy Ti	rucks:	86.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	149.0 feet						<i>(: c</i>	41		
Centerline Dist.		159.0 feet		N	ioise So	ource El			eet)		
Barrier Distance		10.0 feet					s: 1,503				
Observer Height		5.0 feet				m Trucks			O I - A - I'		. 0.0
=	ad Elevation: 1				Heav	y Trucks	s: 1,511	.706	Grade Adj	ustment.	. 0.0
	ad Elevation: 1			L	ane Eq	uivalent	Distan	ce (in i	feet)		
	ier Elevation: 1					Autos	s: 154	.512			
	Road Grade:	0.0%			Mediu	m Trucks	s: 154	.433			
					Heav	y Trucks	s: 154	.395			
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	71.12	3.07		-7.45		-1.20		0.09	-5.9	00	-8.900
Medium Trucks:	78.79	-14.17		-7.45		-1.20		0.07	-5.7	00	-8.700
Heavy Trucks:	83.02	-18.13		-7.45		-1.20		0.03	-5.3	00	-8.300
Unmitigated Nois	e Levels (witho	ut Topo and	barri	er attenu	ıation)						
VehicleType	Leq Peak Hour	Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	65.5	5	63.6		61.9		55.8	}	64.4		65.0
Medium Trucks:	56.0)	54.5		48.1		46.6	i	55.0		55.3
Heavy Trucks:	56.2	2	54.8		45.8		47.0		55.4	ļ	55.5
Vehicle Noise:	66.4	1	64.6		62.2		56.8	}	65.4		65.9
Mitigated Noise L											
VehicleType	Leq Peak Hour			Leq Ev		•	Night		Ldn		NEL
Autos:			57.7		56.0		49.9		58.5		59.1
Medium Trucks:	50.3	3	48.8		42.4		40.9)	49.3	5	49.6

Heavy Trucks:

Vehicle Noise:

50.9

60.6

40.5

56.3

41.7

51.0

50.1

59.6

50.2

60.1

49.5

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 140

Job Number: 9792

Analyst: A. Wolfe

LOUN	VO. 140				Analyst. A. Wolle						
SITE	SPECIFIC II	NPUT DATA				N	IOISE I	MODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: Hour Volume:	35,300 vehicle 10% 3,530 vehicle					ucks (2 / cks (3+ /		15 15 15		
Ve	hicle Speed:	50 mph		V	ehicle l	Miy					
Near/Far La	ne Distance:	74 feet		-		icleType)	Day	Evening	Night	Daily
Site Data						- ,	Autos:	77.5%		9.6%	•
Ba Barrier Type (0-W	rrier Height: /all, 1-Berm):	6.0 feet 0.0				edium Ti Heavy Ti		84.8% 86.5%	_	10.3% 10.8%	
Centerline Di	•	140.0 feet		N	oise Sc	ource Fl	evation	s (in fe	eet)		
Centerline Dist. Barrier Distance Observer Height	to Observer:	150.0 feet 10.0 feet 5.0 feet				n Trucks	s: 1,503 s: 1,505 s: 1,511	5.397	Grade Adj	iustment.	: 0.0
	ad Elevation:			L	ane Eq	uivalent	t Distan	ce (in f	feet)		
	Barrier Elevation: 1,504.3 feet				•	Autos		5.264			
	Road Grade:	0.0%				n Trucks y Trucks		5.161 5.075			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten
Autos:	71.12			-7.05		-1.20		0.10	-6.0		-9.000
Medium Trucks:				-7.05		-1.20		0.08	-5.8		-8.800
Heavy Trucks:	83.02	-18.13		-7.04		-1.20		0.04	-5.4	00	-8.400
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					.	
VehicleType	Leq Peak Ho			Leq Eve		Leq	Night		Ldn		NEL
Autos:		5.9	64.0		62.3		56.2		64.8		65.4
Medium Trucks:		6.4	54.9		48.5		47.0		55.4		55.7
Heavy Trucks:	56	6.7	55.2		46.2		47.4		55.8	3	55.9
Vehicle Noise:	66	3.8	65.0		62.6		57.2	2	65.8	3	66.3
Mitigated Noise L	evels (with To	opo and barrie									
VehicleType	Leq Peak Ho			Leq Eve		Leq	Night		Ldn		NEL
Autos:		9.9	58.0		56.3		50.2		58.8		59.4
Medium Trucks:	50	0.6	49.1		42.7		41.2	2	49.6	;	49.9

Heavy Trucks:

Vehicle Noise:

51.3

60.9

40.8

56.6

42.0

51.3

50.4

59.9

50.5

60.4

49.8

Scenario: Backyard With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 1

Project Name: Rancho Diamante

SITE SPECIFIC INPU	T DATA	NOISE MODEL INPUTS							
Highway Data		Site Conditions (H	lard = 10, Sc	oft = 15)					
Average Daily Traffic (Adt): 21,1	00 vehicles		Autos:	15					
	10%	Medium Truci	ks (2 Axles):	15					
Peak Hour Volume: 2,1	10 vehicles	Heavy Trucks	s (3+ Axles):	15					
Vehicle Speed:	45 mph	Vehicle Mix							
Near/Far Lane Distance:	74 feet	VehicleType	Day	Evening	Night	Daily			
Site Data		Au	tos: 77.5%	12.9%	9.6%	97.42%			
Barrier Height:	0.0 feet	Medium Trud	cks: 84.8%	4.9%	10.3%	1.84%			
	0.0	Heavy Truc	cks: 86.5%	2.7%	10.8%	0.74%			
, , ,	3.0 feet	Noise Source Elev	rations (in fe	2et)					
Centerline Dist. to Observer: 16	3.0 feet		1,510.100	,,,,					
Barrier Distance to Observer: 1	0.0 feet	Medium Trucks:	•						
Observer Height (Above Pad):	5.0 feet			Grade Ad	iustmant:	0.0			
Pad Elevation: 1,50	9.3 feet	Heavy Trucks:	1,516.106	Grade Au	justin e nt.	0.0			
Road Elevation: 1,51	0.1 feet	Lane Equivalent D	istance (in f	feet)					
Barrier Elevation: 1,50	9.3 feet	Autos:	158.801						
Road Grade:	0.0%	Medium Trucks:	158.756						
		Heavy Trucks:	158.791						
FHWA Noise Model Calculations		-							

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
 Autos:	69.34	1.29	-7.63	-1.20	-1.10	0.000	0.000
Medium Trucks:	77.62	-15.95	-7.63	-1.20	-1.17	0.000	0.000
Heavy Trucks:	82.14	-19.90	-7.63	-1.20	-1.36	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	61.8	59.9	58.1	52.1	60.7	61.3					
Medium Trucks:	52.8	51.3	45.0	43.4	51.9	52.1					
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7					
Vehicle Noise:	62.8	61.0	58.5	53.2	61.8	62.3					

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.8	59.9	58.1	52.1	60.7	61.3
Medium Trucks:	52.8	51.3	45.0	43.4	51.9	52.1
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	62.8	61.0	58.5	53.2	61.8	62.3

Scenario: Backyard With Wall Road Name: Warren Rd. s/o Stetson Av.

Road Name: Warren Rd. s/o Stetson Av Lot No: 6 Job Number: 9792 Analyst: A. Wolfe

Project Name: Rancho Diamante

ons (Ha	Autos: (3+ Axles):	oft = 15) 15 15	S						
Trucks Trucks ype	Autos: s (2 Axles): (3+ Axles):	15 15							
Trucks ype	s (2 Axles): (3+ Axles):	15							
Trucks ype	(3+ Axles):								
уре		15							
	Day								
	Day		Vehicle Mix						
Auto		Evening	Night	Daily					
	os: 77.5%	12.9%	9.6%	97.42%					
m Truck	ks: 84.8%	4.9%	10.3%	1.84%					
y Trucl	ks: 86.5%	2.7%	10.8%	0.74%					
e Eleva	ations (in fe	eet)							
Autos: 1,511.100									
	1,513.397								
	1,519.106	Grade Adj	iustment:	0.0					
lent Di	istance (in	feet)							
	•								
	60.014								
ucks:									
	utos: ucks:	utos: 60.237	ucks: 60.014	utos: 60.237 ucks: 60.014					

FHWA Noi	se Model	Calcula	ations
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VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-1.32	-1.20	0.28	-7.360	-10.360
Medium Trucks:	77.62	-15.95	-1.29	-1.20	0.20	-6.800	-9.800
Heavy Trucks:	82.14	-19.90	-1.28	-1.20	0.07	-5.700	-8.700

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	68.1	66.2	64.5	58.4	67.0	67.6					
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.5					
Heavy Trucks:	59.8	58.3	49.3	50.5	58.9	59.0					
Vehicle Noise:	69.2	67.4	64.8	59.5	68.1	68.6					

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	60.8	58.9	57.1	51.0	59.7	60.3					
Medium Trucks:	52.4	50.9	44.5	43.0	51.4	51.7					
Heavy Trucks:	54.1	52.6	43.6	44.8	53.2	53.3					
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5					

Project Name: Rancho Diamante

Scenario: Backyard With Wall

Road Name: Warren Rd. s/o Stetson Av. Job Number: 9792 Lot No: 14 Analyst: A. Wolfe

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS						
Highway Data		Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	10% 2,110 vehicles 45 mph	Medium Trucks Heavy Trucks Vehicle Mix	•					
Near/Far Lane Distance:	74 feet	VehicleType	Day	Evening	Night	Daily		
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	72.0 feet 10.0 feet 5.0 feet	Medium Trucks: ' Heavy Trucks: '	ks: 84.8% ks: 86.5% ations (in fe 1,512.700 1,514.997 1,520.706	4.9% 2.7% eet) Grade Adj	10.3% 10.8%	97.42% 1.84% 0.74%		
Road Elevation:	1,512.7 feet	Lane Equivalent Di	stance (in	feet)				
Barrier Elevation: Road Grade:	1,512.7 feet 0.0%	Autos: Medium Trucks: Heavy Trucks:	60.394 60.171 60.074					

FHWA I	Noise	Model	Calcu	ılations
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VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-1.33	-1.20	0.47	-8.350	-11.350
Medium Trucks:	77.62	-15.95	-1.31	-1.20	0.37	-7.850	-10.850
Heavy Trucks:	82.14	-19.90	-1.30	-1.20	0.18	-6.640	-9.640

Unmitigated Nois	e Levels (withou	t Topo and barr	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.4
Heavy Trucks:	59.7	58.3	49.3	50.5	58.9	59.0
Vehicle Noise:	69.2	67.4	64.8	59.5	68.1	68.6

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	51.3	49.8	43.4	41.9	50.4	50.6
Heavy Trucks:	53.1	51.7	42.6	43.9	52.2	52.4
Vehicle Noise:	61.1	59.3	56.5	51.5	60.0	60.5

Scenario: Backyard With Wall
Road Name: Warren Rd. s/o Stetson Av.

oad Name: Warren Rd. s/o Stetson A Lot No: 48 Job Number: 9792 Analyst: A. Wolfe

Project Name: Rancho Diamante

SITE SPECIFIC INPUT	Γ DATA		N	OISE MODE	L INPUTS	NOISE MODEL INPUTS					
Highway Data		S	ite Conditions (<i>Hard</i> = 10, S	oft = 15)						
Average Daily Traffic (Adt): 21,10	0 vehicles	3		Autos	15						
Peak Hour Percentage: 1	0%		Medium Tru	cks (2 Axles).	15						
Peak Hour Volume: 2,11	0 vehicles	;	Heavy Truc	ks (3+ Axles)	15						
Vehicle Speed:	5 mph	V	Vehicle Mix								
Near/Far Lane Distance:	4 feet		VehicleType	Day	Evening	Night	Daily				
Site Data			A	utos: 77.5%	6 12.9%	9.6%	97.42%				
Barrier Height:	6.0 feet		Medium Tr	ucks: 84.8%	6 4.9%	10.3%	1.84%				
•	0.0		Heavy Tr	ucks: 86.5%	6 2.7%	10.8%	0.74%				
Centerline Dist. to Barrier: 64	4.0 feet	A	oise Source Ele	evations (in t	eet)						
Centerline Dist. to Observer: 74				: 1,510.200	<i></i>						
Barrier Distance to Observer: 10.0 feet			Medium Trucks	*							
Observer Height (Above Pad):	5.0 feet		Heavy Trucks		Grade Adju	ıstment					
Pad Elevation: 1,500	3.9 feet		rieavy rrucks	. 1,516.200	Orado Adjo	istiriorit.	0.0				
Road Elevation: 1,510	0.2 feet	L	Lane Equivalent Distance (in feet)								
Barrier Elevation: 1,510	0.2 feet		Autos	: 63.450							
Road Grade:	0.0%		Medium Trucks	: 63.237							
			Heavy Trucks	63.144							
FHWA Noise Model Calculations											
VehicleType REMEL Tra	ffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten				
Autos: 69.34	1.29	-1.66	-1.20	1.12	-10.54	10	-13.540				
Medium Trucks: 77.62	-15.95	-1.63	-1.20	0.97	-10.2	10	-13.210				
Heavy Trucks: 82.14	-19.90	-1.62	-1.20	0.63	-9.09	90	-12.090				

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Day Leq Evening		Ldn	CNEL							
Autos:	67.8	65.9	64.1	58.1	66.7	67.3							
Medium Trucks:	58.8	57.3	51.0	49.4	57.9	58.1							
Heavy Trucks:	59.4	58.0	49.0	50.2	58.6	58.7							
Vehicle Noise:	68.8	67.0	64.4	59.2	67.8	68.3							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	57.2	55.3	53.6	47.5	56.1	56.7						
Medium Trucks:	48.6	47.1	40.8	39.2	47.7	47.9						
Heavy Trucks:	50.3	48.9	39.9	41.1	49.5	49.6						
Vehicle Noise:	58.5	56.7	54.0	48.9	57.5	58.0						

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Warren Rd. s/o Mustang Wy.

