APPENDIX 9

Prairie View Apartments (DPR20-00008)

NOISE IMPACT ANALYSIS

CITY OF PERRIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
OPR	Office of Planning and Research
Project	Prairie View Apartments
REMEL	Reference Energy Mean Emission Level

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine any potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Prairie View Apartments development ("Project") located on the north side of Dale Street between Wilson Avenue and Murrieta Road, in the City of Perris. The Project is proposed to consist of 287 multifamily attached residential dwelling units. This study has been prepared to satisfy applicable City of Perris standards and thresholds of significance based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

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

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Prairie View Apartments ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for noise analysis, evaluates potential noise impacts, and identifies mitigation to reduce noise impacts as necessary.

1.1 SITE LOCATION

The proposed Project is in the City of Perris Planning Area 5: Central Core, north of Dale Street between Wilson Avenue and Murrieta Road, which is just north of the Interstate-215 Redlands Avenue off-ramp, as shown on Exhibit 1-A. The proposed Project is located on the northeast corner of Dale Street and Wilson Avenue with Patriot Park to the east, dense single-family development to the west, vacant land and Sky View Elementary School to the north, single family residential uses and vacant land to the south, and multi-family residential uses to the southwest. The Project site has been disturbed, and contains a mix of weeds, native and non-native vegetation, and compacted dirt pathways throughout. The Project site is currently slightly elevated from street level and is relatively flat.

1.2 PROJECT DESCRIPTION

The Project proposes to develop 287 single family attached residential dwelling units on approximately 13.36-acres of one parcel with the following Assessor's Parcel Numbers (APN): 311-502-001. The Project would develop 16 buildings varying between 1-story for auxiliary buildings (club house, community center, offices, and fitness center) and 6 different building types of 3-story multi-residential uses containing 170 1-bedroom and 117 2-bedroom units. The buildings would be constructed with a combination of wood framing, and the exterior will be stucco. The Project would accommodate 202 attached garage spaces, 91 carport spaces, 11 handicapped spaces, 243 open guest spaces, and 6 electric vehicle spaces, for a total of 553 parking spaces. The proposed gated community would be accessible via a new entrance along Murrieta Road, and a new gated exit only on Wilson Avenue. The purpose of the Project is to provide housing for singles, couples, professionals, and newcomers to the area that are employed within a 5-mile radius of the Project site. A preliminary site plan is provided on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: PROJECT 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 DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

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

2.1 RANGE OF NOISE

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

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

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

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by up to 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (4)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (5)

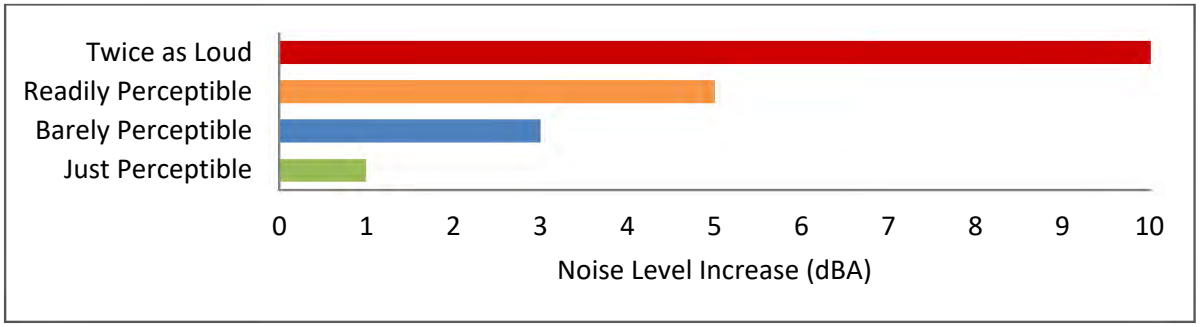
2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (6) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (6) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (4)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (7)

2.9 VIBRATION

As defined in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (8) and the California Department of Transportation (Caltrans) *Transportation and Construction Vibration Guidance Manual* (9), 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. Typical outdoor sources of vibration waves that can propagate through the ground and may create perceptible ground-borne vibration in nearby buildings include construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is fairly smooth, the vibration from rubber-tired traffic is rarely perceptible (8).