Lot No: 620

Job Number: 9792

Analyst: A. Wolfe

SITE S	PECIFIC IN	IPUT DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Highway Data			S								
Average Daily T	raffic (Adt):	20,000 vehicles			Autos:	15					
Peak Hour F	Percentage:	10%		Medium Trud	cks (2 Axles):	15					
Peak Ho	our Volume:	2,000 vehicles		Heavy Truck	(s (3+ Axles):	15					
Veh	40 mph	V	ehicle Mix								
Near/Far Lan	74 feet		VehicleType	Day	Evening	Night	Daily				
Site Data					utos: 77.5%	J		97.42%			
Rarı	rier Height:	6.0 feet		Medium Tru	icks: 84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0							
Centerline Dis	,	58.0 feet	A.	oico Souroo Elo	votions (in f	204)					
Centerline Dist. to	o Observer:	68.0 feet	14	oise Source Ele		eer)					
Barrier Distance to	o Observer:	10.0 feet			1,507.200						
Observer Height (A	Above Pad):	5.0 feet		Medium Trucks:	ŕ	Grade Adju	etmont:	. 0 0			
• ,	d Elevation:	1,507.3 feet		Heavy Trucks:	1,515.206	Grade Adju	Sunen.	0.0			
Road	d Elevation:	1,507.2 feet	Li	Lane Equivalent Distance (in feet)							
Barrie	er Elevation:	1,507.3 feet		Autos:	55.130						
R	Road Grade:	0.0%		Medium Trucks:	54.877						
				Heavy Trucks:	54.756						
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten			
Autos:	67.36	1.57	-0.74	-1.20	0.17	-6.56	0	-9.560			
Medium Trucks:	76.31	-15.67	-0.71	-1.20	0.11	-6.08	30	-9.080			
Heavy Trucks:	81.16	-19.62	-0.70	-1.20	0.02	-5.20	00	-8.200			

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day Leq Evening		Leq Night	Ldn	CNEL							
Autos:	67.0	65.1	63.3	57.3	65.9	66.5							
Medium Trucks:	58.7	57.2	50.9	49.3	57.8	58.0							
Heavy Trucks:	59.6	58.2	49.2	50.4	58.8	58.9							
Vehicle Noise:	68.2	66.5	63.7	58.6	67.2	67.7							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	60.4	58.5	56.8	50.7	59.3	59.9						
Medium Trucks:	52.7	51.1	44.8	43.2	51.7	51.9						
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7						
Vehicle Noise:	61.9	60.2	57.2	52.4	60.9	61.4						

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 214

Job Number: 9792

Analyst: A. Wolfe

Lot No. 214 Analyst. A. Wolle											
SITE S Highway Data	PECIFIC IN	IPUT DATA	S	Neite Conditions (OISE MODE <i>Hard</i> = 10. Se		;				
Average Daily Ti	raffic (Adt):	14 200 vehicles		ne conditions (Autos:						
Peak Hour P	. ,	10%	'	Medium Trucks (2 Axles): 15							
	ur Volume:	1,420 vehicles			ks (3+ <i>Axles):</i>						
	cle Speed:	40 mph			NO (01 71X/00).	10					
Near/Far Lane	•	36 feet	ν	ehicle Mix							
Neal/Fal Laile	e Distance.	30 1661		VehicleType	Day	Evening	Night	Daily			
Site Data				Α	utos: 77.5%	12.9%	9.6%	97.42%			
Barri	ier Height:	0.0 feet		Medium Tr	ucks: 84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-Wa	_	0.0		Heavy Tr	ucks: 86.5%	2.7%	10.8%	0.74%			
Centerline Dist.	65.0 feet	٨	Noise Source Elevations (in feet)								
Centerline Dist. to Observer:		75.0 feet			: 1,502.300						
Barrier Distance to	Observer:	10.0 feet		Medium Trucks	•						
Observer Height (A	bove Pad):	5.0 feet			•	Grado Adii	ictmont:				
Pad	l Elevation:	1,503.2 feet		Heavy Trucks: 1,510.306 Grade Adjustmen				0.0			
Road	l Elevation:	1,502.3 feet	L	Lane Equivalent Distance (in feet)							
		1,503.2 feet		Autos	: 73.047						
Ro	oad Grade:	0.0%		Medium Trucks	: 72.897						
				Heavy Trucks	72.838						
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten			
Autos:	67.36	0.08	-2.57	-1.20	-0.93	0.0	00	0.000			
Medium Trucks:	76.31	-17.15	-2.56	-1.20	-1.08	0.0	00	0.000			
Heavy Trucks:	81.16	-21.11	-2.55	-1.20	-1.50	0.00	00	0.000			

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Day Leq Evening		Ldn	CNEL							
Autos:	63.7	61.8	60.0	54.0	62.6	63.2							
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7							
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6							
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	63.7	61.8	60.0	54.0	62.6	63.2						
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7						
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6						
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4						

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 232

Job Number: 9792

Analyst: A. Wolfe

						,			
SITE	SPECIFIC INF	PUT DATA			NO	ISE MODI	EL INPUT	S	
Highway Data				Site Con	nditions (H	lard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 14	4,200 vehicles	3			Autos	: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles)	: 15		
Peak H	lour Volume:	1,420 vehicles	6	He	avy Trucks	s (3+ Axles)	: 15		
Ve	hicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ne Distance:	36 feet			icleType	Day	Evening	Night	Daily
Site Data					Au	tos: 77.5°		9.6%	97.42%
Ra	rrier Height:	0.0 feet		М	edium Trud	cks: 84.89	% 4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0		1	Heavy Trud	cks: 86.5°	% 2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	65.0 feet		Noise S	ource Flev	ations (in t	feet)		
Centerline Dist.	to Observer:	75.0 feet		710/30 0		1,504.600	(00)		
Barrier Distance	to Observer:	10.0 feet		Modiu		1,506.897			
Observer Height	(Above Pad):	5.0 feet					Grade Ad	liustmont	
P	ad Elevation: 1	,504.3 feet		пеач	y Trucks.	1,512.606	Orace Au	justinent	0.0
Ro	ad Elevation: 1	,504.6 feet		Lane Eq	uivalent D	istance (in	feet)		
Barr	ier Elevation: 1	,504.3 feet			Autos:	72.960			
	Road Grade:	0.0%		Mediu	m Trucks:	72.848			
				Heav	y Trucks:	72.883			
FHWA Noise Mod	el Calculations								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	67.36	0.08	-2	.57	-1.20	-1.01	0.0	000	0.000
Medium Trucks:	76.31	-17.15	-2	.56	-1.20	-1.17	0.0	000	0.000
Heavy Trucks:	81.16	-21.11	-2	.56	-1.20	-1.60	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and I	barrier att	enuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq Ni	ght	Ldn	CI	VEL
Autos:	63.7	7 6	31.8	60 O	•	54.0	62.6	2	63.2

Unmitigated Nois	e Levels (withou	t Topo and barr	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	63.7	61.8	60.0	54.0	62.6	63.2						
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7						
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6						
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4						

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Mustang Wy. w/o Warren rd. Job Number: 9792
Lot No: 85
Analyst: A. Wolfe

LOT	VO. 85					Al	iaiyst. F	A. VVOI	iie		
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE	L INPUTS	,	
Highway Data				3	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	5,000 vehicles	s				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	500 vehicles	s		He	avy Truci	ks (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		1	/ehicle l	Mix					
Near/Far La	ne Distance:	36 feet				icleType		Day	Evening	Night	Daily
Site Data								77.5%	_	9.6%	
Ra	rrier Height:	0.0 feet			М	edium Tru	ucks:	84.8%		10.3%	1.84%
Barrier Type (0-W	_	0.0			ŀ	Heavy Tru	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		59.0 feet		_							
Centerline Dist.		69.0 feet		^	Voise So	ource Ele		•	eet)		
Barrier Distance		10.0 feet					: 1,504				
Observer Height		5.0 feet				m Trucks.	•				
•	ad Elevation:				Heav	y Trucks.	: 1,512	.606	Grade Adj	ustment:	0.0
Road Elevation: 1,504.6 feet					ane Ea	uivalent	Distand	e (in	feet)		
	ier Elevation:	•				Autos.		.899	,		
	Road Grade:	0.0%			Mediui	m Trucks.		.725			
					Heav	y Trucks.	: 66	.635			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	67.36	-4.45		-2.00)	-1.20		-0.89	0.0	00	0.000
Medium Trucks:	76.31			-1.98	3	-1.20		-1.06	0.0	00	0.000
Heavy Trucks:	81.16	-25.64		-1.97	,	-1.20		-1.51	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	,	Leq Ev	rening	Leq ∧	light		Ldn	CI	VEL
Autos:	59	9.7	57.8		56.0		50.0		58.6		59.2
Medium Trucks:	51	1.4	49.9		43.6		42.0		50.5	'	50.7
Heavy Trucks:	52	2.3	50.9		41.9		43.1		51.5		51.0
Vehicle Noise:	6′	1.0	59.2		56.4		51.3		59.9		60.4
Mitigated Noise L	evels (with To	ppo and barrie	r atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	, T	Leq Ev	rening	Leq N	light		Ldn	CI	VEL

	Mitigated Noise L	eveis (with Topo					
VehicleType		Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
	Autos:	59.7	57.8	56.0	50.0	58.6	59.2
	Medium Trucks:	51.4	49.9	43.6	42.0	50.5	50.7
	Heavy Trucks:	52.3	50.9	41.9	43.1	51.5	51.6
	Vehicle Noise:	61.0	59.2	56.4	51.3	59.9	60.4

Scenario: Backyard With Wall Project Name: Rancho Diamante

Road Name: Mustang Wy. w/o Warren rd.

Lot No: 606

Job Number: 9792

Analyst: A. Wolfe

Lot i	vo. 000		Analysi. A. Wolle								
SITE		NOISE MODEL INPUTS									
Highway Data				S	ite Cor	nditions (Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: Hour Volume:	5,000 vehicle 10% 500 vehicle				edium Tru eavy Truc	cks (2 A	,	15 15 15		
Near/Far La	ehicle Speed: ane Distance:	40 mph 36 feet		V	/ehicle Veh	nicleType		Day	Evening	Night	Daily
Site Data								77.5%		9.6%	
Ba Barrier Type (0-V	rrier Height: Vall, 1-Berm):	0.0 feet 0.0				ledium Tr Heavy Tr		84.8% 86.5%		10.3% 10.8%	
Centerline D	ist. to Barrier:	64.0 feet		٨	loise S	ource Ele	evations	s (in fe	eet)		
Centerline Dist. to Observer: 74.0 feet Barrier Distance to Observer: 10.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 1,506.7 feet					Mediu		: 1,504 : 1,506	.600 .897	, Grade Adj	iustment	: 0.0
Ro	Pad Elevation: 1,506.7 feet Road Elevation: 1,504.6 feet					uivalent		•	feet)		
	ier Elevation: Road Grade:	0.0%				Autos m Trucks yy Trucks	: 71	.128 .938 .783			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	67.36	-4.45		-2.49		-1.20		-0.86	0.0	000	0.000
Medium Trucks:	76.31	-21.69)	-2.47		-1.20		-1.00	0.0	000	0.000
Heavy Trucks:	81.16	-25.64	•	-2.46		-1.20		-1.42	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	У	Leq Ev	ening	Leq I	Vight		Ldn	CI	NEL
Autos:	59	9.2	57.3		55.6		49.5		58.1		58.7
Medium Trucks:	51	1.0	49.4		43.1		41.5		50.0)	50.2
Heavy Trucks:	51	1.9	50.4		41.4		42.6		51.0)	51.1
Vehicle Noise:	60).5	58.7		55.9		50.9		59.4	ļ <u> </u>	59.9
Mitigated Noise L	•	-				T		T		1	
VehicleType	Leg Peak Ho	ur Leg Da	У	Leg Ev	ening	Leq I	Vight		Ldn	CI	NEL

	Witigated Noise L	eveis (with Topo					
VehicleType		Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
	Autos:	59.2	57.3	55.6	49.5	58.1	58.7
	Medium Trucks:	51.0	49.4	43.1	41.5	50.0	50.2
	Heavy Trucks:	51.9	50.4	41.4	42.6	51.0	51.1
	Vehicle Noise:	60.5	58.7	55.9	50.9	59.4	59.9

Scenario: First Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 318

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS								
Highway Data		Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):	40,200 vehicles	Autos: 15								
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15								
Peak Hour Volume:	4,020 vehicles	Heavy Trucks (3+ Axles): 15								
Vehicle Speed:	50 mph	Vehicle Mix								
Near/Far Lane Distance:	74 feet	VehicleType Day Evening Night Daily								
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%								
Barrier Height:	6.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%								
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%								
Centerline Dist. to Barrier:	108.0 feet	Noise Source Elevations (in feet)								
Centerline Dist. to Observer:	128.0 feet	Autos: 1,499.200								
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,501.497								
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1,507.206 Grade Adjustment: 0.0								
Pad Elevation:	1,499.9 feet	, , , , , , , , , , , , , , , , , , , ,								
Road Elevation:	1,499.2 feet	Lane Equivalent Distance (in feet)								
Barrier Elevation:	1,499.9 feet	Autos: 121.710								
Road Grade:	0.0%	Medium Trucks: 121.585								
		Heavy Trucks: 121.498								
FHWA Noise Model Calculation	ns									

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-5.90	-1.20	0.10	-6.000	-9.000
Medium Trucks:	78.79	-13.60	-5.89	-1.20	0.07	-5.700	-8.700
Heavy Trucks:	83.02	-17.56	-5.89	-1.20	0.01	-5.100	-8.100

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	67.7	65.8	64.0	57.9	66.6	67.2						
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4						
Heavy Trucks:	58.4	57.0	47.9	49.2	57.5	57.6						
Vehicle Noise:	68.5	66.7	64.3	58.9	67.5	68.0						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	61.7	59.8	58.0	51.9	60.6	61.2							
Medium Trucks:	52.4	50.9	44.5	43.0	51.4	51.7							
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.5							
Vehicle Noise:	62.7	60.9	58.3	53.0	61.6	62.1							

Scenario: First Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 324

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA		NOISE MODEL INPUTS								
Highway Data			Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):	40,200 vehicles	s			Autos:	15					
Peak Hour Percentage:	10%		Medium Tr	ucks (2	Axles):	15					
Peak Hour Volume:	4,020 vehicles	s	Heavy Tru								
Vehicle Speed:	50 mph	50 mph Vehicle Mix									
Near/Far Lane Distance:	74 feet		VehicleType Day		Evening	Night	Daily				
Site Data				Autos:	77.5%	12.9%	9.6%	97.42%			
Barrier Height:	6.0 feet		Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm):			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Barrier:	114.0 feet	.0 feet Noise Source Elevations (in feet)									
Centerline Dist. to Observer:	134.0 feet			s: 1,49	•	,					
Barrier Distance to Observer:	20.0 feet		Medium Truck	•							
Observer Height (Above Pad):	5.0 feet		Heavy Truck			Grade Adj	ustment:	0.0			
Pad Elevation:	1,501.9 feet										
Road Elevation:	1,498.7 feet	1	Lane Equivalen	t Dista	nce (in t	feet)					
Barrier Elevation:	1,501.9 feet		Auto	s: 12	28.245						
Road Grade:	0.0%		Medium Truck	rs: 12	28.074						
			Heavy Truck	rs: 12	27.860						
FHWA Noise Model Calculation	ns										
VehicleTyne REMEI	Traffic Flow	Distance	Finite Road	Free	snel	Rarrier Atte	en Ber	m Δtten			

Vehicle	Туре	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
	Autos:	71.12	3.63	-6.24	-1.20	0.14	-6.320	-9.320
Medium	Trucks:	78.79	-13.60	-6.23	-1.20	0.10	-6.000	-9.000
Heavy	Trucks:	83.02	-17.56	-6.22	-1.20	0.03	-5.300	-8.300

Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	67.3	65.4	63.6	57.6	66.2	66.8						
Medium Trucks:	57.8	56.3	49.9	48.3	56.8	57.0						
Heavy Trucks:	58.0	56.6	47.6	48.8	57.2	57.3						
Vehicle Noise:	68.2	66.4	63.9	58.6	67.1	67.7						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	61.0	59.1	57.3	51.3	59.9	60.5							
Medium Trucks:	51.8	50.3	43.9	42.3	50.8	51.0							
Heavy Trucks:	52.7	51.3	42.3	43.5	51.9	52.0							
Vehicle Noise:	62.0	60.2	57.6	52.4	61.0	61.5							

Scenario: First Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 241

Project Name: Rancho Diamante

SITE SPECIFIC I Highway Data	NPUT DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):				•	Autos:	15				
Peak Hour Percentage:	10%		Medium Ti	•						
Peak Hour Volume:	.,	S	Heavy Tru							
Vehicle Speed:	50 mph		Vehicle Mix							
Near/Far Lane Distance:	74 feet		VehicleTyp	е	Day	Evening	Night	Daily		
Site Data				Autos:	77.5%	12.9%	9.6%	97.42%		
Barrier Height:	0.0 feet		Medium 7	Trucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%		
Centerline Dist. to Barrier:	194.0 feet		Noise Source E	levatio	ns (in fe	eet)				
Centerline Dist. to Observer:			Autos: 1,502.660							
Barrier Distance to Observer:	20.0 feet		Medium Truck							
Observer Height (Above Pad):	5.0 feet		Heavy Truck			Grade Adj	ustment: 0.0			
Pad Elevation:	•			4 Di-4-		f4)				
Road Elevation:	•		Lane Equivalen		•	reet)				
	1,501.9 feet		Auto		0.820					
Road Grade:	0.0%		Medium Truck		0.786					
			Heavy Truck	rs: 21	0.811					
FHWA Noise Model Calculatio	ns									
VehicleType RFMFI	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Atte	en Ber	m Atten		

FHWA Noise Model Calculation	S
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VehicleType REMEL		Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-9.48	-1.20	-0.56	0.000	0.000
Medium Trucks:	78.79	-13.60	-9.48	-1.20	-0.62	0.000	0.000
Heavy Trucks:	83.02	-17.56	-9.48	-1.20	-0.76	0.000	0.000

Unmitigated Noise	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	64.1	62.2	60.4	54.4	63.0	63.6						
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8						
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1						
Vehicle Noise:	65.0	63.2	60.7	55.3	63.9	64.4						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	64.1	62.2	60.4	54.4	63.0	63.6						
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8						
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1						
Vehicle Noise:	65.0	63.2	60.7	55.3	63.9	64.4						

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 211

Job Number: 9792

Analyst: A. Wolfe

2017		7 mary 50. 7 % 17 511 5								
SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS						
Highway Data				Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	35,300 vehicle	S				Autos:	15		
Peak Hour	Percentage:	10%		Ме	edium Tr	rucks (2 A	Axles):	15		
Peak H	lour Volume:	3,530 vehicle	s	He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	74 feet			icleType	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	_	9.6%	
Rai	rrier Height:	6.0 feet		M	ledium 7		84.8%		10.3%	1.84%
Barrier Type (0-W	•	0.0			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	•	140.0 feet		M-1- 0	·		- (* f	4)		
Centerline Dist.		160.0 feet		Noise S				eet)		
Barrier Distance	to Observer:	20.0 feet		A 4 1'		s: 1,502				
Observer Height (Above Pad):	5.0 feet				s: 1,504		Grada Adii	ictmont	
- ,	•	1,502.4 feet		Hea	vy Truck	ks: 1,510).706	Grade Adjı	ısımem.	0.0
Roa	ad Elevation:	1,502.7 feet		Lane Eq	uivalen	t Distan	ce (in i	feet)		
Barri	er Elevation:	1,502.4 feet			Auto	s: 155	5.167			
I	Road Grade:	0.0%		Mediu	m Truck	rs: 155	5.090			
				Hea	vy Truck	ks: 155	5.067			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten
Autos:	71.12	3.07	-7.	48	-1.20		0.07	-5.70	00	-8.700
Medium Trucks:	78.79	-14.17	-7 .	48	-1.20		0.05	-5.50	00	-8.500
Heavy Trucks:	83.02	-18.13	-7.	48	-1.20		0.01	-5.10	00	-8.100
Unmitigated Noise	e Levels (with	out Topo and	barrier atte	nuation)						
VehicleType	Leq Peak Hou	, ,	•	Evening	•	Night		Ldn		VEL
Autos:	65		63.6	61.8		55.8		64.4		65.0
Medium Trucks:	55		54.4	48.1		46.5		55.0		55.2
Heavy Trucks:	56		54.8	45.8		47.0		55.4		55.
Vehicle Noise:	66	.4	64.6	62.1		56.8	3	65.3		65.9
Mitigated Noise Le	•	·	1	on)						
VehicleType	Leq Peak Hou		•	Evening		Night		Ldn	CI	VEL
Autos:	59	.8	57.9	56.1		50.1		58.7		59.3

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

50.4

51.1

60.8

42.6

40.7

56.4

41.0

41.9

51.1

49.5

50.3

59.7

49.7

50.4 60.2

48.9

49.7

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 150

Job Number: 9792

Analyst: A. Wolfe

SITE SPECIFIC I	NPUT DATA			NOISE M	ODE	L INPUTS	<u> </u>		
Highway Data			Site Conditions	s (Hard = 1	10, Sc	oft = 15)			
Average Daily Traffic (Adt):	35,300 vehicles	3		Α	utos:	15			
Peak Hour Percentage:	10%		Medium Trucks (2 Axles): 15						
Peak Hour Volume:	3,530 vehicles	S	Heavy Tru	icks (3+ A	xles):	15			
Vehicle Speed:	50 mph		Vehicle Mix						
Near/Far Lane Distance:	74 feet	-	VehicleTyp	e L	Day	Evening	Night	Daily	
Site Data					77.5%		9.6%		
Barrier Height:	6.0 feet		Medium	Trucks: 8	34.8%	4.9%	10.3%	1.84%	
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy	Trucks: 8	36.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Barrier:	149.0 feet		Noise Source E	levations	(in fe	20t)			
Centerline Dist. to Observer:	169.0 feet			os: 1,503.	•				
Barrier Distance to Observer:	20.0 feet		Medium Truci	•					
Observer Height (Above Pad):	5.0 feet		Heavy Truci	,		Grade Adju	istment	. 0.0	
Pad Elevation:	1,503.8 feet		Tieavy Truci	13. 1,011.	700	Orado riaja	ioti i ioti it.	0.0	
Road Elevation:	1,503.7 feet		Lane Equivalent Distance (in feet)						
Barrier Elevation:	1,503.8 feet		Auto	os: 164.	487				
Road Grade:	0.0%		Medium Truci	ks: 164.	408				
			Heavy Truci	ks: 164.	371				
FHWA Noise Model Calculation	ns								
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresne	el	Barrier Atte	n Ber	m Atten	
Autos: 71.1	2 3.07	-7.8	-1.20	I	0.07	-5.70	00	-8.700	
Medium Trucks: 78.7	9 -14.17	-7.8	6 -1.20		0.05	-5.50	00	-8.500	
Heavy Trucks: 83.0	2 -18.13	-7.8	-1.20		0.01	-5.10	00	-8.100	
Unmitigated Noise Levels (wit	hout Topo and	barrier attei	nuation)						

Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	65.1	63.2	61.5	55.4	64.0	64.6						
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.8						
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1						
Vehicle Noise:	66.0	64.2	61.7	56.4	65.0	65.5						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	59.4	57.5	55.8	49.7	58.3	58.9						
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.3						
Heavy Trucks:	50.7	49.3	40.3	41.5	49.9	50.0						
Vehicle Noise:	60.4	58.6	56.1	50.8	59.3	59.9						

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 140

Job Number: 9792

Analyst: A. Wolfe

2017	10. 140			Analyst. A. Wolle								
SITE	SPECIFIC INP	UT DATA			NC	NOISE MODEL INPUTS						
Highway Data				Site Con	ditions (F	Hard = 10, S	oft = 15)					
Average Daily	Traffic (Adt): 35	,300 vehicles				Autos	15					
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles).	15					
Peak H	lour Volume: 3	,530 vehicles		He	avy Truck	s (3+ Axles)	15					
Ve	hicle Speed:	50 mph		Vehicle	Mix							
Near/Far La	ne Distance:	74 feet			icleType	Day	Evening	Night	Daily			
Site Data						itos: 77.5%	_	_	97.42%			
Rai	rrier Height:	6.0 feet		М	edium Tru	cks: 84.8%	6 4.9%	10.3%	1.84%			
Barrier Type (0-W	•	0.0		1	Heavy Tru	cks: 86.5%	6 2.7%	10.8%	0.74%			
Centerline Dis	•	140.0 feet		M-' 0			(4)					
Centerline Dist.		160.0 feet		Noise So		vations (in f	eet)					
Barrier Distance		20.0 feet				1,503.100						
Observer Height ((Above Pad):	5.0 feet				1,505.397	O A!	(. 0 0			
• ,	ad Elevation: 1,			Heav	y Trucks:	1,511.106	Grade Adji	ustment:	0.0			
	ad Elevation: 1,			Lane Eq	uivalent L	Distance (in	feet)					
Barrier Elevation: 1,504.3 feet					Autos:	155.239						
Road Grade: 0.0%				Mediu	m Trucks:	155.136						
				Heav	y Trucks:	155.050						
FHWA Noise Mode	ol Coloulations											
VehicleType		Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten			
Autos:	71.12	3.07	-7 .4		-1.20	0.09	-5.9		-8.900			
Medium Trucks:		-14.17	-7.4		-1.20	0.06	-5.6		-8.600			
Heavy Trucks:		-18.13	-7.4		-1.20	0.02	-5.2		-8.200			
Unmitigated Noise	e Levels (withou	ut Topo and ba	rrier attei	nuation)								
VehicleType	Leq Peak Hour	Leq Day		vening	Leq N	ight	Ldn	CI	VEL			
Autos:	65.5	63.	6	61.8		55.8	64.4		65.0			
Medium Trucks:	55.9	54.	4	48.1		46.5	55.0		55.2			
Heavy Trucks:	56.2	54.	8	45.8		47.0	55.4		55.5			
Vehicle Noise:	66.4	64.	6	62.1		56.8	65.3		65.9			
Mitigated Noise Le	evels (with Tope	o and barrier at	tenuation	n)								
VehicleType	Leq Peak Hour	Leq Day		vening	Leq N	ight	Ldn	CI	VEL			
Autos:	59.6	57.	7	55.9		49.9	58.5		59.1			
Medium Trucks:	50.3			42.5		40.9	49.4		49.6			
Heavy Trucks:	51.0	49.	6	40.6		41.8	50.2		50.3			

Vehicle Noise:

60.6

56.3

51.0

59.5

60.1

Scenario: First Floor With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 1

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS							
Highway Data		Site Conditions (Ha	rd = 10, So	oft = 15)					
Average Daily Traffic (Adt):	21,100 vehicles		Autos:	15					
Peak Hour Percentage:	10%	Medium Trucks	(2 Axles):	15					
Peak Hour Volume:	2,110 vehicles	Heavy Trucks ((3+ <i>Axles</i>):	15					
Vehicle Speed:	45 mph	Vehicle Mix							
Near/Far Lane Distance:	74 feet	VehicleType	Day	Evening	Night	Daily			
Site Data		Auto	s: 77.5%	12.9%	9.6%	97.42%			
Barrier Height:	0.0 feet	Medium Truck	s: 84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Truck	s: 86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Barrier:	153.0 feet	Noise Source Eleva	tions (in fe	eet)					
Centerline Dist. to Observer:	173.0 feet	Autos: 1							
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1	•						
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1		Grade Adj	ustment:	0.0			
Pad Elevation:	1,509.3 feet		<u> </u>						
Road Elevation:	1,510.1 feet	Lane Equivalent Dis	stance (in f	eet)					
Barrier Elevation:	1,509.3 feet	Autos:	169.049						
Road Grade:	0.0%	Medium Trucks:	169.008						
		Heavy Trucks:	169.040						
FHWA Noise Model Calculation	ns								

	VehicleType REMEL		Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:		69.34	1.29	-8.04	-1.20	-0.55	0.000	0.000
	Medium Trucks:	77.62	-15.95	-8.04	-1.20	-0.62	0.000	0.000
	Heavy Trucks:	82.14	-19.90	-8.04	-1.20	-0.81	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	61.4	59.5	57.7	51.7	60.3	60.9						
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7						
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3						
Vehicle Noise:	62.4	60.6	58.1	52.8	61.4	61.9						

Mitigated Noise Levels (with Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.1	52.8	61.4	61.9

Scenario: First Floor With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 6

Project Name: Rancho Diamante

SITE SPECIFIC I Highway Data	NPUT DATA		I Site Conditions			L INPUTS	5	
Average Daily Traffic (Adt):	21 100 vehicle		Site Conditions	(паги	= 10, 30 Autos:	15		
Peak Hour Percentage:	10%		Medium Ti	rucks (2		15		
Peak Hour Volume:		s	Heavy Tru	•	,			
Vehicle Speed: Near/Far Lane Distance:	*		Vehicle Mix					
iveai/i ai Lane Distance.	74 1661		VehicleTyp	e	Day	Evening	Night	Daily
Site Data				Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Height:	6.0 feet		Medium T	Trucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):			Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	82.0 feet 20.0 feet		Medium Truck	os: 1,51 ks: 1,51	1.100	•		0.0
Pad Elevation:	1,510.5 feet		Heavy Truck Lane Equivale n			Grade Adj	ustment:	0.0
Road Elevation: Barrier Elevation:	*		Auto	os: 7	0.174	eer)		
Road Grade:	0.0%		Medium Truck Heavy Truck		69.951 69.854			
FHWA Noise Model Calculation	ns	-						
VehicleType RFMFI	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Atte	en Ber	m Atten

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.31	-1.20	0.23	-7.010	-10.010
Medium Trucks:	77.62	-15.95	-2.29	-1.20	0.14	-6.320	-9.320
Heavy Trucks:	82.14	-19.90	-2.28	-1.20	0.02	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	67.1	65.2	63.5	57.4	66.0	66.6					
Medium Trucks:	58.2	56.7	50.3	48.8	57.2	57.5					
Heavy Trucks:	58.8	57.3	48.3	49.5	57.9	58.0					
Vehicle Noise:	68.2	66.4	63.8	58.5	67.1	67.6					

Mitigated Noise Levels (with Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	60.1	58.2	56.4	50.4	59.0	59.6				
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.1				
Heavy Trucks:	53.6	52.1	43.1	44.3	52.7	52.8				
Vehicle Noise:	61.5	59.7	56.9	51.9	60.4	60.9				

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Warren Rd. s/o Stetson Av. Job Number: 9792
Lot No: 14 Job Number: 9792
Analyst: A. Wolfe

Lot ∧	lo: 14				An	alyst: F	A. Wol	fe		
SITE	SPECIFIC IN	PUT DATA			NC	ISE M	IODE	L INPUT	<u></u> S	
Highway Data				Site Con	nditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	1,100 vehicles				A	lutos:	15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	2,110 vehicles		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Vehicle i	Mix					
Near/Far La	ne Distance:	74 feet			icleType		Day	Evening	Night	Daily
Site Data							77.5%		9.6%	-
Ra	rrier Height:	6.0 feet		М	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0		I	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	,	62.0 feet	-	Noise C	ourse Fla	rotions	/in fa	2041		
Centerline Dist.	to Observer:	82.0 feet		Noise S	ource Ele			et)		
Barrier Distance	to Observer:	20.0 feet		N 4 12	Autos:					
Observer Height ((Above Pad):	5.0 feet			m Trucks:			Crada Ad		
•	ad Elevation: 1			Heav	y Trucks:	1,520	.706	Grade Adj	ustment	. 0.0
Roa	ad Elevation: 1	,512.7 feet		Lane Eq	uivalent L	Distanc	e (in i	feet)		
Barr	ier Elevation: 1	,512.7 feet			Autos:	70.	.253			
	Road Grade:	0.0%		Mediu	m Trucks:	70.	.030			
				Heav	y Trucks:	69.	.933			
FHWA Noise Mod	el Calculations	;								
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	rm Atten
Autos:	69.34	1.29	-2.3	2	-1.20		0.35	-7.7	'50	-10.750
Medium Trucks:	77.62	-15.95	-2.3	0	-1.20		0.24	-7.0)80	-10.080
Heavy Trucks:	82.14	-19.90	-2.2	9	-1.20		0.06	-5.6	300	-8.600
Unmitigated Noise	e Levels (witho	out Topo and bar	rier atter	uation)						
VehicleType	Leq Peak Hou		-	vening	Leq N	ight		Ldn		NEL
Autos:	67.	1 65.2	2	63.5		57.4		66.0)	66.6
Medium Trucks:	58.	2 56.7	7	50.3		48.8		57.2	2	57.5
Heavy Trucks:	58.	8 57.3	3	48.3		49.5		57.9)	58.0
Vehicle Noise:	68.	2 66.4	1	63.8		58.5		67.1	I	67.6
Mitigated Noise L	evels (with Top	oo and barrier att	tenuation	1)						
VehicleType	Leq Peak Hou	Leq Day	Leq E	vening	Leq N	ight		Ldn		NEL
Autos:	59.			55.7		49.6		58.3	3	58.9
Medium Trucks:	51.			43.2		41.7		50.1		50.4
Heavy Trucks:	53.	2 51.7	7	42.7		43.9		52.3	3	52.4
			·	=		-4-0		=0.0		20.0

Vehicle Noise:

60.8

56.1

51.2

59.8

60.2

59.0

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Warren Rd. s/o Stetson Av. Job Number: 9792
Lot No: 48 Job Number: 9792
Analyst: A. Wolfe

SITE S	PECIFIC II	NPUT DATA		NO	DISE MODE	L INPUTS		
Highway Data			3	Site Conditions (I	Hard = 10, S	oft = 15)		
Average Daily T	raffic (Adt):	21,100 vehicles	S		Autos:	15		
Peak Hour F	. ,	10%		Medium Truc	ks (2 Axles):	15		
	our Volume:	2,110 vehicles	S	Heavy Truck	s (3+ Axles):	15		
Veh	icle Speed:	45 mph	1	/ehicle Mix				
Near/Far Lan	e Distance:	74 feet		VehicleType	Day	Evening	Night	Daily
Site Data					utos: 77.5%			97.42%
Rarı	rier Height:	6.0 feet		Medium Tru	icks: 84.8%	6 4.9%	10.3%	1.84%
Barrier Type (0-Wa	_	0.0		Heavy Tru	icks: 86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	•	64.0 feet		loise Source Ele	votions (in f	oot)		
Centerline Dist. to	o Observer:	84.0 feet	<u> </u>		•	eei)		
Barrier Distance to	o Observer:	20.0 feet			1,510.200			
Observer Height (A		5.0 feet		Medium Trucks:	•	0 / 4 //		0.0
• .	•	1,506.9 feet		Heavy Trucks:	1,518.206	Grade Adju	istment.	0.0
		1,510.2 feet	L	ane Equivalent l	Distance (in	feet)		
		1,510.2 feet		Autos:	73.021	<u> </u>		
	Road Grade:	0.0%		Medium Trucks:	72.809			
		0.075		Heavy Trucks:	72.716			
FHWA Noise Mode	l Calculation	ıs						
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos:	69.34	1.29	-2.57	-1.20	0.70	-9.30	00	-12.300

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.57	-1.20	0.70	-9.300	-12.300
Medium Trucks:	77.62	-15.95	-2.55	-1.20	0.55	-8.750	-11.750
Heavy Trucks:	82.14	-19.90	-2.54	-1.20	0.25	-7.150	-10.150

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	66.9	65.0	63.2	57.1	65.8	66.4					
Medium Trucks:	57.9	56.4	50.1	48.5	57.0	57.2					
Heavy Trucks:	58.5	57.1	48.0	49.3	57.6	57.8					
Vehicle Noise:	67.9	66.1	63.5	58.3	66.9	67.4					

Mitigated Noise Levels (with Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	57.6	55.7	53.9	47.8	56.5	57.1				
Medium Trucks:	49.2	47.7	41.3	39.8	48.2	48.5				
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6				
Vehicle Noise:	59.0	57.2	54.3	49.4	57.9	58.4				

Scenario: First Floor With Wall

Road Name: Warren Rd. s/o Mustang Wy.