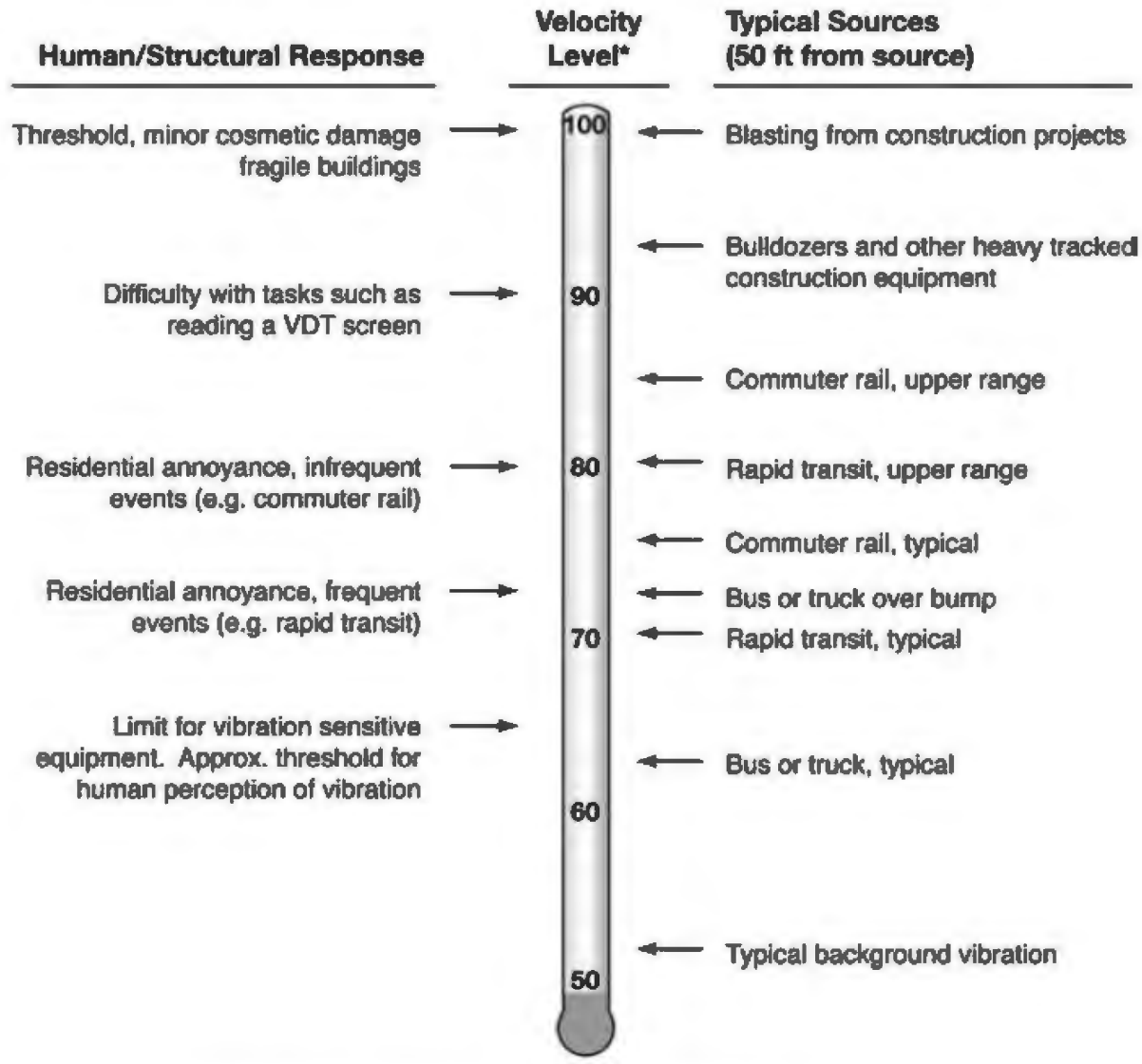
Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of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

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

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits (10). Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels.

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

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



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

Source: Federal Transit Administration (FTA) Transit Noise 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 constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

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

3.2 STATE OF CALIFORNIA BUILDING STANDARDS CODE

3.1.1 RESIDENTIAL CONSTRUCTION

The State of California's noise insulation standards for all residential units are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Chapter 12, Section 1206. These noise standards are applied to new construction that contains dwelling units or sleeping units, such as residential and hotel or motel uses, in California for controlling interior noise levels resulting from exterior noise sources. For new buildings, the acceptable interior noise limit is 45 dBA CNEL in habitable rooms (12).

3.1.2 NON-RESIDENTIAL CONSTRUCTION

The 2019 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (13) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations require the use of prescriptive measures and allow for a noise study to demonstrate compliance using performance-based measures when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, or railroad as shown in a local General Plan.

In areas where noise contours are not readily available the noise standard shall be 65 dBA L_{eq} during any hour of operation. A project exposed to these noise levels must demonstrate compliance with the Section 5.507.4.1 prescriptive method or the Section 5.507.4.2 performance method of noise reduction. Under Section 5.507.4.1 the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50, and exterior windows with a minimum STC rating of 40 are required. Alternatively, the Section 5.507.4.2 environmental comfort criteria of the Green Building Standards code can be met if the interior noise levels of the Project building satisfy the hourly equivalent level of 50 dBA

L_{eq} in occupied areas during any hour of operation. As such, this noise assessment has been prepared to satisfy the 50 dBA L_{eq} interior noise level performance criteria.

3.3 CITY OF PERRIS GENERAL PLAN NOISE ELEMENT

The City of Perris has adopted a Noise Element of the General Plan (14) to control and abate environmental noise, and to protect the citizens of Perris from excessive exposure to noise. The Noise Element provides guidelines for unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies noise polices and implementation measures designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. To protect Perris residents from unacceptable noise levels, the Noise Element contains the following objectives:

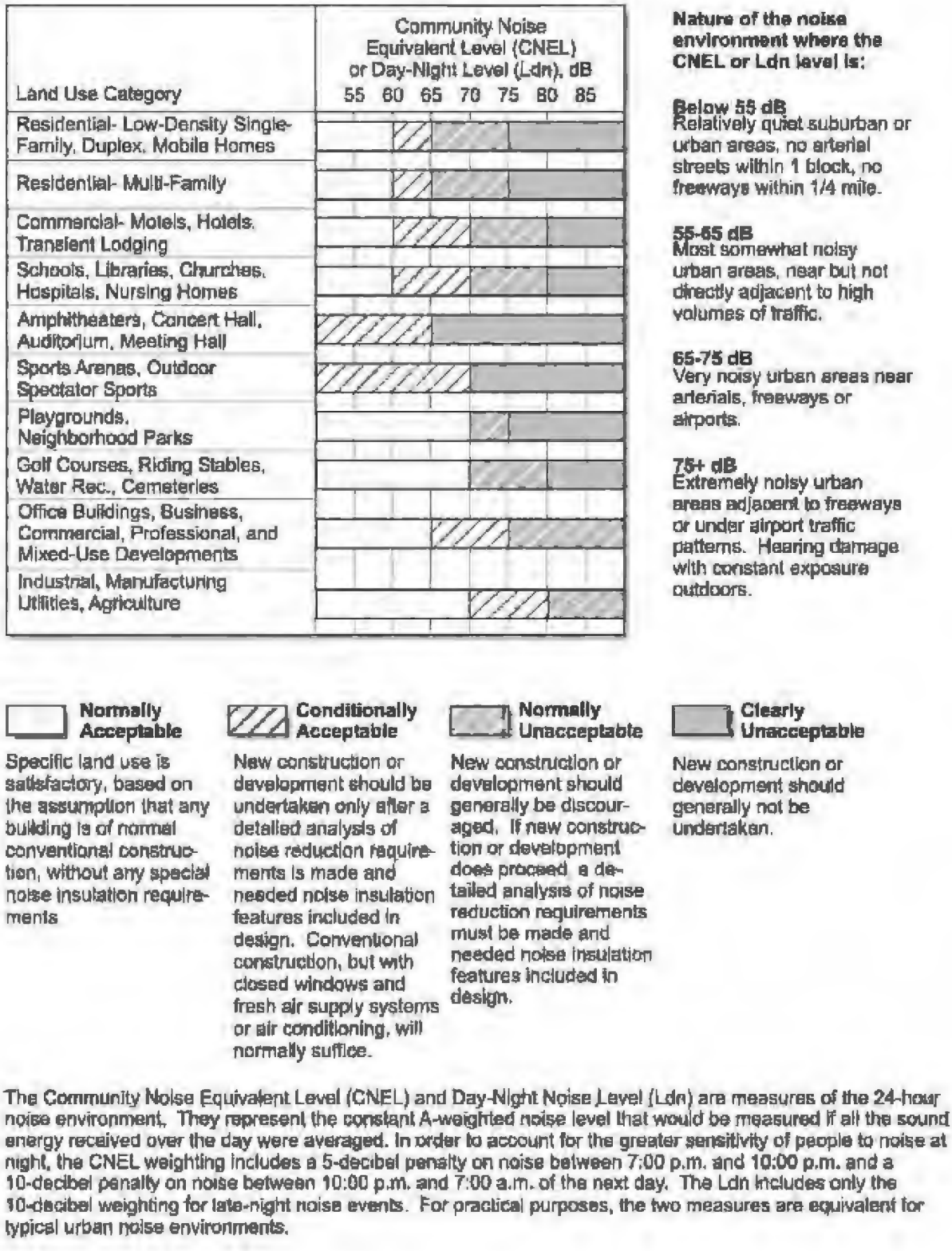
Goal I. *Future land uses compatible with projected noise environments.*
Goal II *Roadway improvements compatible with existing noise-sensitive land uses.*

The noise policies specified in the City of Perris Noise Element provide the guidelines necessary to satisfy these objectives. To ensure the appropriate exterior and interior noise levels for existing and new land uses, Exhibit N-1 of the City of Perris General Plan Noise Element, shown on Exhibit 3-A, identifies a maximum allowable exterior *normally acceptable* noise level of 60 dBA CNEL and an interior noise level limit of 45 dBA CNEL for residential homes impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. This sets an interior noise level limit of 45 dBA CNEL for new residential developments impacted by transportation noise sources such as arterial roads, freeways, airports, railroads, and warehousing uses. The Noise Element also provides several policies to reduce noise impacts from transportation (II.A.1, II.A.2) that includes the use of quieter roadway surface materials, roadway alignment, noise barriers, and pavement surface treatments.

The policies included in the General Plan Noise Element consider land use compatibility and identify exterior noise level compatibility standards for transportation related noise. The *Land Use Compatibility for Community Noise Environments* matrix 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.

According to the City's *Land Use Compatibility for Community Noise Environments* (Exhibit N-1), multi-family residential land uses such as the Prairie View Apartments Project are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL and *conditionally acceptable* with noise levels below 65 dBA CNEL. For land uses within the *normally unacceptable* category, where exterior noise levels range from 65 to 75 dBA CNEL, *new construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design*.

EXHIBIT 3-A: CITY OF PERRIS NOISE COMPATIBILITY GUIDELINE



City of Perris General Plan Noise Element, Exhibit N-1.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Prairie View Apartments, operational noise such as the expected air conditioning units, parking lot vehicle movements, and trash enclosure activities are typically evaluated against standards established under a City's Municipal Code.

The City of Perris Municipal Code, Chapter 7.34 *Noise Control*, Section 7.34.040, establishes the permissible noise level at any point on the property line of the affected residential receivers. The City of Perris Municipal Code does not identify any exterior noise level standards for non-residential land use. Therefore, for residential properties, the exterior noise level shall not exceed a maximum noise level of 80 dBA L_{max} during daytime hours (7:01 a.m. to 10:00 p.m.) and shall not exceed a maximum noise level of 60 dBA L_{max} during the nighttime hours (10:01 p.m. to 7:00 a.m.), as shown on Table 3-1. (15) The City of Perris Municipal Code is included in (13) Appendix 3.1.

Additional exterior noise level standards are identified in the City of Perris General Plan Noise Element Implementation Measure V.A.1 which requires that new industrial facilities within 160 feet of the property line of existing noise-sensitive land uses must demonstrate compliance with a 60 dBA CNEL exterior noise level standard. Table 3-1 shows the Municipal Code and General Plan standards used in this analysis to evaluate the potential operational noise levels from the Project.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Noise Level Standard (dBA)
City of Perris	Residential[1]	Daytime (7:01 a.m. - 10:00 p.m.)	80 dBA L_{max}
		Nighttime (10:01 p.m. - 7:00 a.m.)	60 dBA L_{max}
	Industrial within 160 Feet of PL[2]	24-Hours	60 dBA CNEL

[1] Source: City of Perris Municipal Code, Sections 7.34.040 & 7.34.050 (Appendix 3.1).
[2] Source: City of Perris General Plan Noise Element, Implementation Measure V.A.1.

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Prairie View Apartments site, noise from construction activities is typically evaluated against standards established under a City's Municipal Code. The City of Perris Municipal Code, Section 7.34.060 included in Appendix 3.1, identifies the City's construction noise standards and permitted hours of construction activity (refer to Table 3-1). Further, the City of Perris Municipal Code, Section 7.34.060, states that the noise level standard of 80 dBA L_{max} at residential properties shall apply to the noise-sensitive receiver locations located in the City of Perris. (15)

TABLE 3-2: CONSTRUCTION NOISE STANDARDS

Jurisdiction	Permitted Hours of Construction Activity	Construction Noise Level Standard

City of Perris[1]	7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday).	80 dBA L_{max}

[1] City of Perris Municipal Code, Section 7.34.060 (Appendix 3.1).