Lot No: 620

Project Name: Rancho Diamante

Job Number: 9792 Analyst: A. Wolfe

SITE SPECIFIC I	NPUT DATA		N	OISE MOD	EL INPUT	S	
Highway Data		9	Site Conditions (Hard = 10, S	Soft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage:	20,000 vehicles 10%	S	Medium Tru	Autos cks (2 Axles)			
Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	2,000 vehicles 40 mph 74 feet		/ehicle Mix	ks (3+ Axles			
iveai/i ai Lane Distance.	74 1001		VehicleType	Day	Evening	Night	Daily
Site Data				utos: 77.5			97.42%
Barrier Height:	6.0 feet		Medium Tr			10.3%	
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	0.0 58.0 feet		Heavy Tr			10.8%	0.74%
		1	Noise Source Ele	evations (in	feet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	78.0 feet 20.0 feet 5.0 feet 1.507.3 feet		Autos Medium Trucks Heavy Trucks		Grade Ad	ijustment:	0.0
Road Elevation:		L	ane Equivalent	Distance (in	feet)		
Barrier Elevation:	1,507.3 feet		Autos		•		
Road Grade:	0.0%		Medium Trucks Heavy Trucks				
FHWA Noise Model Calculation	ns						
VehicleTyne REMEL	Traffic Flow	Distance	Finite Road	Freenel	Rarrier Att	on Bor	m Atton

I IIIIA Noise mou	ci oaioaiation	3					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	1.57	-1.82	-1.20	0.17	-6.560	-9.560
	70.04	45.07	4.00	4.00	0.40	0.000	0.000

Medium Trucks: -6.000 -9.000 76.31 -15.67 -1.80 -1.20 0.10 Heavy Trucks: 81.16 -19.62 -1.79 -1.20 0.00 -4.900 -7.900

Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.9	64.0	62.2	56.2	64.8	65.4				
Medium Trucks:	57.6	56.1	49.8	48.2	56.7	56.9				
Heavy Trucks:	58.6	57.1	48.1	49.3	57.7	57.8				
Vehicle Noise:	67.2	65.4	62.6	57.5	66.1	66.6				

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	59.3	57.4	55.7	49.6	58.3	58.9						
Medium Trucks:	51.6	50.1	43.8	42.2	50.7	50.9						
Heavy Trucks:	53.7	52.2	43.2	44.4	52.8	52.9						
Vehicle Noise:	60.9	59.2	56.2	51.3	59.9	60.4						

Scenario: First Floor With Wall

Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 214

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOIS	SE MODE	L INPUTS	3	
Highway Data		Site Conditions (Hai	rd = 10, So	oft = 15)		
Average Daily Traffic (Adt):	14,200 vehicles		Autos:	15		
Peak Hour Percentage:	10%	Medium Trucks	(2 Axles):	15		
Peak Hour Volume:	1,420 vehicles	Heavy Trucks ((3+ <i>Axles</i>):	15		
Vehicle Speed:	40 mph	Vehicle Mix				
Near/Far Lane Distance:	36 feet	VehicleType	Day	Evening	Night	Daily
Site Data		Auto	s: 77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet	Medium Truck	s: 84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Truck	s: 86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	65.0 feet	Noise Source Eleva	tions (in fe	eet)		
Centerline Dist. to Observer:	85.0 feet	Autos: 1	•	,01,		
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1	•			
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1		Grade Adj	ustment:	0.0
Pad Elevation:	1,503.2 feet	Troavy Traone.	,010.000			0.0
Road Elevation:	1,502.3 feet	Lane Equivalent Dis	stance (in f	eet)		
Barrier Elevation:	1,503.2 feet	Autos:	83.282			
Road Grade:	0.0%	Medium Trucks:	83.150			
		Heavy Trucks:	83.099			
FHWA Noise Model Calculation	ns					

VehicleType REMEL		Traffic Flow Distance		Finite Road Fresnel		Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.43	-1.20	-0.41	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.42	-1.20	-0.54	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.41	-1.20	-0.96	0.000	0.000

Unmitigated Noise	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	62.8	60.9	59.2	53.1	61.7	62.3							
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8							
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7							
Vehicle Noise:	64.1	62.3	59.5	54.4	63.0	63.5							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	62.8	60.9	59.2	53.1	61.7	62.3							
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8							
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7							
Vehicle Noise:	64.1	62.3	59.5	54.4	63.0	63.5							

Scenario: First Floor With Wall

Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 232

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOIS	SE MODE	L INPUTS	5	
Highway Data		Site Conditions (Ha	rd = 10, So	oft = 15)		
Average Daily Traffic (Adt):	14,200 vehicles		Autos:	15		
Peak Hour Percentage:	10%	Medium Trucks	s (2 Axles):	15		
Peak Hour Volume:	1,420 vehicles	Heavy Trucks ((3+ Axles):	15		
Vehicle Speed:	40 mph	Vehicle Mix				
Near/Far Lane Distance:	36 feet	VehicleType	Day	Evening	Night	Daily
Site Data		Auto	s: 77.5%	12.9%	9.6%	97.42%
Barrier Height:	0.0 feet	Medium Truck	s: 84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Truck	s: 86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	65.0 feet	Noise Source Eleva	tions (in fe	eet)		
Centerline Dist. to Observer:	85.0 feet	Autos: 1				
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1	•			
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1		Grade Adj	ustment:	0.0
Pad Elevation:	1,504.3 feet	Troavy Traono.	,012.000			0.0
Road Elevation:	1,504.6 feet	Lane Equivalent Dis	stance (in f	eet)		
Barrier Elevation:	1,504.3 feet	Autos:	83.205			
Road Grade:	0.0%	Medium Trucks:	83.107			
		Heavy Trucks:	83.138			
FHWA Noise Model Calculation	ns					

VehicleType REME		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
	Autos:	67.36	0.08	-3.42	-1.20	-0.48	0.000	0.000
	Medium Trucks:	76.31	-17.15	-3.41	-1.20	-0.62	0.000	0.000
	Heavy Trucks:	81.16	-21.11	-3.42	-1.20	-1.06	0.000	0.000

Unmitigated Noise	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	62.8	60.9	59.2	53.1	61.7	62.3							
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8							
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7							
Vehicle Noise:	64.1	62.3	59.5	54.5	63.0	63.5							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	62.8	60.9	59.2	53.1	61.7	62.3							
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8							
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7							
Vehicle Noise:	64.1	62.3	59.5	54.5	63.0	63.5							

Scenario: First Floor With Wall Project Name: Rancho Diamante

Road Name: Mustang Wy. w/o Warren rd. Job Number: 9792
Lot No: 85
Analyst: A. Wolfe

SITE S	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions	(Hard	= 10, So	ft = 15)				
Average Daily	Traffic (Adt):	5,000 vehicle	S			Autos:	15				
Peak Hour	Percentage:	10%		Medium Tr	ucks (2	2 Axles):	15				
Peak He	our Volume:	500 vehicle	S	Heavy Tru	cks (3+	+ Axles):	15				
Vel	nicle Speed:	40 mph		Vehicle Mix							
Near/Far Lar	ne Distance:	36 feet		Vehicle Type	,	Day	Evening	Night	Daily		
Site Data					_						
Site Data					Autos:	_			97.42%		
Bar	rier Height:	0.0 feet		Medium 7				10.3%	1.84%		
Barrier Type (0-Wa	all, 1-Berm):	0.0		Heavy 7	rucks:	86.5%	2.7%	10.8%	0.74%		
Centerline Dis	t. to Barrier:	59.0 feet		Noise Source E	levatic	nns (in fe	opt)				
Centerline Dist. t	to Observer:	79.0 feet				04.600					
Barrier Distance t	to Observer:	20.0 feet			•						
Observer Height (Above Pad):	5.0 feet		Medium Trucks: 1,506.897 Heavy Trucks: 1,512.606 Grade Adjustment: 0					0.0		
Pa	d Elevation:	1,505.8 feet		пеаvy тиск	S. 1,5	12.000	Grade Auj	usim e m.	0.0		
Roa	d Elevation:	1,504.6 feet		Lane Equivalen	t Dista	nce (in f	eet)				
Barrie	er Elevation:	1,505.8 feet		Auto	s:	77.172					
F	Road Grade:	0.0%		Medium Truck	s:	77.021					
				Heavy Truck	s:	76.943					
FHWA Noise Mode	el Calculatio	ns									
VehicleTvpe	REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Atte	en Ber	m Atten		

VehicleType REM		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
	Autos:	67.36	-4.45	-2.93	-1.20	-0.38	0.000	0.000
	Medium Trucks:	76.31	-21.69	-2.92	-1.20	-0.52	0.000	0.000
	Heavy Trucks:	81.16	-25.64	-2.91	-1.20	-0.96	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	58.8	56.9	55.1	49.1	57.7	58.3					
Medium Trucks:	50.5	49.0	42.6	41.1	49.6	49.8					
Heavy Trucks:	51.4	50.0	40.9	42.2	50.6	50.7					
Vehicle Noise:	60.0	58.2	55.5	50.4	59.0	59.5					

Mitigated Noise Levels (with Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	58.8	56.9	55.1	49.1	57.7	58.3	
Medium Trucks:	50.5	49.0	42.6	41.1	49.6	49.8	
Heavy Trucks:	51.4	50.0	40.9	42.2	50.6	50.7	
Vehicle Noise:	60.0	58.2	55.5	50.4	59.0	59.5	

Scenario: First Floor With Wall

Road Name: Mustang Wy. w/o Warren rd.

Lot No: 606

Project Name: Rancho Diamante

SITE SPECIFIC I	SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Har	d = 10, So	oft = 15)				
Average Daily Traffic (Adt):	5,000 vehicles		Autos:	15				
Peak Hour Percentage:	10%	Medium Trucks	(2 Axles):	15				
Peak Hour Volume:	500 vehicles	Heavy Trucks (3	3+ <i>Axles):</i>	15				
Vehicle Speed:	40 mph	Vehicle Mix						
Near/Far Lane Distance:	36 feet	VehicleType	Day	Evening	Night	Daily		
Site Data		Autos	s: 77.5%	12.9%	9.6%	97.42%		
Barrier Height:	0.0 feet	Medium Trucks	s: 84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks	s: 86.5%	2.7%	10.8%	0.74%		
Centerline Dist. to Barrier:	64.0 feet	Noise Source Elevations (in feet)						
Centerline Dist. to Observer:	84.0 feet	Autos: 1,		/				
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,						
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1,		Grade Adj	ustment:	0.0		
Pad Elevation:	1,506.7 feet							
Road Elevation:	1,504.6 feet	Lane Equivalent Dis	tance (in t	feet)				
Barrier Elevation:	1,506.7 feet	Autos:	82.355					
Road Grade:	0.0%	Medium Trucks:	82.189					
		Heavy Trucks:	82.054					
FHWA Noise Model Calculation	ns							

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.35	-1.20	-0.34	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.34	-1.20	-0.47	0.000	0.000
Heavy Trucks:	81.16	-25.64	-3.33	-1.20	-0.86	0.000	0.000

Unmitigated Nois						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.4	56.5	54.7	48.6	57.3	57.9
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.4
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3
Vehicle Noise:	59.6	57.8	55.1	50.0	58.6	59.1

Mitigated Noise Levels (with Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	58.4	56.5	54.7	48.6	57.3	57.9		
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.4		
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3		
Vehicle Noise:	59.6	57.8	55.1	50.0	58.6	59.1		

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 318

Project Name: Rancho Diamante

Average Daily Traffic (Adt): 40,200 vehicles Peak Hour Percentage: 10%	Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15
Peak Hour Volume: 4,020 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 74 feet	Vehicle Mix VehicleType Day Evening Night Daily
Site Data Barrier Height: 6.0 feet	Autos: 77.5% 12.9% 9.6% 97.42% Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 108.0 feet Centerline Dist. to Observer: 128.0 feet Barrier Distance to Observer: 20.0 feet Observer Height (Above Pad): 14.0 feet Pad Elevation: 1,499.9 feet	Heavy Trucks: 86.5% 2.7% 10.8% 0.74% Noise Source Elevations (in feet) Autos: 1,499.200 Medium Trucks: 1,501.497 Heavy Trucks: 1,507.206 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 123.414
Road Grade: 0.0% FHWA Noise Model Calculations	Medium Trucks: 123.162 Heavy Trucks: 122.718

L								
	VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:		71.12	3.63	-5.99	-1.20	-0.89	0.000	0.000
	Medium Trucks:	78.79	-13.60	-5.98	-1.20	-1.01	0.000	0.000
	Heavy Trucks:	83.02	-17.56	-5.95	-1.20	-1.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.6	65.7	63.9	57.8	66.5	67.1			
Medium Trucks:	58.0	56.5	50.1	48.6	57.1	57.3			
Heavy Trucks:	58.3	56.9	47.8	49.1	57.5	57.6			
Vehicle Noise:	68.5	66.6	64.2	58.8	67.4	67.9			

Mitigated Noise Levels (with Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.6	65.7	63.9	57.8	66.5	67.1	
Medium Trucks:	58.0	56.5	50.1	48.6	57.1	57.3	
Heavy Trucks:	58.3	56.9	47.8	49.1	57.5	57.6	
Vehicle Noise:	68.5	66.6	64.2	58.8	67.4	67.9	