3.6 VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Prairie View Apartments, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Perris does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (9 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations.

The construction vibration damage potential criteria include consideration of the building conditions. (3 p. 182) Table 3-2 describes the maximum acceptable transient and continuous vibration building damage potential levels by structure type and condition. The existing buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

3.7 AIRPORT LAND USE COMPATIBILITY

The March Air Reserve Base/Inland Port Airport (MARB/IPA) is located approximately 5.5 miles northwest of the Project site boundary. The March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (MARB/IPA LUCP) includes the policies for determining the land use compatibility of the Project. (14) The MARB/IPA, Map MA-1, indicates that the Project site is located within Compatibility Zone C2, and the Table MA-1 Compatibility Zone Factors indicates that this area is considered to have a moderate noise impact, and is outside the 55 dBA CNEL noise level contour boundaries. Consistent with the Basic Compatibility Criteria, listed in Table MA-2 of the MARB/IPA LUCP, noise sensitive outdoor uses are permitted.

The Project site is located approximately 1.5 miles northeast of the Perris Valley Aviation Airport. This places the Project site approximately 1.0-mile northeast of the Perris Valley Aviation Airport 55 dBA CNEL noise contour according to Map PV-3 of *Appendix A, Proposed Perris Valley Airport Land Use Compatibility Plan,* of the *Riverside County Airport Land Use Plan Policy Document (July 2010)*. Table 2A of the *Riverside County Airport Land Use Plan Policy Document* shows that residential land uses located outside the 55 dBA CNEL noise level contour of Perris Valley Aviation Airport, such as the Project, are considered *normally compatible land use*.

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4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (16) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

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

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

The closest airports which would require additional noise analysis under CEQA Appendix G Guideline C are the MARB/IPA and the Perris Valley Aviation Airport. As previously described in Section 3.7, the Project is in MARB/IPA Compatibility Zone C2, and the Table MA-1 Compatibility Zone Factors indicates that this area is considered to have a *moderate* noise impact as the Project is located outside the 55 dBA CNLE noise contour. In addition, Table MA-2 indicates that the Project land use satisfies the basic compatibility criteria. As discussed in Section 3.7, Table 2A of the *Riverside County Airport Land Use Plan Policy Document* shows that residential land uses located outside the 55 dBA CNEL noise level contour of Perris Valley Aviation Airport are considered compatible. The Project site approximately 1.0-mile northeast of the 55 dBA CNEL noise level contour of Perris Valley Aviation Airport. Therefore, the potential impacts under CEQA Appendix G Guideline C, are *less than significant* and are not further analyzed in this noise study.

4.2 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (17)

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

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (17) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance.

The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (19 p. 2_48).

4.3 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
On-Site	Noise-Sensitive[1]	See Exhibit 3-A	See Exhibit 3-A	
Off-Site	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational	Residential	Noise Level Threshold[2]	80 dBA L_{max}	60 dBA L_{max}
Construction	Noise-Sensitive	It is unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise.[2]		
		Noise Level Threshold[3]	80 dBA L_{max}	n/a
		Vibration Level Threshold[4]	0.3 PPV (in/sec)	n/a

[1] FICON, 1992.
[2] City of Perris Municipal Code, Section 7.34.040 and 7.34.050 (Appendix 3.1).
[3] City of Perris Municipal Code, Section 7.34.060 (Appendix 3.1).
[4] Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.
"Daytime" = 7:01 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:00 a.m., "PPV" = Peak Particle Velocity

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at six 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 shows the Project site and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, February 17, 2022. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

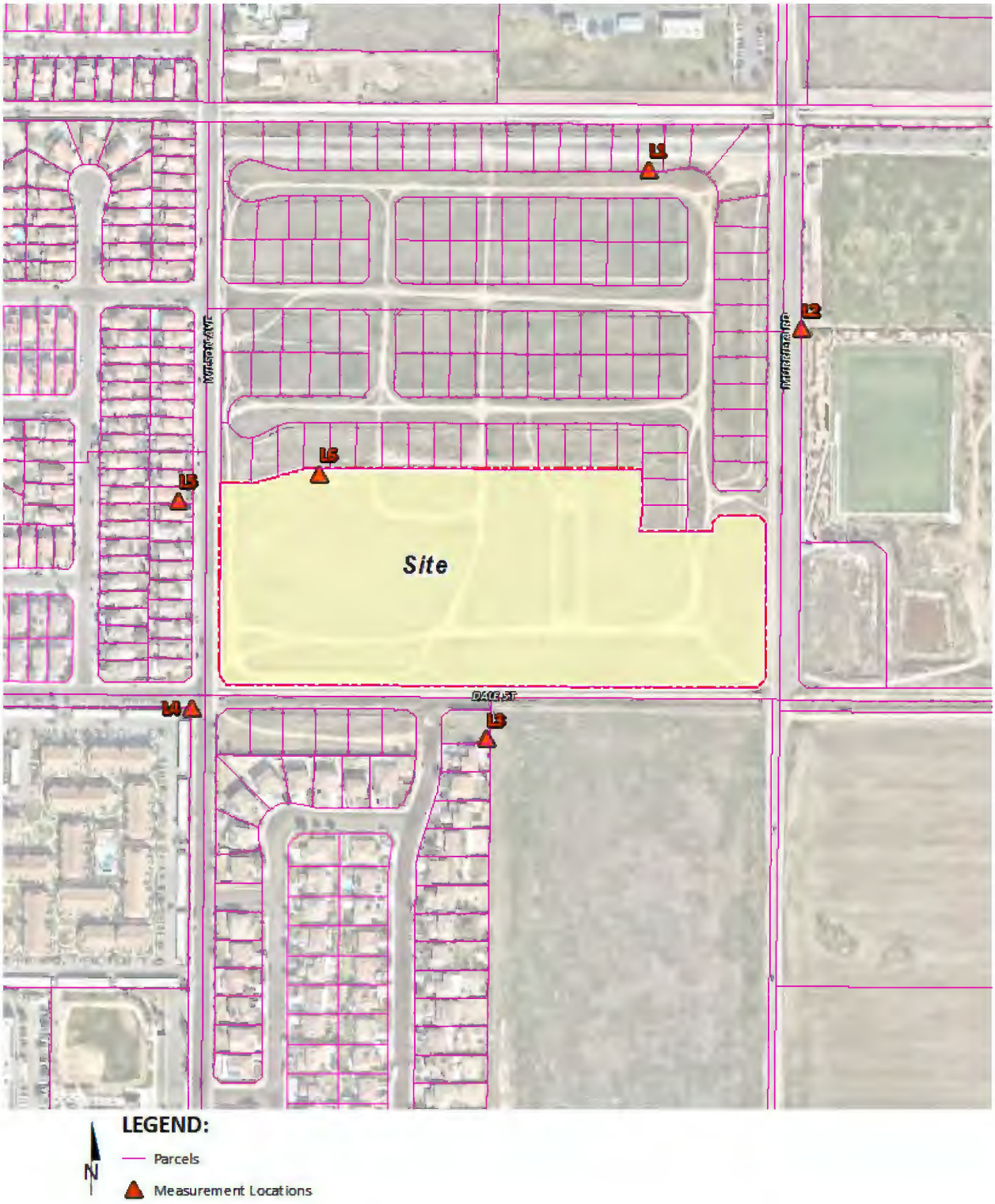
To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL.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

5.2 NOISE MEASUREMENT LOCATIONS

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

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



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5.3 NOISE MEASUREMENT RESULTS

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

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

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located north of the Project site near Sky View Elementary School at 625 Mildred Street.	52.3	50.5
L2	Located northeast of the Project site near Patriot Park at 525 Murrieta Road.	72.9	67.9
L3	Located south of the Project site near single-family residence at 379 Lady Bell Way.	53.7	52.6
L4	Located southwest of the Project site near Park Towne Apartments at 290 Wilson Avenue.	61.6	57.7
L5	Located west of the Project site near single-family residence at 512 Wilson Avenue.	58.2	53.6
L6	Located at the northern edge of the Project's perimeter.	48.7	49.8

[1] See Exhibit 5-A for the noise level measurement locations conducted on February 17, 2022.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods. The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with nearby surface streets and MARB/IPA aircraft flyovers. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations.

6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with the City of Perris General Plan Policies for land use, all transportation related noise levels are presented in terms of the 24-hour CNEL's.

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. (21) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (22) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

6.2 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-1. Based on the City of Perris General Plan Circulation Element Exhibit CE-4, Dale Street and Wilson Avenue are classified as a 2-lane Collectors and Murrieta Road is classified as a 2-lane Major Collector. (23). To predict the future on-site noise environment at the Project site, parameters including the number of lanes were obtained from the City of Perris General Plan Circulation Element Table CE-2 and average daily traffic volumes were obtain from Prairie View Apartments Traffic Analysis prepared by Urban Crossroads in June 2022.

TABLE 6-1: ON-SITE ROADWAY PARAMETERS

Roadway	Lanes	Classification[1]	Design Capacity (ADT)[2]	Speeds (MPH)[3]	Site Conditions
Dale Street	2	Collector	1,750	25	Soft
Wilson Avenue	2	Collector	3,100	25	Soft
Murrieta Road	2	Major Collector	9,300	25	Soft

[1] City of Perris General Plan Circulation Element, Exhibit CE-4, 2008.
[2]Prairie View Aparetments Traffic Analysis, Exhibit 7-2, June 18, 2022.
[3] Speed limits

The traffic volumes shown in Table 6-1 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify potential mitigation measures (if any) that address the worst-case future 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. 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. (24) Table 6-2 presents the time-of-day vehicle splits by vehicle type used to develop the 24-hour CNEL, and Table 6-3 presents the total traffic flow distributions (vehicle mixes) used for this analysis. The information in Tables 6-2 and 6-3 provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Model based on roadway types.

TABLE 6-2: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	75.54%	13.97%	10.49%	100.00%
Medium Trucks	48.91%	2.17%	48.91%	100.00%
Heavy Trucks	47.30%	5.40%	47.30%	100.00%

[1] Riverside (Collector, Secondary) Mix, 2017
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-3: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

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

[1] Typical Southern California vehicle mix.

To predict the future noise environment at each building 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 site plan showing the plotting of each building in relationship to adjacent analyzed roadways, as shown in Appendix 4.1. The plans are 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 first-floor exterior noise level receivers were placed five feet above the pad elevation. Second- floor receiver locations were placed at 14 feet above the pad elevations. Third-floor receiver locations were placed at 23 feet above the pad elevations.

6.3 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-4 identifies the fourteen off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Perris General Plan Connected City Element, and the posted vehicle speeds. Consistent with the Traffic Analysis prepared by Urban Crossroads, Inc. for the Project, (25) the off-site traffic noise analysis includes the following traffic scenarios.

- Existing (2022)
- Existing Plus Project (E+P)
- Opening Year (2024) Without Project (OY)
- Opening Year (2024) With Project (OY+P)
- Horizon Year (2045) Without Project (HY)

- Horizon Year (2045) With Project (HY+P)

The average daily traffic (ADT) volumes used for this study are presented on Table 6-5. Table 6-2 and Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits used for calculating CNEL values.