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 324

Project Name: Rancho Diamante

SITE SPECIFIC II Highway Data	NPUT DATA	NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	10%	Medium Truck Heavy Trucks Vehicle Mix VehicleType	• ,	15 15 15	Night	Daily	
Site Data	0.0 for 1	Auto	os: 77.5%	12.9%		97.42%	
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer:		Noise Source Eleva Autos:	10.8%	0.74%			
Observer Height (Above Pad): Pad Elevation: Road Elevation:		Medium Trucks: Heavy Trucks: Lane Equivalent Di	1,506.706	Grade Adj	ustment:	0.0	
Barrier Elevation: Road Grade:	1,501.9 feet 0.0%	Autos: Medium Trucks: Heavy Trucks:	129.934 129.650 129.118				
FHWA Noise Model Calculation	ns	Sinite Dead	F	Dannian Au	D	A ((a	

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-6.32	-1.20	-0.79	0.000	0.000
Medium Trucks:	78.79	-13.60	-6.31	-1.20	-0.90	0.000	0.000
Heavy Trucks:	83.02	-17.56	-6.28	-1.20	-1.21	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.3	63.6	57.5	66.1	66.7			
Medium Trucks:	57.7	56.2	49.8	48.3	56.7	57.0			
Heavy Trucks:	58.0	56.6	47.5	48.8	57.1	57.2			
Vehicle Noise:	68.1	66.3	63.8	58.5	67.1	67.6			

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	67.2	65.3	63.6	57.5	66.1	66.7						
Medium Trucks:	57.7	56.2	49.8	48.3	56.7	57.0						
Heavy Trucks:	58.0	56.6	47.5	48.8	57.1	57.2						
Vehicle Noise:	68.1	66.3	63.8	58.5	67.1	67.6						

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o "C Street"

Lot No: 241

Project Name: Rancho Diamante

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions	(Hard	= 10, So	oft = 15)				
Average Daily	Traffic (Adt):	40,200 vehicle	S			Autos:	15				
Peak Hour	Percentage:	10%		Medium Tı	ucks (2	2 Axles):	15				
Peak H	Hour Volume:	4,020 vehicle	s	Heavy Tru	cks (3+	- Axles):	15				
Ve	ehicle Speed:	50 mph		Vehicle Mix							
Near/Far La	ne Distance:	74 feet		VehicleType	o	Day	Evening	Night	Daily		
Site Data					Autos:	77.5%			97.42%		
Po	rrior Hoights	0.0 foot		Medium 7		84.8%		10.3%	1.84%		
Barrier Type (0-W	rrier Height:	0.0 feet 0.0		Heavy 1	rucks:	86.5%		10.8%	0.74%		
Centerline Di	ist. to Barrier:	194.0 feet		Noise Source E			eet)				
Centerline Dist.				Auto	s: 1,50	02.660					
Barrier Distance		20.0 feet		Medium Truck	s: 1,50	04.957					
Observer Height	• • • • • • • • • • • • • • • • • • • •	14.0 feet 1,501.9 feet		Heavy Truck	(s: 1,5	10.666	Grade Adj	ustment:	0.0		
Ro	ad Elevation:	1,502.7 feet	•	Lane Equivalen	t Dista	nce (in f	eet)				
Barr	ier Elevation:	1,501.9 feet	•	Autos: 211.193							
	Road Grade:	0.0%		Medium Truck	s: 2	11.061					
				Heavy Truck	s: 2	10.842					
FHWA Noise Mod	lel Calculation	ns									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Atte	en Ber	m Atten		

L								
	VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
_	Autos:	71.12	3.63	-9.49	-1.20	-3.92	0.000	0.000
	Medium Trucks:	78.79	-13.60	-9.48	-1.20	-4.07	0.000	0.000
	Heavy Trucks:	83.02	-17.56	-9.48	-1.20	-4.45	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	64.1	62.2	60.4	54.3	63.0	63.6						
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8						
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1						
Vehicle Noise:	65.0	63.1	60.7	55.3	63.9	64.4						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	64.1	62.2	60.4	54.3	63.0	63.6						
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8						
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1						
Vehicle Noise:	65.0	63.1	60.7	55.3	63.9	64.4						

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 211

Project Name: Rancho Diamante

SITE SPECIFIC I	SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS							
Highway Data		S	Site Conditions	(Hard :	= 10, So	ft = 15)					
Average Daily Traffic (Adt):	35,300 vehicles 10%		Medium Tru	ioks (2	Autos:	15 15					
Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:			Heavy Truc		,	15					
Near/Far Lane Distance:	74 feet	<u>\</u>	/ehicle Mix VehicleType		Day	Evening	Night	Daily			
Site Data				lutos:	77.5%		9.6%				
Barrier Height:	6.0 feet		Medium Tr		84.8%		10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%			
Barrier Elevation:	1,502.7 feet 1,502.4 feet		Autos Autos Medium Trucks Heavy Trucks Ane Equivalent Autos Medium Trucks	s: 1,50 s: 1,50 s: 1,51 Distai s: 15	02.700 04.997 0.706	Grade Adj	iustment:	0.0			
Road Grade: FHWA Noise Model Calculation	0.0%		Heavy Trucks		55.767	Parrior Att		m Atton			

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.53	-1.20	-1.05	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.52	-1.20	-1.15	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.51	-1.20	-1.43	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	65.5	63.6	61.8	55.7	64.4	65.0						
Medium Trucks:	55.9	54.4	48.0	46.5	55.0	55.2						
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5						
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8						

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	65.5	63.6	61.8	55.7	64.4	65.0						
Medium Trucks:	55.9	54.4	48.0	46.5	55.0	55.2						
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5						
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8						

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 150

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS
Highway Data		Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt):	35,300 vehicles	Autos: 15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15
Peak Hour Volume:	3,530 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed:	50 mph	Vehicle Mix
Near/Far Lane Distance:	74 feet	VehicleType Day Evening Night Daily
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%
Barrier Height:	6.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%
Centerline Dist. to Barrier:	149.0 feet	Noise Source Elevations (in feet)
Centerline Dist. to Observer:	169.0 feet	Autos: 1,503.700
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,505.997
Observer Height (Above Pad):	14.0 feet	Heavy Trucks: 1,511.706 Grade Adjustment: 0.0
Pad Elevation:	•	
Road Elevation:	1,503.7 feet	Lane Equivalent Distance (in feet)
Barrier Elevation:	1,503.8 feet	Autos: 165.502
Road Grade:	0.0%	Medium Trucks: 165.322
		Heavy Trucks: 165.013
FHWA Noise Model Calculation	ns	

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.90	-1.20	-1.06	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.89	-1.20	-1.15	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.88	-1.20	-1.41	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	65.1	63.2	61.4	55.4	64.0	64.6						
Medium Trucks:	55.5	54.0	47.7	46.1	54.6	54.8						
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1						
Vehicle Noise:	66.0	64.2	61.7	56.3	64.9	65.4						

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	66.0	64.2	61.7	56.3	64.9	65.4

Scenario: Second Floor With Wall Road Name: Stetson Av. e/o Mustang Wy.

Lot No: 140

Project Name: Rancho Diamante

SITE SPECIFIC I Highway Data	NPUT DATA	NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	10%	Medium Trucks Heavy Trucks Vehicle Mix	(3+ Axles):	15	Night	Doile		
Site Data		VehicleType Auto	Day os: 77.5%	Evening 12.9%	Night 9.6%	<i>Daily</i> 97.42%		
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	20.0 feet 14.0 feet	Medium Trucks: Heavy Trucks: Moise Source Eleva Autos: Medium Trucks: Heavy Trucks:	ks: 86.5% ations (in fe 1,503.100 1,505.397	2.7%	10.3% 10.8% ustment:	1.84% 0.74% 0.0		
	1,503.1 feet	Lane Equivalent Di Autos: Medium Trucks: Heavy Trucks:	istance (in 1 156.403 156.197 155.829	feet)				
FHWA Noise Model Calculation	ns	Finite Dead		Damian Au	D	Au		

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.53	-1.20	-0.98	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.52	-1.20	-1.08	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.51	-1.20	-1.35	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	65.5	63.6	61.8	55.7	64.4	65.0						
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2						
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5						
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8						

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8

Scenario: Second Floor With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 1

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISI	E MODE	L INPUT	5				
Highway Data		Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):	21,100 vehicles		Autos:	15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15					
Peak Hour Volume:	2,110 vehicles	Heavy Trucks (3	+ Axles):	15					
Vehicle Speed:	•	Vehicle Mix							
Near/Far Lane Distance:	74 feet	VehicleType	Day	Evening	Night	Daily			
Site Data		Autos.	77.5%	12.9%	9.6%	97.42%			
Barrier Height:	0.0 feet	Medium Trucks.	84.8%	4.9%	10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks.	86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Barrier:	153.0 feet	Noise Source Elevati	ons (in fe	eet)					
Centerline Dist. to Observer:		Autos: 1,5	•						
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,5							
Observer Height (Above Pad):	14.0 feet	Heavy Trucks: 1,5		Grade Adj	ustment:	0.0			
Pad Elevation:				•					
Road Elevation:	1,510.1 feet	Lane Equivalent Dist	ance (in i	reet)					
Barrier Elevation:	1,509.3 feet	Autos:	169.512						
Road Grade:	0.0%	Medium Trucks:	169.348						
		Heavy Trucks:	169.077						
FHWA Noise Model Calculation	ns								

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-8.06	-1.20	-3.83	0.000	0.000
Medium Trucks:	77.62	-15.95	-8.05	-1.20	-4.01	0.000	0.000
Heavy Trucks:	82.14	-19.90	-8.04	-1.20	-4.49	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	61.4	59.5	57.7	51.7	60.3	60.9						
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7						
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3						
Vehicle Noise:	62.4	60.6	58.0	52.8	61.4	61.9						

Mitigated Noise L	evels (with Topo	and barrier atte	enuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.0	52.8	61.4	61.9

Scenario: Second Floor With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 6

Project Name: Rancho Diamante

SITE	SPECIFIC II	NPUT DATA		I	NOISE	MODE	L INPUT	3	
Highway Data				Site Conditions	(Hard	= 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	21,100 vehicles	S			Autos:	15		
Peak Hour	Percentage:	10%		Medium Tı	ucks (2	? Axles):	15		
Peak H	lour Volume:	2,110 vehicles	S	Heavy Tru	cks (3+	- Axles):	15		
Ve	ehicle Speed:	45 mph		Vehicle Mix					
Near/Far La	ne Distance:	74 feet		VehicleType	Э	Day	Evening	Night	Daily
Site Data					Autos:	77.5%	12.9%	9.6%	97.42%
Ва	rrier Height:	6.0 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 Di	ist. to Barrier:	62.0 feet		Noise Source E	levatio	ns (in fe	et)		
Centerline Dist.	to Observer:	82.0 feet			s: 1,5	-			
Barrier Distance	to Observer:	20.0 feet		Medium Truck	•				
Observer Height	(Above Pad):	14.0 feet		Heavy Truck			Grade Adj	ustment:	0.0
P	ad Elevation:	1,510.5 feet		Tieavy Truck	.s. 1,5	19.100	Orado Maj	addirioni.	0.0
Ro	ad Elevation:	1,511.1 feet		Lane Equivalen	t Dista	nce (in f	eet)		
Barr	ier Elevation:	1,511.1 feet		Auto	s:	74.395			
	Road Grade:	0.0%		Medium Truck	s:	74.015			
				Heavy Truck	s:	73.376			
FHWA Noise Mod	lel Calculation	ns							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Atte	en Beri	m Atten

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.69	-1.20	-0.52	0.000	0.000
Medium Trucks:	77.62	-15.95	-2.66	-1.20	-0.67	0.000	0.000
Heavy Trucks:	82.14	-19.90	-2.60	-1.20	-1.15	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	66.7	64.8	63.1	57.0	65.6	66.3							
Medium Trucks:	57.8	56.3	49.9	48.4	56.9	57.1							
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7							
Vehicle Noise:	67.8	66.0	63.4	58.2	66.7	67.3							

Mitigated Noise Levels (with Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	66.7	64.8	63.1	57.0	65.6	66.3					
Medium Trucks:	57.8	56.3	49.9	48.4	56.9	57.1					
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7					
Vehicle Noise:	67.8	66.0	63.4	58.2	66.7	67.3					

Scenario: Second Floor With Wall

Project Name: Rancho Diamante

Road Name: Warren Rd. s/o Stetson Av. Job Number: 9792
Lot No: 14 Analyst: A. Wolfe

SITE	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS						
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	21,100 vehicles	3				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 A	(xles	15		
Peak H	lour Volume:	2,110 vehicles	3		He	avy Truc	ks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	74 feet		-		icleType		Day	Evening	Night	Daily
Site Data								77.5%	•	9.6%	
Ra	rrier Height:	6.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0				Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	,	62.0 feet		N	loisa Si	ource Ele	ovation	s (in fa	of)		
Centerline Dist.	to Observer:	82.0 feet		7	10/30 0		s: 1,512	•	,01)		
Barrier Distance	to Observer:	20.0 feet			Mediu	m Trucks					
Observer Height ((Above Pad):	14.0 feet				y Trucks	•		Grade Adj	ustment:	0.0
Pa	ad Elevation:	1,511.3 feet									
	ad Elevation:			L	ane Eq	uivalent			feet)		
	ier Elevation:	•				Autos		.255			
	Road Grade:	0.0%				m Trucks	_	.900			
					Heav	y Trucks	s: 73	.322			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	69.34	1.29		-2.68		-1.20		-0.38	0.0	00	0.000
Medium Trucks:	77.62			-2.65		-1.20		-0.52	0.0	00	0.000
Heavy Trucks:	82.14	-19.90		-2.60		-1.20		-0.94	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho			Leq Eve	ening	Leq I	Night		Ldn	CI	VEL
Autos:	66	5.8	64.9		63.1		57.0	1	65.7		66.3
Medium Trucks:			56.3		50.0		48.4		56.9		57.1
Heavy Trucks:			57.0		48.0		49.2		57.6		57.7
Vehicle Noise:	67	7.8	66.0		63.4		58.2		66.8		67.3
Mitigated Noise L	evels (with To	ppo and barrie	attenu	ıation)	<u> </u>						
VehicleType	Leq Peak Ho	ur Leq Day	'	Leq Eve	ening	Leq I	Night		Ldn	CI	VEL

Medium Trucks:

Heavy Trucks:

Vehicle Noise:

Autos:

66.8

57.8

58.4

67.8

63.1

50.0

48.0

63.4

64.9

56.3

57.0

66.0

57.0

48.4

49.2

58.2

65.7

56.9

57.6

66.8

66.3

57.1

57.7 67.3

Scenario: Second Floor With Wall Road Name: Warren Rd. s/o Stetson Av.

Lot No: 48

Project Name: Rancho Diamante

SITE	SPECIFIC IN		NOISE MODEL INPUTS							
Highway Data			,	Site Conditions (Hard = 10, Soft = 15)						
Average Daily	Traffic (Adt): 2	21,100 vehicles	3			Autos:	15			
Peak Hour	Percentage:	10%		Medium Tr	ucks (2	? Axles):	15			
Peak H	lour Volume:	2,110 vehicles	3	Heavy Tru	cks (3+	- Axles):	15			
Ve	ehicle Speed:	45 mph		Vehicle Mix						
Near/Far La	ne Distance:	74 feet		VehicleType)	Day	Evening	Night	Daily	
Site Data					Autos:	77.5%	12.9%	9.6%	97.42%	
Ra	rrier Height:	6.0 feet		Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-W	_	0.0		Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Di	ist. to Barrier:	64.0 feet		Noise Source E	levatio	ns (in fe	20t)			
Centerline Dist.	to Observer:	84.0 feet				10.200	,01)			
Barrier Distance	to Observer:	20.0 feet		Medium Truck						
Observer Height	(Above Pad):	14.0 feet					Grade Adj	iustmont		
P	ad Elevation:	1,506.9 feet		Heavy Truck	S. 1,5	10.200	Orace Auj	ustinent	0.0	
Ro	ad Elevation:	1,510.2 feet	1	Lane Equivalen	t Dista	nce (in f	feet)			
Barr	ier Elevation:	1,510.2 feet		Auto	s:	76.168				
	Road Grade:	0.0%		Medium Truck	s:	75.879				
				Heavy Truck	s:	75.460				
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Atte	en Ber	m Atten	
Autos:	69.34	1.29	-2.8	5 -1.20		-0.14	0.0	000	0.000	
Madium Truska	77.60	1E 0E	2.04	1 20		0.22	0.0		0.000	

THIVA NOISE MODEL CALCULATIONS			3					
VehicleType		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
	Autos:	69.34	1.29	-2.85	-1.20	-0.14	0.000	0.000
	Medium Trucks:	77.62	-15.95	-2.82	-1.20	-0.23	0.000	0.000
	Heavy Trucks:	82.14	-19.90	-2.78	-1.20	-0.52	0.000	0.000

Unmitigated Nois	e Levels (withou	t Topo and barri	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	57.7	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.3	56.8	47.8	49.0	57.4	57.5
Vehicle Noise:	67.6	65.8	63.3	58.0	66.6	67.1

Mitigated Noise L	evels (with Topo					
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	57.7	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.3	56.8	47.8	49.0	57.4	57.5
Vehicle Noise:	67.6	65.8	63.3	58.0	66.6	67.1

Scenario: Second Floor With Wall Road Name: Warren Rd. s/o Mustang Wy.