TABLE 6-4: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Receiving Land Use[1]	Classification[2]	Centerline Distance to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	Secondary Arterial	40'	45
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	Secondary Arterial	95'	45
3	Redlands Ave.	n/o Dale St.	Sensitive	Secondary Arterial	35'	25
4	Wilson Ave.	n/o San Jacinto Ave.	Sensitive	Collector	35'	25
5	Wilson Ave.	n/o Dale St.	Sensitive	Collector	35'	25
6	Wilson Ave.	n/o Driveway 1	Sensitive	Collector	35'	25
7	Murrieta Rd.	n/o San Jacinto Ave.	Sensitive	Major Collector	75'	35
8	Murrieta Rd.	n/o Driveway 2	Sensitive	Major Collector	45'	35
9	San Jacinto Ave.	w/o Murrieta Rd.	Non-Sensitive	Secondary Arterial	100'	45
10	San Jacinto Ave.	w/o Wilson Ave.	Sensitive	Secondary Arterial	60'	45
11	San Jacinto Ave.	w/o Redlands Ave.	Non-Sensitive	Secondary Arterial	70'	45
12	Dale St.	w/o Redlands Ave.	Sensitive	Collector	35'	25
13	Dale St.	e/o Redlands Ave.	Sensitive	Collector	35'	25
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	Collector	105'	25

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] City of Perris General Plan Housing Element.
[3] Based upon the right-of-way distances for each roadway classification provided in the General Plan Circulation Element.

TABLE 6-5: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Existing		Opening Year (2024)		Horizon Year (2045)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Redlands Ave.	n/o I-215NB Off Ramp	30,450	31,150	43,450	44,150	54,500	55,250
2	Redlands Ave.	n/o San Jacinto Ave.	14,450	14,800	18,350	18,650	25,900	26,250
3	Redlands Ave.	n/o Dale St.	12,750	12,950	16,550	16,750	20,000	20,200
4	Wilson Ave.	n/o San Jacinto Ave.	3,050	3,100	3,150	3,250	3,500	3,550
5	Wilson Ave.	n/o Dale St.	2,450	2,750	2,550	2,850	2,800	3,100
6	Wilson Ave.	n/o Driveway 1	2,450	2,500	2,550	2,550	2,800	2,850
7	Murrieta Rd.	n/o San Jacinto Ave.	5,100	5,650	5,300	5,850	8,750	9,300
8	Murrieta Rd.	n/o Driveway 2	5,100	5,300	5,300	5,500	5,850	6,000
9	San Jacinto Ave.	w/o Murrieta Rd.	15,250	15,550	15,850	16,200	42,300	42,650
10	San Jacinto Ave.	w/o Wilson Ave.	18,250	18,650	1,900	19,400	20,900	23,000
11	San Jacinto Ave.	w/o Redlands Ave.	6,050	6,050	10,300	10,300	24,400	24,400
12	Dale St.	w/o Redlands Ave.	1,250	1,250	1,300	1,300	2,300	2,300
13	Dale St.	e/o Redlands Ave.	1,700	2,250	1,800	2,300	1,950	2,500
14	Dale St.	e/o Wilson Ave.	1,100	1,600	1,125	1,650	1,240	1,760

[1]Prairie View Apartments (DPR20-00008) Traffic Analysis, Urban Crossroads, Inc.

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7 ON-SITE TRAFFIC NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the traffic noise exposure and to identify potential necessary noise abatement measures for the proposed Prairie View Apartments Project. It is expected that the primary source of noise impacts to the Project site will be traffic noise from Live Oak Avenue in the Project study area. The Project will also experience some background traffic noise impacts from its internal local 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.

7.1 ON-SITE EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-1 to 6-3, the expected future exterior noise levels were calculated. Table 7-1 presents a summary of future exterior noise level impacts at the building facades of the proposed residential dwelling units consistent with the standards of the City of Perris General Plan Noise Element. The on-site traffic noise level analysis indicates that the Project will experience unmitigated exterior noise levels ranging from 52.2 to 62.2 dBA CNEL at the first-floor elevation. This noise analysis shows that the Project will satisfy the City of Perris noise standards for residential land uses. All calculations are provided in Appendix 7.1.

TABLE 7-1: EXTERIOR NOISE LEVELS (CNEL)

Lot	Roadway	Unmitigated Noise Level Exterior (dBA CNEL)[1]
Building 2	Wilson Avenue	52.2
Building 3	Wilson Avenue	52.8
Building 1	Dale Street	65.7
Building 3	Dale Street	66.2
Building 1	Murrieta Road	50.7
Building 3	Murrieta Road	50.3
Clubhouse	Murrieta Road	55.9

[1] Exterior noise level calculations are included Appendix 7.1.

7.2 ON-SITE INTERIOR NOISE ANALYSIS

The future noise levels were calculated at the first, second, and third-floor building façades to ensure that the interior noise levels comply with the City of Perris 45 dBA CNEL interior noise standards.

7.2.1 NOISE REDUCTION METHODOLOGY

The interior noise level is the difference between the predicted exterior noise level at the building façade 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.

7.2.2 INTERIOR NOISE LEVEL ASSESSMENT

Tables 7-2 to 7-4 show that the residential dwelling units nearest Wilson Avenue, Dale Street, and Murrieta Road will not require a windows-closed condition with a means of mechanical ventilation (e.g. air conditioning) to achieve the City of Perris 45 dBA CNEL interior noise level standard. Table 7-2 shows that the future unmitigated noise levels at the first-floor building façade are expected to range from 44.1 to 54.3 dBA CNEL. Table 7-3 shows the future unmitigated noise levels at the second-floor building façade will range from 49.5 to 57.4 dBA CNEL, and Table 7-4 shows the future unmitigated noise levels at the third-floor building façade will range from 49.5 to 57.4dBA CNEL. The interior noise level analysis shows that the City of Perris 45 dBA CNEL with windows open interior noise standards can be satisfied using standard windows and sliding glass doors with a minimum STC ratings of 27.