Lot No: 620

Project Name: Rancho Diamante

SITE SPECIFIC I	SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS						
Highway Data		5	Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):	20,000 vehicles	s		Autos.	: 15					
Peak Hour Percentage:	10%		Medium Tru	icks (2 Axles).	: 15					
Peak Hour Volume:	2,000 vehicles	s	Heavy Truc	ks (3+ Axles).	: 15					
Vehicle Speed:	40 mph	,	/ehicle Mix							
Near/Far Lane Distance:	74 feet	_	VehicleType	Day	Evening	Night	Daily			
Site Data							•			
Site Data						9.6%				
Barrier Height:	6.0 feet		Medium Tr	rucks: 84.8%	6 4.9%	10.3%	1.84%			
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tr	rucks: 86.5%	6 2.7%	10.8%	0.74%			
Centerline Dist. to Barrier:	58.0 feet	_	loise Source Ele	evations (in f	ieet)					
Centerline Dist. to Observer:	78.0 feet	-			ccij					
Barrier Distance to Observer:	20.0 feet			s: 1,507.200						
Observer Height (Above Pad):	14.0 feet		Medium Trucks	ŕ	0 , 4 , 1		0.0			
Pad Elevation:			Heavy Trucks	s: 1,515.206	Grade Adj	ustment.	0.0			
Road Elevation:	•	L	.ane Equivalent	Distance (in	feet)					
Barrier Elevation:	*		Autos							
Road Grade:	0.0%		Medium Trucks							
Noad Grade.	0.076									
			Heavy Trucks	s: 68.936						
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	en Ber	m Atten			
Autos: 67.3	6 1.57	-2.30	-1.20	-0.58	0.0	00	0.000			

i iiiiii i iioloo iiioa	or ourouration	•					
VehicleType REMEL		Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	1.57	-2.30	-1.20	-0.58	0.000	0.000
Medium Trucks:	76.31	-15.67	-2.26	-1.20	-0.76	0.000	0.000
Heavy Trucks:	81.16	-19.62	-2.20	-1.20	-1.31	0.000	0.000

Unmitigated Nois	Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.4	63.5	61.8	55.7	64.3	64.9			
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5			
Heavy Trucks:	58.1	56.7	47.7	48.9	57.3	57.4			
Vehicle Noise:	66.7	64.9	62.2	57.1	65.6	66.1			

Mitigated Noise Levels (with Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.4	63.5	61.8	55.7	64.3	64.9				
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5				
Heavy Trucks:	58.1	56.7	47.7	48.9	57.3	57.4				
Vehicle Noise:	66.7	64.9	62.2	57.1	65.6	66.1				

Scenario: Second Floor With Wall Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 214

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS
Highway Data		Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	10% 1,420 vehicles 40 mph	Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Vehicle Mix
Near/Far Lane Distance:	36 feet	VehicleType Day Evening Night Daily
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	0.0 feet 0.0 65.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84% Heavy Trucks: 86.5% 2.7% 10.8% 0.74% Noise Source Elevations (in feet)
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	85.0 feet 20.0 feet 14.0 feet 1.503.2 feet	Autos: 1,502.300 Medium Trucks: 1,504.597 Heavy Trucks: 1,510.306 Grade Adjustment: 0.0
Road Elevation:		Lane Equivalent Distance (in feet)
Barrier Elevation: Road Grade:	*	Autos: 84.398 Medium Trucks: 84.023 Heavy Trucks: 83.358
FHWA Noise Model Calculation	าร	1

	VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
	Autos:	67.36	0.08	-3.51	-1.20	-3.06	0.000	0.000
	Medium Trucks:	76.31	-17.15	-3.48	-1.20	-3. <i>4</i> 2	0.000	0.000
	Heavy Trucks:	81.16	-21.11	-3.43	-1.20	-4.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	62.7	60.8	59.1	53.0	61.6	62.2					
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8					
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7					
Vehicle Noise:	64.0	62.2	59.5	54.4	62.9	63.4					

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.8	59.1	53.0	61.6	62.2				
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8				
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7				
Vehicle Noise:	64.0	62.2	59.5	54.4	62.9	63.4				

Scenario: Second Floor With Wall Road Name: Mustang Wy. s/o Stetson Av.

Lot No: 232

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA		NOISE MODEL INPUTS						
Highway Data			Site Conditions	(Hard	= 10, Sc	oft = 15)			
Average Daily Traffic (Adt):	14,200 vehicles	S			Autos:	15			
Peak Hour Percentage:	10%		Medium Tr	ucks (2	Axles):	15			
Peak Hour Volume:	1,420 vehicles	s	Heavy Tru	cks (3+	- Axles):	15			
Vehicle Speed:	40 mph	,	Vehicle Mix						
Near/Far Lane Distance:	36 feet		VehicleType	Evening	Night	Daily			
Site Data				Autos:	<i>Day</i> 77.5%			97.42%	
Barrier Height:	0.0 feet		Medium 7	rucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy T	rucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Barrier:	65.0 feet	1	Noise Source E	levatio	ns (in fe	eet)			
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	85.0 feet 20.0 feet 14.0 feet		Autos: 1,504.600 Medium Trucks: 1,506.897 Heavy Trucks: 1,512.606 Grade Adjustment: 0.0						
Pad Elevation: Road Elevation:	•		Lane Equivalen						
Barrier Elevation:	1,504.3 feet		Auto	s: 8	34.194				
Road Grade:	0.0%		Medium Truck Heavy Truck		33.851 33.267				
FHWA Noise Model Calculation	ns								
VehicleType REMEI	Traffic Flow	Distance	Finite Road	Free	snel	Rarrier Atte	an Ber	m Δtten	

FHWA Noise I	dodel Calculations
--------------	--------------------

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.50	-1.20	-3.25	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.47	-1.20	-3.62	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.43	-1.20	-4.65	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.8	59.1	53.0	61.6	62.3				
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8				
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7				
Vehicle Noise:	64.0	62.2	59.5	54.4	63.0	63.4				

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	62.7	60.8	59.1	53.0	61.6	62.3				
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8				
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7				
Vehicle Noise:	64.0	62.2	59.5	54.4	63.0	63.4				

Scenario: Second Floor With Wall Road Name: Mustang Wy. w/o Warren rd.

Lot No: 85

Project Name: Rancho Diamante

SITE SPECIFIC I	NPUT DATA	NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard	l = 10, So	oft = 15)			
Average Daily Traffic (Adt):	5,000 vehicles		Autos:	15			
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15			
Peak Hour Volume:	500 vehicles	Heavy Trucks (3	+ Axles):	15			
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet	VehicleType	Day	Evening	Night	Daily	
Site Data		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Height:	0.0 feet	Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Barrier:	59.0 feet	Noise Source Elevation	ons (in fe	eet)			
Centerline Dist. to Observer:	79.0 feet	Autos: 1,5	•	- 7			
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,5					
Observer Height (Above Pad):	14.0 feet	Heavy Trucks: 1,5		Grade Adj	ustment:	0.0	
Pad Elevation:	1,505.8 feet	•					
Road Elevation:	1,504.6 feet	Lane Equivalent Dista	ance (in f	eet)			
Barrier Elevation:	1,505.8 feet	Autos:	78.409				
Road Grade:	0.0%	Medium Trucks:	77.997				
		Heavy Trucks:	77.258				
FHWA Noise Model Calculation	ns						

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.03	-1.20	-2.91	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.00	-1.20	-3.30	0.000	0.000
Heavy Trucks:	81.16	-25.64	-2.94	-1.20	-4.38	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	58.7	56.8	55.0	49.0	57.6	58.2				
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7				
Heavy Trucks:	51.4	50.0	40.9	42.2	50.5	50.7				
Vehicle Noise:	59.9	58.1	55.4	50.3	58.9	59.4				

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	58.7	56.8	55.0	49.0	57.6	58.2				
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7				
Heavy Trucks:	51.4	50.0	40.9	42.2	50.5	50.7				
Vehicle Noise:	59.9	58.1	55.4	50.3	58.9	59.4				

Scenario: Second Floor With Wall Road Name: Mustang Wy. w/o Warren rd.

Lot No: 606

Project Name: Rancho Diamante

SITE SPECIFIC	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data			Site Conditions	(Hard :	= 10, Sc	oft = 15)				
Average Daily Traffic (Adt)	: 5,000 vehicle	s			Autos:	15				
Peak Hour Percentage	: 10%		Medium T	rucks (2	Axles):	15				
Peak Hour Volume	: 500 vehicle	s	Heavy Tru	ıcks (3+	Axles):	15				
Vehicle Speed	•		Vehicle Mix							
Near/Far Lane Distance	: 36 feet		VehicleTyp	е	Day	Evening	Night	Daily		
Site Data				Autos:	77.5%	12.9%	9.6%	97.42%		
Barrier Height	: 0.0 feet		Medium 7	Trucks:	84.8%	4.9%	10.3%	1.84%		
Barrier Type (0-Wall, 1-Berm			Heavy 7	Trucks:	86.5%	2.7%	10.8%	0.74%		
Centerline Dist. to Barrie	: 64.0 feet		Noise Source E	Elevation	ns (in fe	eet)				
Centerline Dist. to Observe	: 84.0 feet			os: 1,50	•					
Barrier Distance to Observe	20.0 feet		Medium Truck	•						
Observer Height (Above Pad	: 14.0 feet		Heavy Truck			Grade Adj	ustment:	0.0		
Pad Elevation	: 1,506.7 feet									
Road Elevation	: 1,504.6 feet		Lane Equivaler	nt Distai	nce (in i	feet)				
Barrier Elevation	: 1,506.7 feet		Auto	os: 8	33.613					
Road Grade	: 0.0%		Medium Truck	ks: 8	3.202					
			Heavy Truck	ks: 8	32.447					
FHWA Noise Model Calculate	ons									
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fres	snel	Barrier Atte	en Beri	m Atten		

FHWA Noise Model Calculation	S
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VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.45	-1.20	-2.86	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.42	-1.20	-3.22	0.000	0.000
Heavy Trucks:	81.16	-25.64	-3.36	-1.20	-4.20	0.000	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	58.3	56.4	54.6	48.5	57.2	57.8							
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3							
Heavy Trucks:	51.0	49.5	40.5	41.7	50.1	50.2							
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0							

Mitigated Noise L	Mitigated Noise Levels (with Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	58.3	56.4	54.6	48.5	57.2	57.8							
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3							
Heavy Trucks:	51.0	49.5	40.5	41.7	50.1	50.2							
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0							

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APPENDIX 8.2:

ON-SITE RAIL NOISE CALCULATIONS



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Federal Transit Adminstration
General Transit Noise Assessment
Case: 9792 - Lot 318

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RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	45.2	38.8	38.8
Diesel Loco.	39.9	33.5	33.5
Metrolink 91 Line Ext.	43.7	37.2	37.2
Source 3	0.0	0.0	0.0
CNEL (dB):	Source 1 51.4	Source 2 40.2	Source 3 0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for each noise source below - see reference list for source numbers.

NOISE SOURCE PAI	NOISE SOURCE PARAMETERS									
Parameter	Diesel Loco.		Metrolink 91 Line E	xt.	Source 3					
Source Num.	Diesel Loco.	2	Comm. Rail Cars	3						
Dist. to receiver	distance (ft)	279	distance (ft)	279						
Daytime Hours	speed (mph)	15	speed (mph)	40						
(7 AM - 10 PM)	trains/hour	0.17	trains/hour	0.5						
15 hours	locos/train	1	cars/train	5						
Nighttime Hours	speed (mph)	15	speed (mph)	40						
(10 PM - 7 AM)	trains/hour	0.17	trains/hour	0.5						
9 hours	locos/train	1	cars/train	5						
Jointed Track?	Y/N	N	Y/N	N						
Embedded Track?	Y/N	N	Y/N	N						
Aerial Structure?	Y/N	N	Y/N	N						
Barrier Present?	Y/N	N	Y/N	N						
Intervening Rows										
of Buildings	number	0	number	0						

SOURCE REFERENCE	E LIST
Source	Number
Electric Loco.	1
Diesel Loco.	2
Comm. Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Automobiles	9
City Buses	10
Commuter Buses	11
Rail Yard or Shop	12
Layover Tracks	13
Bus Storage Yard	14
Bus Op. Facility	15
Bus Transit Center	16
Parking Garage	17
Park & Ride Lot	18

DATA SOURCES:

Diesel locomotive information based on observed activity during the noise level measurements and the U.S. DOT Crossing Inventory Form for crossing number 027366S at Warren Road.

Metrolink information is based on the Metrolink Fact Sheet for Quarter 3 of 2014-2015 for the 91 Line which will be extended to Perris. From the Paris extension is where the San Jacinto Branch Line will potentially connect to Hemet. This page intentionally left blank



APPENDIX 10.1:

OPERATIONAL NOISE LEVEL CALCULATIONS



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Project Name: Rancho Diamante

Observer Location: R1

Source: Air Conditioning Unit (Roof-Top)

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

0.0 feet

Job Number: 9792 Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 4,435.0 feet Noise Distance to Barrier: 4,435.0 feet

Noise Source Height:

Barrier Height:

6.0 feet 5.0 feet

10/16/2017

Barrier Distance to Observer: 0.0 feet

Barrier Elevation:

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: 20.0 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	78.2			
Distance Attenuation	4,435.0	-59.0	-59.0	-59.0	-59.0	-59.0	-59.0			
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2			
Raw (Distance + Barrier)		8.0	-69.2	-69.2	-69.2	-69.2	9.0			
39 Minute Hourly Adjustmen	nt	6.1	-71.1	-71.1	-71.1	-71.1	7.1			

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R1

Project Name: Rancho Diamante

Source: Parking Lot Vehicle Movements

0.0 feet

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 4,435.0 feet
Noise Distance to Barrier: 4,435.0 feet
Barrier Distance to Observer: 0.0 feet

Barrier Height: 6.0 feetNoise Source Height: 5.0 feet

Observer Height: 5.0 feet

Observer Elevation: 0.0 feet

Barrier Type (0-Wall, 1-Berm):

Noise Source Elevation: 0.0 feet

Barrier Elevation:

Drop Off Coefficient: 15.0

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

0

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	79.5			
Distance Attenuation	4,435.0	-44.2	-44.2	-44.2	-44.2	-44.2	-44.2			
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2			
Raw (Distance + Barrier)		5.7	-54.4	-54.4	-54.4	-54.4	25.1			
60 Minute Hourly Adjustmen	nt	5.7	-54.4	-54.4	-54.4	-54.4	25.1			

10/16/2017

Observer Location: R1 Project Name: Rancho Diamante

Source: Drive-Thru Speakerphone Job Number: 9792
Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 4,435.0 feet
Noise Distance to Barrier: 4,435.0 feet
Noise Distance to Barrier: 4,435.0 feet
Noise Source Height: 3.0 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	66.4		
Distance Attenuation	4,435.0	-49.4	-49.4	-49.4	-49.4	-49.4	-49.4		
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		2.4	-59.6	-59.6	-59.6	-59.6	6.8		
60 Minute Hourly Adjustmen	nt	2.4	-59.6	-59.6	-59.6	-59.6	6.8		