TABLE 7-2: FIRST FLOOR INTERIOR NOISE IMPACTS (CNEL)

Location	Roadway	Noise Level at Façade[1]	Required Interior NR[2]	Calculated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
Building 2	Wilson Avenue	45.1	0.1	25.0	No	20.1	45	No
Building 3	Wilson Avenue	46.2	1.2	25.0	No	21.2	45	No
Building 1	Dale Street	52.1	7.1	25.0	No	27.1	45	No
Building 3	Dale Street	54.3	9.3	25.0	No	29.3	45	No
Building 1	Murrieta Road	44.5	-0.5	25.0	No	19.5	45	No
Building 3	Murrieta Road	44.1	-0.9	25.0	No	19.1	45	No
Clubhouse	Murrieta Road	48.1	3.1	25.0	No	23.1	46	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.
[3] Estimated minimum interior noise reduction.
[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.
"NR" = Noise reduction

TABLE 7-3: SECOND FLOOR INTERIOR NOISE IMPACTS (CNEL)

Location	Roadway	Noise Level at Façade[1]	Required Interior NR[2]	Calculated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
Building 2	Wilson Avenue	50.9	5.9	25.0	No	25.9	45.0	No
Building 3	Wilson Avenue	52.4	7.4	25.0	No	27.4	45.0	No
Building 1	Wilson Avenue	56.2	11.2	25.0	No	31.2	45.0	No
Building 3	Dale Street	57.4	12.4	25.0	No	32.4	45.0	No
Building 1	Dale Street	50.2	5.2	25.0	No	25.2	45.0	No
Building 3	Murrieta Road	49.5	4.5	25.0	No	24.5	45.0	No
Clubhouse	Murrieta Road	54.4	9.4	25.0	No	29.4	46.0	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.
[3] Calculated minimum interior noise reduction in second floor bedrooms (Table 5-2)
[4] Does the required interior noise reduction trigger upgraded with a minimum STC rating of 27?
[5] Estimated interior noise level with minimum STC rating for all windows.
"NR" = Noise reduction

TABLE 7-4: THIRD FLOOR INTERIOR NOISE IMPACTS (CNEL)

Location	Roadway	Noise Level at Façade[1]	Required Interior NR[2]	Calculated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
Building 2	Wilson Avenue	50.9	5.9	25.0	No	25.9	45.0	No
Building 3	Wilson Avenue	52.4	7.4	25.0	No	27.4	45.0	No
Building 1	Dale Street	57.2	12.2	25.0	No	32.2	45.0	No
Building 3	Dale Street	57.4	12.4	25.0	No	32.4	45.0	No
Building 1	Murrieta Road	50.1	5.1	25.0	No	25.1	45.0	No
Building 3	Murrieta Road	49.5	4.5	25.0	No	24.5	45.0	No
Clubhouse	Murrieta Road	54.4	9.4	25.0	No	29.4	46.0	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.
[3] Calculated minimum interior noise reduction in second floor bedrooms (Table 5-2)
[4] Does the required interior noise reduction trigger upgraded with a minimum STC rating of 27?
[5] Estimated interior noise level with minimum STC rating for all windows.
"NR" = Noise reduction

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8 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the *Prairie View Apartments (DPR20-0008) Traffic Analysis* (25). 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.
    1. Existing With Project: This scenario refers to the existing present-day noise conditions with the proposed Project.
- Opening Year 2024 Without the Project: This scenario refers to cumulative near term noise conditions without the proposed Project.
    1. Opening Year 2024 Year With Project: This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.
- Horizon Year 2045 Without the Project: This scenario refers to Year 2045 cumulative noise conditions without the proposed Project.
    1. Horizon Year 2045 Year With Project: This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.

8.1 TRAFFIC NOISE CONTOURS

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

Tables 8-1 through 8-6 present a summary of the exterior traffic noise levels. Roadway segments are analyzed in each of the following timeframes: Existing without and with Project conditions, OY Year 2024 without and with Project conditions, and HY 2045 without and with Project conditions. Appendix 8.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 8-1: EXISTING WITHOUT PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	71.7	65	140	303
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	68.5	RW	85	184
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	61.8	RW	RW	66
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.0	RW	11	24
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.1	RW	10	21
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.1	RW	10	21
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	62.6	13	28	59
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.6	13	28	59
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.1	RW	RW	13
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	55.5	RW	RW	16
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	53.6	RW	RW	12

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 8-2: EXISTING WITH PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	71.8	66	143	307
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	68.6	RW	87	187
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	61.9	RW	RW	67
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.1	RW	11	24
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.6	RW	10	22
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.2	RW	10	21
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	63.0	14	30	64
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.7	13	28	61
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.1	RW	RW	13
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	56.7	RW	RW	20
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	55.2	RW	RW	16

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 8-3: OPENING YEAR 2024 WITHOUT PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	73.3	83	178	384
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	69.5	RW	100	216
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	62.9	RW	RW	78
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.2	RW	11	24
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.2	RW	10	21
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.2	RW	10	21
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	62.7	13	28	61
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.7	13	28	61
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.3	RW	RW	14
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	55.7	RW	RW	17
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	53.7	RW	RW	12

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 8-4: OPENING YEAR 2024 WITH PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	73.3	84	180	388
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	69.6	RW	101	218
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	63.0	RW	37	79
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.3	5	12	25
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.7	5	11	23
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.2	5	10	21
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	63.2	14	30	65
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.9	13	29	62
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.3	3	6	14
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	56.8	4	9	20
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	55.3	3	7	16

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 8-5: HORIZON YEAR 2045 WITHOUT PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	74.3	96	207	446
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	71.0	59	126	272
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	63.7	RW	RW	89
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.6	RW	12	26
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.6	RW	11	23
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.6	RW	11	23
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	64.9	18	40	85
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	63.2	14	30	65
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	56.8	RW	RW	20
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	56.1	RW	RW	18
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	54.1	RW	RW	13

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 8-6: HORIZON YEAR 2045 WITH PROJECT NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Nearest Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	74.3	97	209	450
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	71.1	59	127	274
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	63.8	RW	RW	89
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.7	RW	12	27
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	58.1	RW	11	24
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.7	RW	11	23
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	65.2	19	41	89
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	63.3	14	31	66
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	56.8	RW	RW	20
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	57.2	RW	10	21
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	55.6	RW	RW	17

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

8.2 EXISTING PROJECT TRAFFIC NOISE LEVELS

Table 8-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 53.6 to 71.7 dBA CNEL, without accounting for any noise

attenuation features such as noise barriers or topography. Table 8-2 shows the Existing plus Project conditions will range from 54.1 to 71.8 dBA CNEL. Table 8-7 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Section 4.2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic noise levels.