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R2 Project Name: Rancho Diamante

Source: Air Conditioning Unit (Roof-Top)

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,153.0 feet
Noise Distance to Barrier: 2,153.0 feet
Noise Distance to Barrier: 2,153.0 feet
Noise Source Height: 5.0 feet
Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 20.0 feet Drop Off Coefficient: 20.0

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	78.2			
Distance Attenuation	2,153.0	-52.7	-52.7	-52.7	-52.7	-52.7	-52.7			
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2			
Raw (Distance + Barrier)		14.3	-62.9	-62.9	-62.9	-62.9	15.3			
39 Minute Hourly Adjustmen	nt	12.4	-64.8	-64.8	-64.8	-64.8	13.4			

Project Name: Rancho Diamante

Drop Off Coefficient:

Job Number: 9792

10/16/2017

15.0

Observer Location: R2

Source: Parking Lot Vehicle Movements

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,153.0 feet Barrier Height: 6.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 2,153.0 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

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)	5.0	60.1	0.0	0.0	0.0	0.0	79.5			
Distance Attenuation	2,153.0	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5			
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2			
Raw (Distance + Barrier)		10.4	-49.7	-49.7	-49.7	-49.7	29.8			
60 Minute Hourly Adjustmen	nt	10.4	-49.7	-49.7	-49.7	-49.7	29.8			

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Project Name: Rancho Diamante Observer Location: R2

> Job Number: 9792 Source: Drive-Thru Speakerphone Condition: Operational Analyst: A. Wolfe

> > **NOISE MODEL INPUTS**

Noise Distance to Observer 2.153.0 feet Barrier Height: 6.0 feet Noise Source Height: 3.0 feet Noise Distance to Barrier: 2,153.0 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)	15.0	62.0	0.0	0.0	0.0	0.0	66.4		
Distance Attenuation	2,153.0	-43.1	-43.1	-43.1	-43.1	-43.1	-43.1		
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		8.7	-53.3	-53.3	-53.3	-53.3	13.1		
60 Minute Hourly Adjustmen	nt	8.7	-53.3	-53.3	-53.3	-53.3	13.1		

Project Name: Rancho Diamante

Drop Off Coefficient:

10/16/2017

20.0

Observer Location: R3
Source: Air Conditioning Unit (Roof-Top)

Job Number: 9792

Analyst: A. Wolfe

Condition: Operational

NOISE MODEL INPUTS

Noise Distance to Observer 2,192.0 feet
Noise Distance to Barrier: 2,192.0 feet
Noise Distance to Observer: 0.0 feet

Noise Distance to Observer: 0.0 feet

Noise Source Height: 5.0 feet
Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 20.0 feet

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	78.2		
Distance Attenuation	2,192.0	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8		
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		14.2	-63.0	-63.0	-63.0	-63.0	15.2		
39 Minute Hourly Adjustmen	nt	12.3	-64.9	-64.9	-64.9	-64.9	13.3		

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R3 Project Name: Rancho Diamante

Source: Parking Lot Vehicle Movements

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,192.0 feet
Noise Distance to Barrier: 2,192.0 feet
Noise Distance to Barrier: 2,192.0 feet
Noise Source Height: 5.0 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

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	79.5		
Distance Attenuation	2,192.0	-39.6	-39.6	-39.6	-39.6	-39.6	-39.6		
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		10.3	-49.8	-49.8	-49.8	-49.8	29.7		
60 Minute Hourly Adjustmen	nt	10.3	-49.8	-49.8	-49.8	-49.8	29.7		

10/16/2017

Observer Location: R3 Project Name: Rancho Diamante

Source: Drive-Thru Speakerphone Job Number: 9792
Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,192.0 feet

Noise Distance to Barrier: 2,192.0 feet

Noise Distance to Barrier: 2,192.0 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	66.4		
Distance Attenuation	2,192.0	-43.3	-43.3	-43.3	-43.3	-43.3	-43.3		
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		8.5	-53.5	-53.5	-53.5	-53.5	12.9		
60 Minute Hourly Adjustmen	nt	8.5	-53.5	-53.5	-53.5	-53.5	12.9		

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R4 Project Name: Rancho Diamante

Source: Air Conditioning Unit (Roof-Top)

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer383.0 feetBarrier Height:6.0 feetNoise Distance to Barrier:373.0 feetNoise Source Height:5.0 feetBarrier Distance to Observer:10.0 feetObserver Height:5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 20.0 feet Drop Off Coefficient: 20.0

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	78.2		
Distance Attenuation	383.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7		
Shielding (Barrier Attenuation)	373.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1		
Raw (Distance + Barrier)		34.4	-42.8	-42.8	-42.8	-42.8	35.4		
39 Minute Hourly Adjustmen	nt	32.5	-44.7	-44.7	-44.7	-44.7	33.5		

10/16/2017

Observer Location: R4 Project Name: Rancho Diamante

Source: Parking Lot Vehicle Movements Job Number: 9792
Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 329.0 feet Barrier Height: 319.0 feet Noise Source Height: 5.0 feet Barrier Distance to Observer: 10.0 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	79.5		
Distance Attenuation	329.0	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3		
Shielding (Barrier Attenuation)	319.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5		
Raw (Distance + Barrier)		27.3	-32.8	-32.8	-32.8	-32.8	46.7		
60 Minute Hourly Adjustmen	nt	27.3	-32.8	-32.8	-32.8	-32.8	46.7		

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R4 Project Name: Rancho Diamante

Source: Drive-Thru Speakerphone

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 383.0 feet Barrier Height: 373.0 feet Noise Source Height: 3.0 feet Barrier Distance to Observer: 10.0 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

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	66.4		
Distance Attenuation	383.0	-28.1	-28.1	-28.1	-28.1	-28.1	-28.1		
Shielding (Barrier Attenuation)	373.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6		
Raw (Distance + Barrier)		28.3	-33.7	-33.7	-33.7	-33.7	32.7		
60 Minute Hourly Adjustmen	nt	28.3	-33.7	-33.7	-33.7	-33.7	32.7		

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R5 Project Name: Rancho Diamante

Source: Air Conditioning Unit (Roof-Top)

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 537.0 feet Barrier Height: 6.0 feet
Noise Distance to Barrier: 527.0 feet Noise Source Height: 5.0 feet
Barrier Distance to Observer: 10.0 feet Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 20.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

	NOISE	MODEL P	ROJECTI	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	537.0	-40.6	-40.6	-40.6	-40.6	-40.6	-40.6
Shielding (Barrier Attenuation)	527.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		31.4	-45.8	-45.8	-45.8	-45.8	32.4
39 Minute Hourly Adjustment 29.5 -47.7 -47.7 -47.7 30							

STATIONARY SOURCE NOISE PREDICTION MODEL 10/16/2017

Observer Location: R5 Project Name: Rancho Diamante

Source: Parking Lot Vehicle Movements

Job Number: 9792

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 537.0 feet Barrier Height: 527.0 feet Noise Source Height: 5.0 feet Barrier Distance to Observer: 10.0 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 P	ROJECTIO	ONS				
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5	
Distance Attenuation	537.0	-30.5	-30.5	-30.5	-30.5	-30.5	-30.5	
Shielding (Barrier Attenuation)	527.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5	
Raw (Distance + Barrier)		24.1	-36.0	-36.0	-36.0	-36.0	43.5	
60 Minute Hourly Adjustmen	60 Minute Hourly Adjustment 24.1 -36.0 -36.0 -36.0 43							

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R5 Project Name: Rancho Diamante

Source: Drive-Thru Speakerphone Job Number: 9792
Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer537.0 feetBarrier Height:6.0 feetNoise Distance to Barrier:527.0 feetNoise Source Height:3.0 feetBarrier Distance to Observer:10.0 feetObserver 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 P	ROJECTIO	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	537.0	-31.1	-31.1	-31.1	-31.1	-31.1	-31.1
Shielding (Barrier Attenuation)	527.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		25.4	-36.6	-36.6	-36.6	-36.6	29.8
60 Minute Hourly Adjustmen	nt	25.4	-36.6	-36.6	-36.6	-36.6	29.8

APPENDIX 11.1:

CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS MEMO







SUBJECT: CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS MEMO

This Construction Reference Noise Level Measurements Memo has been prepared to summarize the sample reference noise level measurements collected by Urban Crossroads, Inc. To describe peak construction noise activities, we have historically relied on reference noise level measurements provided in the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). However, our experience demonstrates that the RCNM significantly overstates the predicted construction noise levels. This is largely due the fact that RCNM is based on construction equipment data collected from the Central Artery/Tunnel project in Boston, Massachusetts in the early 1990's. Due to substantial changes in the air quality emission requirements in the State of California Air Resources Board (ARB), the RCNM reference noise level measurements do not adequately describe modern construction equipment noise levels. In addition, the RCNM methodology places all construction equipment at a single point near the property line. This scenario simply does not occur in the real world as typical construction activity represents a variety of equipment operating at different locations throughout the project site.

REFERENCE NOISE LEVEL MEASUREMENTS

To estimate a project's construction-related noise levels, sample reference noise level measurements of similar construction activities were collected by Urban Crossroads, Inc. to describe the different stages of construction. The reference noise levels are intended to represent typical construction noise levels when multiple pieces of equipment are operating simultaneously at a construction site. The following reference noise level measurements were collected from existing construction operations with similar equipment as those expected with future construction of comparable land uses. Appendix A includes the data collected from each of the reference noise level measurements adjusted to present noise levels at a uniform reference distance of 50 feet. Appendix B includes the reference noise source photos by identification number ("ID"). Table 1 summarizes the reference noise level measurements. The reference noise level measurements are identified by land use type and location below.

BUSINESS PARK CONSTRUCTION SITE, CITY OF IRVINE

On Wednesday, October 14th, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine. The reference noise level measurements include the following noise source activities: a truck pass-by and background dozer activity (ID 1) and dozer activity (ID 2). Both measurements were taken at a distance of approximately 30 feet from the source and represent typical construction activities during the grading stage of construction.

RESIDENTIAL CONSTRUCTION SITE, CITY OF RANCHO MISSION VIEJO

On Tuesday, October 20th, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements at a residential construction site located in the unincorporated area within the County of Orange known as Rancho Mission Viejo. The reference noise level measurements include the following noise source activities: construction vehicle maintenance (ID 3), foundation trenching (ID 4), rough grading activities (ID 5), and residential building framing (ID 6). All reference measurements were taken at this location at a distance of approximately 30 feet from the noise source.

INDUSTRIAL SITE, CITY OF ONTARIO

Additional short-term reference noise level measurements were collected on Friday, October 30th, 2015, by Urban Crossroads, Inc. at an active industrial construction site in the City of Ontario. The reference noise level measurements represent the grading activities associated with industrial/warehousing construction. Five reference noise level measurements were taken at this location to describe: a water truck pass-by and backup alarm (ID 7), a dozer pass-by (ID 8), two scrapers and a water truck pass-by (ID 9), two scrapers pass-by (ID 10), and scraper, water truck and dozer activities over a 30-minute period (ID 11). All reference measurements taken at this location were at a distance of approximately 30 feet from the source.

INDUSTRIAL SITE, CITY OF REDLANDS

On July 1st, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements of a nighttime concrete pour at an industrial construction site located at 27334 San Bernardino Avenue in the City of Redlands. The reference noise level measurements include the following nighttime building construction and paving-related noise source activities: concrete mixer truck movements (ID 12), concrete paver activities (ID 13), concrete mixer pour & paving activities (ID 14), concrete mixer backup alarms and air brakes (ID 15), and a one-hour measurement over the duration of all reference measurements at this location of concrete mixer pour activities (ID 16).



TABLE 1: CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS SUMMARY

ID	Noise Source	Reference Distance From Source	Noise	rence Levels ce Distance	Noise	rence Levels Feet ⁶
		(Feet)	dBA Leq	dBA Lmax	dBA Leq	dBA Lmax
1	Truck Pass-Bys & Dozer Activity ¹	30'	63.6 68.1		59.2	63.7
2	Dozer Activity ¹	30'	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities ²	30'	71.9	74.8	67.5	70.4
4	Foundation Trenching ²	30'	72.6	74.9	68.2	70.5
5	Rough Grading Activities ²	30'	77.9	84.8	73.5	80.4
6	Residential Framing ³	30'	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm ⁴	30'	76.3	82.3	71.9	77.9
8	Dozer Pass-By ⁴	30'	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By ⁴	30'	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By ⁴	30'	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity ⁴	30'	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements ⁵	50'	71.2	73.1	71.2	73.1
13	Concrete Paver Activities ⁵	30'	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities ⁵	30'	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities ⁵	50'	67.7	79.2	67.7	79.2

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.

MODELED AND MEASURED CONSTRUCTION NOISE LEVELS

A RCNM construction noise analysis was prepared by Urban Crossroads, Inc. on October 17th, 2014 for an industrial project site in the City of Ontario. The noise levels due to construction in the industrial portion of the project site (Planning Area 1) were estimated at up to thirteen receiver locations to determine the potential noise impacts at adjacent sensitive land uses. Returning to the same industrial project site over a year later, in October 2015, Urban Crossroads, Inc. collected noise level measurements at the same receiver locations to validate the modeled RCNM construction noise levels with actual construction noise level measurements collected in the field. The grading stage of construction was chosen for this comparison since grading activities typically represent the worst-case construction activities due to the number and size of the mobile equipment used in the grading process.



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

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

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

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

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

MODELED CONSTRUCTION NOISE LEVELS

As shown on Table 2, the modeled RCNM noise levels during the grading stage of construction were estimated to produce a noise level approaching 92.6 dBA Leq at a distance of 50 feet from the project site boundary. The RCNM noise levels reflect the combined construction noise level impacts of excavators, graders, tractors, loaders, backhoes, rubber tired dozers, and scrapers producing a noise level of 92.6 dBA Leq. At nearby receiver locations, this results in a short-term construction noise level approaching 88.2 dBA Leq.

TABLE 2: RCNM MODELED CONSTRUCTION NOISE LEVELS

Equipment Type ¹	Quantity	Usage Factor ²	Hours Of Operation ³	Reference Noise Level @ 50 Feet (dBA Leq)	Combined Level @ 50 Feet (dBA Leq)
Excavator	2	40%	3.2	81.0	80.0
Grader	8	40%	3.2	85.0	90.1
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Rubber Tired Dozer	2	40%	3.2	79.0	78.0
Scraper	5	40% 3.2		84.0	87.0
	Соі	mbined Hoເ	ırly Noise Levels	50 Feet (Leq dBA)	92.6

Receiver Location	Distance To Property Line (Feet) ⁴	Distance Attenuation (dBA Leq) ⁵	Estimated Noise Barrier Attenuation (dBA Leq)	Construction Noise Level (dBA Leq)
R2	83'	-4.4	0.0	88.2
R3	78'	-3.9	-5.6	83.1

¹ Source: FHWA's Roadway Construction Noise Model, January 2006.



² Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

³ Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

 $^{^{\}rm 4}$ Distance from the nearest point of construction activity to the nearest receiver.

⁵ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

MEASURED CONSTRUCTION NOISE LEVELS

To describe the actual construction noise levels based on typical conditions, short-term construction noise level measurements were collected in the field during grading activities at receiver locations R2 and R3. Appendix C includes study area photos of the measurement locations and the construction activities observed from each location at the project site. To validate the construction noise levels, measurements were collected during continuous on-site grading activities on Friday, October 30th, and again on Friday, November 6th, 2015.

Grading activities observed on the site during the short-term noise level measurements include water trucks queuing and refilling at a stationary tank, trencher activity, up to three scrapers operating simultaneously, and dozer activity. The water truck queuing activity was the closest equipment observed near the project site boundaries due to the stationary location of the water refill tank, at a distance of approximately 100 feet from the receiver locations. The trencher was observed at a distance of roughly 600 feet from the receiver locations, and the scrapers and dozer activities were at approximately 900 feet from the receiver locations. Additional stationary scrapers were located at a distance of approximately 700 feet from the receiver locations. Additional background construction noise sources include forklifts, cranes, and man lifts used in the building construction stage of a portion of the site located roughly 900 feet southeast of the receiver locations. The construction activities observed during the short-term measurements represent typical grading activities within an industrial construction site, with multiple pieces of equipment operating at varying distances from the project site boundaries.

Table 3 shows the modeled RCNM noise levels using the actual distances from each receiver location to the nearest equipment activity observed during the short-term noise level measurements. Based on the RCNM model, the peak grading construction noise levels would range from 80.9 to 86.5 dBA Leq when equipment is located at 100 feet from each receiver location. By calculating the modeled RCNM noise level at each location, a comparison can be made between the modeled and measured grading construction noise levels to calibrate the construction noise model.



TABLE 3: MODELED CONSTRUCTION NOISE LEVELS BASED ON ACTUAL EQUIPMENT DISTANCES

Equipment Type ¹	Quantity	Usage Factor ²	Hours Of Operation ³	Reference Noise Level @ 50 Feet (dBA Leq)	Combined Level @ 50 Feet (dBA Leq)
Excavator	2	40%	3.2	81.0	80.0
Grader	8	40%	3.2	85.0	90.1
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Rubber Tired Dozer	2	40%	3.2	79.0	78.0
Scraper	5	40%	3.2	84.0	87.0
	Cor	mbined Hoເ	ırly Noise Levels	50 Feet (Leq dBA)	92.6

Receiver Location	Distance To Closest Equipment Activity (Feet) ⁴	Distance Attenuation (dBA Leq) ⁵	Estimated Noise Barrier Attenuation (dBA Leq)	Construction Noise Level (dBA Leq)
R2	100'	-6.0	0.0	86.5
	100'	-6.0	-5.6	80.9

¹ Source: FHWA's Roadway Construction Noise Model, January 2006.

To determine the project-only construction noise levels at each receiver location during the grading activities observed at the project site, the ambient without project noise level measurements are compared to the short-term with project noise level measurements. The ambient noise level measurements from the original noise study are shown on Table 4 in addition to the new short-term noise level measurements collected during typical grading activity at the receiver locations on Day 1, Friday, October 30th 2015. By subtracting the previous ambient noise level from the new combined (project construction plus ambient) noise level measurements at each receiver, the project-only construction noise levels can be logarithmically calculated. Table 4 shows the project-only construction noise levels ranged from 61.4 to 63.4 dBA Leq, and are significantly lower than those modeled with the RCNM at the same receiver locations.

Based on the Day 1 analysis, the differences between the peak RCNM model and typical measured construction noise levels range from 19.6 to 23.2 dBA Leq. This analysis demonstrates how the RCNM overstates the potential construction noise level impacts by placing all equipment at a single point at the project site boundary. In reality, the grading equipment within the project site was observed to operate in different locations throughout the project site. In addition, the typical construction noise levels



² Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

³ Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

⁴ Distance from the nearest point of construction activity to the nearest receiver.

⁵ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

measured at the receiver locations reflect modern construction equipment noise level emissions that are largely overstated using the older RCNM reference noise levels.

TABLE 4: DAY 1 CONSTRUCTION NOISE LEVEL COMPARISON

Oı	riginal Noise Stu	dy		Calib	ration	
Receiver Location ¹	Measured Daytime Ambient Noise Levels (dBA Leq) ²	Peak Modeled RCNM Grading Construction Noise Levels (dBA Leq) ³	Calculated RCNM Noise Levels to Closest Observed Equipment (dBA Leq) ⁴	Measured Typical Grading Construction Noise Levels at Receivers (dBA Leq) ⁵	Calculated Project-Only Construction Noise Levels (dBA Leq) ⁶	Difference Between Modeled & Measured Noise Levels (dBA Leq) ⁷
R2	70.3	88.2	86.5	71.1	63.4	23.2
R3	68.3	83.1	80.9	69.1	61.4	19.6

¹ Receiver locations from the construction noise analysis which are closest to the Planning Area 1 construction activities.

Similarly, the Day 2 short-term construction noise level measurements are shown on Table 5 in relation to the RCNM modeled noise levels. Table 5 shows the project-only construction noise levels ranged from 64.1 to 65.3 dBA Leq, and are significantly lower than those modeled with the RCNM at the same receiver locations. Based on the Day 2 analysis, the differences between the peak RCNM model and typical measured construction noise levels range from 16.8 to 21.2 dBA Leq. This Day 2 analysis is consistent with the Day 1 typical grading construction noise level measurements taken a week later at the same receiver locations.



² Ambient noise level measurements taken on 3/13/14 at the receiver locations during the Ontario industrial project noise study.

³ Estimated construction noise levels based on the RCNM peak construction noise analysis methodology. These conditions are not likely to occur as the RCNM assumes all equipment is operating simultaneously at a single point at the project site boundary.

⁴ Modeled RCNM construction noise levels at each receiver location based on the observed distance to the nearest construction equipment activity during the noise level measurements, shown on Table 3.

⁵ Measured noise levels at the receiver locations during one hour of typical grading activities in the center of the construction site.

⁶ Project only construction noise levels calculated based on the logarithmic noise level difference between the measured noise levels during grading activity and the ambient without project noise levels measured at each receiver location.

⁷ Difference between the peak RCNM modeled noise levels and the typical noise levels measured at the receiver locations during typical grading activities.

TABLE 5: DAY 2 CONSTRUCTION NOISE LEVEL COMPARISON

0	riginal Noise Stu	dy		Calib	ration	
Receiver Location ¹	Measured Daytime Ambient Noise Levels (dBA Leq) ²	Peak Modeled RCNM Grading Construction Noise Levels (dBA Leq) ³	Calculated RCNM Noise Levels to Closest Observed Equipment (dBA Leq) ⁴	Measured Typical Grading Construction Noise Levels at Receivers (dBA Leq) ⁵	Calculated Project-Only Construction Noise Levels (dBA Leq) ⁶	Difference Between Modeled & Measured Noise Levels (dBA Leq) ⁷
R2	70.3	88.2	86.5	71.5	65.3	21.2
R3	68.3	83.1	80.9	69.7	64.1	16.8

¹ Receiver locations from the construction noise analysis which are closest to the Planning Area 1 construction activities.

CONCLUSIONS

The sample reference noise level measurements were taken by Urban Crossroads, Inc. in order to better describe the noise levels from various typical construction activities at different land use types. To quantify the difference between the modeled RCNM and measured construction noise levels in the field, Urban Crossroads, Inc. compared the modeled results of a RCNM construction noise level analysis with the actual measured noise levels observed in the field during typical grading activities at the same project site. While the RCNM equipment database and methodology provides conservative, worst-case, construction noise levels for specific pieces of equipment, our field measurements show how the RCNM methodology overstates the noise levels experienced at the nearby receiver locations during actual construction activities.

This analysis demonstrates how the RCNM overstates the potential construction noise level impacts by placing all equipment at a single point at the project site boundary. In reality based on our observations in the field, the grading equipment within the project site was observed to operate at different locations throughout the project site. In addition, the typical construction noise levels measured at the receiver locations reflect modern construction equipment noise level emissions that are largely overstated using the older RCNM reference noise levels. The reference noise level measurements presented in this memo are, therefore, representative of typical construction noise levels to accurately describe potential construction noise impacts at nearby receiver locations for a given project. This memo presents typical construction activity reference noise levels. Detailed site specific analysis is needed to assess potential



² Ambient noise level measurements taken on 3/13/14 at the receiver locations during the Ontario industrial project noise study.

³ Estimated construction noise levels based on the RCNM peak construction noise analysis methodology. These conditions are not likely to occur as the RCNM assumes all equipment is operating simultaneously at a single point at the project site boundary.

⁴ Modeled RCNM construction noise levels at each receiver location based on the observed distance to the nearest construction equipment activity during the noise level measurements, shown on Table 3.

⁵ Measured noise levels at the receiver locations during one hour of typical grading activities in the center of the construction site.

⁶ Project only construction noise levels calculated based on the logarithmic noise level difference between the measured noise levels during grading activity and the ambient without project noise levels measured at each receiver location.

⁷ Difference between the peak RCNM modeled noise levels and the typical noise levels measured at the receiver locations during typical grading activities.

construction noise level impacts at nearby sensitive receiver locations on a project by project basis and to identify the appropriate mitigation measures as needed at future construction sites.

Prepared by:

URBAN CROSSROADS, INC.

Bill Lawson, P.E., INCE

Principal

Alex Wolfe

Assistant Analyst



APPENDIX A

REFERENCE NOISE LEVEL MEASUREMENTS SUMMARY TABLE



Construction Equipment Reference Noise Levels

0	Reference Source	Type of Project (Land Use)	Typical Construction Stands)	Reference Measurement Duration	Reference Distance From Source	Refei Noise	Reference Noise Levels	Reference Noise Levels @ 50 Feet	e Noise els Feet
		(-min ede)	(clagan)	(h:mm:ss)	(Feet)	dBA Leg	dBA Lmax	dBA Leq	dBA Lmax
1	Truck Pass-Bys & Dozer Activity	Business Park	Grading	0:01:15	30,	9:89	68.1	59.2	63.7
2	Dozer Activity	Business Park	Grading	0:01:00	30,	9.89	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities	Residential	Grading	0:01:00	30,	71.9	74.8	67.5	70.4
4	Foundation Trenching	Residential	Trenching, Building Const.	0:01:01	30,	72.6	74.9	68.2	70.5
2	Rough Grading Activities	Residential	Grading	0:02:00	30,	77.9	84.8	73.5	80.4
9	Residential Framing	Residential	Building Const.	0:02:00	30,	2.99	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm	Industrial	Grading	0:00:45	30,	76.3	82.3	71.9	77.9
8	Dozer Pass-By	Industrial	Grading	0:00:32	30,	84.0	89.9	9.62	85.5
6	Two Scrapers & Water Truck Pass-By	Industrial	Grading	0:00:32	30,	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By	Industrial	Grading	0:00:30	30,	83.7	86.9	79.3	82.5
11	L Scraper, Water Truck, & Dozer Activity	Industrial	Grading	0:30:00	30,	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements	Industrial	Building Const., Paving	0:01:00	20,	71.2	73.1	71.2	73.1
13	Concrete Paver Activities	Industrial	Building Const., Paving	0:01:00	30,	70.0	75.7	9:59	71.3
14	l Concrete Mixer Pour & Paving Activities	Industrial	Building Const., Paving	0:01:00	30,	70.3	26.3	62.9	71.9
15	Goncrete Mixer Backup Alarms & Air Brakes	Industrial	Building Const., Paving	0:00:50	20,	71.6	78.8	71.6	78.8
16	16 Concrete Mixer Pour Activities	Industrial	Building Const., Paving	1:00:00	50'	67.7	79.2	67.7	79.2





APPENDIX B

REFERENCE NOISE SOURCE PHOTOS







1.1_TruckPass-By&DozerActivity 33, 39' 0.101600", 117, 43' 56.773600"



2.1_DozerActivity 33, 39' 0.101600", 117, 43' 56.773600"



3.1_ConstructionVehicleMaintenance 33, 31' 16.600000", 117, 36' 58.060000"



4.1_FoundationTrenching 33, 32' 8.530000", 117, 35' 55.490000"



4.2_FoundationTrenching 33, 32' 8.540000", 117, 35' 55.710000"



5.1_RoughGradingActivities 33, 31' 16.710000", 117, 37' 0.530000"



5.2_RoughGradingActivities 33, 31' 16.600000", 117, 37' 0.450000"



5.3_RoughGradingActivities 33, 31' 16.570000", 117, 37' 0.450000"



5.4_RoughGradingActivities 33, 31' 16.660000", 117, 37' 0.310000"



6.1_ResidentialFraming 33, 32' 15.610000", 117, 36' 2.740000"



7.1_WaterTruckPassBy&BackupAlarm 34, 4' 19.318500", 117, 36' 25.015800"



8.1_DozerPass-By 34, 4' 19.373400", 117, 36' 24.988400"



9.1_TwoScrapers&WaterTruckPass-By 34, 4' 19.332200", 117, 36' 24.988400"



10.1_TwoScrapersPass-By 34, 4' 19.373400", 117, 36' 25.070800"



10.2_TwoScrapersPass-By 34, 4' 19.373400", 117, 36' 25.070800"



11.1_Scraper,WaterTruck,&DozerActivity 34, 4' 19.373400", 117, 36' 25.070800"



11.2_Scraper,WaterTruck,&DozerActivity 34, 4' 19.318500", 117, 36' 25.125700"



11.3_Scraper,WaterTruck,&DozerActivity 34, 4' 19.346000", 117, 36' 25.043300"



11.4_Scraper,WaterTruck,&DozerActivity 34, 4' 19.291000", 117, 36' 25.070800"



12.1_ConcreteMixerTruckMovements 34, 4' 43.200000", 117, 12' 25.779400"



13.1_ConcretePaverActivities 34, 4' 43.625700", 117, 12' 25.312500"



14.1_ConcreteMixerPour&PavingActivities 34, 4' 42.746800", 117, 12' 24.955400"



15.1_ConcreteMixerBackupAlarms&AirBrakes 34, 4' 43.666900", 117, 12' 24.763100"



16.1_ConcreteMixerPourActivities 34, 4' 43.158800", 117, 12' 25.944200"



SHORT-TERM MEASUREMENTS & CONSTRUCTION ACTIVITY PHOTOS





ConstructionSite_1 34, 4' 39.808000", 117, 36' 22.955900"



ConstructionSite_2 34, 4' 39.808000", 117, 36' 22.955900"



ConstructionSite_3 34, 4' 39.533300", 117, 36' 23.312900"



ConstructionSite_4 34, 4' 39.533300", 117, 36' 23.312900"



ConstructionSite_5 34, 4' 39.341100", 117, 36' 28.064500"



ConstructionSite_6 34, 4' 39.684400", 117, 36' 23.477700"



ConstructionSite_7 34, 4' 39.684400", 117, 36' 23.477700"



R2 34, 4' 39.341100", 117, 36' 28.064500"



R2_South 34, 4' 39.217500", 117, 36' 29.108200"



R2_Southwest 34, 4' 39.217500", 117, 36' 29.108200"



R2_Southwest2 34, 4' 39.505900", 117, 36' 28.970900"



R2_West 34, 4' 39.217500", 117, 36' 29.108200"



R3 34, 4' 39.972800", 117, 36' 16.803500"



R3_E 34, 4' 39.972800", 117, 36' 16.803500"



R3_South 34, 4' 39.972800", 117, 36' 16.803500"



R3_South2 34, 4' 39.519600", 117, 36' 17.050700"



R3_South3 34, 4' 39.698100", 117, 36' 14.221800"



R3_Southeast 34, 4' 39.698100", 117, 36' 14.221800"



R3_Southwest 34, 4' 39.972800", 117, 36' 16.803500"

APPENDIX 11.2:

TEMPORARY NOISE BARRIER ATTENUATION CALCULATIONS





STATIONARY SOURCE NOISE PREDICTION MODEL

12/9/2015

Observer Location: R6 Project Name: Rancho Diamante

Source: Grading

Condition: Construction

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 140.0 feet Barrier Height: 6.0 feet
Noise Distance to Barrier: 10.0 feet Noise Source Height: 8.0 feet
Barrier Distance to Observer: 130.0 feet Observer Height: 5.0 feet

Observer Elevation: 1,498.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 1,496.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 1,498.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

	NOISE	MODEL P	ROJECTI	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	0.0	0.0	0.0	0.0	0.0	85.5
Distance Attenuation	140.0	-8.9	-8.9	-8.9	-8.9	-8.9	-8.9
Shielding (Barrier Attenuation)	10.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
Raw (Distance + Barrier)		-13.8	-13.8	-13.8	-13.8	-13.8	71.7
60 Minute Hourly Adjustmen	nt	-13.8	-13.8	-13.8	-13.8	-13.8	71.7