8.3 OPENING YEAR 2024 TRAFFIC NOISE LEVEL INCREASES

Table 8-3 presents the Opening Year 2024 without Project conditions CNEL noise levels. The Opening Year 2024 without Project exterior noise levels are expected to range from 53.7 to 73.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 8-4 shows the Opening Year 2024 with Project conditions will range from 54.3 to 73.3 dBA CNEL. Table 8-8 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Section 4.2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic noise levels.

8.3 HORIZON YEAR 2045 TRAFFIC NOISE LEVEL INCREASES

Table 8-5 presents the Horizon Year 2045 without Project conditions CNEL noise levels. The Horizon Year 2045 without Project exterior noise levels are expected to range from 54.1 to 74.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 8-6 shows the Horizon Year 2045 with Project conditions will range from 55.6 to 74.3 dBA CNEL. Table 8-9 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.5 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Section 4.2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases due to unmitigated Project-related traffic noise levels.

TABLE 8-7: EXISTING WITH PROJECT TRAFFIC NOISE INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	71.7	71.8	0.1	1.5	No
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	68.5	68.6	0.1	1.5	No
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	61.8	61.9	0.1	3.0	No
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.0	58.1	0.1	5.0	No
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.1	57.6	0.5	5.0	No
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.1	57.2	0.1	5.0	No
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	62.6	63.0	0.4	3.0	No
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.6	62.7	0.1	3.0	No
9	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.1	54.1	0.0	5.0	No
10	Dale St.	e/o Redlands Ave.	Non-Sensitive	55.5	56.7	1.2	5.0	No
11	Dale St.	e/o Wilson Ave.	Non-Sensitive	53.6	55.2	1.6	5.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 8-8: OPENING YEAR 2024 WITH PROJECT TRAFFIC NOISE INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	73.3	73.3	0.0	1.5	No
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	69.5	69.6	0.1	1.5	No
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	62.9	63.0	0.1	3.0	No
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.2	58.3	0.1	5.0	No
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.2	57.7	0.5	5.0	No
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.2	57.2	0.0	5.0	No
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	62.7	63.2	0.5	3.0	No
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	62.7	62.9	0.2	3.0	No
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	54.3	54.3	0.0	5.0	No
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	55.7	56.8	1.1	5.0	No
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	53.7	55.3	1.6	5.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 8-9: HORIZON YEAR 2045 WITH PROJECT TRAFFIC NOISE INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Redlands Ave.	n/o I-215NB Off Ramp	Non-Sensitive	74.3	74.3	0.0	1.5	No
2	Redlands Ave.	n/o San Jacinto Ave.	Sensitive	71.0	71.1	0.1	1.5	No
3	Redlands Ave.	n/o Dale St.	Non-Sensitive	63.7	63.8	0.1	3.0	No
4	Wilson Ave.	n/o San Jacinto Ave.	Non-Sensitive	58.6	58.7	0.1	5.0	No
5	Wilson Ave.	n/o Dale St.	Non-Sensitive	57.6	58.1	0.5	5.0	No
6	Wilson Ave.	n/o Driveway 1	Non-Sensitive	57.6	57.7	0.1	5.0	No
7	Murrieta Rd.	n/o San Jacinto Ave.	Non-Sensitive	64.9	65.2	0.3	3.0	No
8	Murrieta Rd.	n/o Driveway 2	Non-Sensitive	63.2	63.3	0.1	3.0	No
12	Dale St.	w/o Redlands Ave.	Non-Sensitive	56.8	56.8	0.0	5.0	No
13	Dale St.	e/o Redlands Ave.	Non-Sensitive	56.1	57.2	1.1	5.0	No
14	Dale St.	e/o Wilson Ave.	Non-Sensitive	54.1	55.6	1.5	5.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

9 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 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, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

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

R1: Location R1 represents the property line of the existing Sky View Elementary School at 625 Mildred Street, approximately 841 feet north of the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the property line of the existing noise sensitive Patriot Park at 525 Murrieta Road, approximately 79 feet east of the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the property line of the existing noise sensitive residence at 379 Lady Bell Way, approximately 134 feet south of the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the property line of the existing noise sensitive Park Towne Apartments at 290 Wilson Avenue, approximately 98 feet southwest of the Project site. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

R5: Location R5 represents the property line of the existing noise sensitive residence at 526 Wilson Avenue, directly approximately 64 feet west of the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

R6: Location R6 represents the northern property line of the proposed Project. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.

EXHIBIT 9-A: RECEIVER LOCATIONS

10 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 9, resulting from the operation of the proposed Prairie View Apartments Project. Exhibit 10-A identifies the noise source locations used to assess the operational noise levels.

10.1 OPERATIONAL NOISE SOURCES

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

AIR CONDITIONING UNITS

To assess the noise levels created by the air conditioning units, reference noise levels were taken from equipment specifications for a 3-ton residential packaged air conditioning unit (Carrier 48VGB24). Each air conditioning unit was modeled as operating 45 minutes per hour during the daytime and 30 minutes during the nighttime. For this noise analysis, the air conditioning units are expected to be ground mounted adjacent to the proposed buildings. The air conditioning units are anticipated to be located 3 feet above the ground level. At a uniform reference distance of 50 feet, each unit would generate a reference noise level of 44.4 dBA L_{max}.

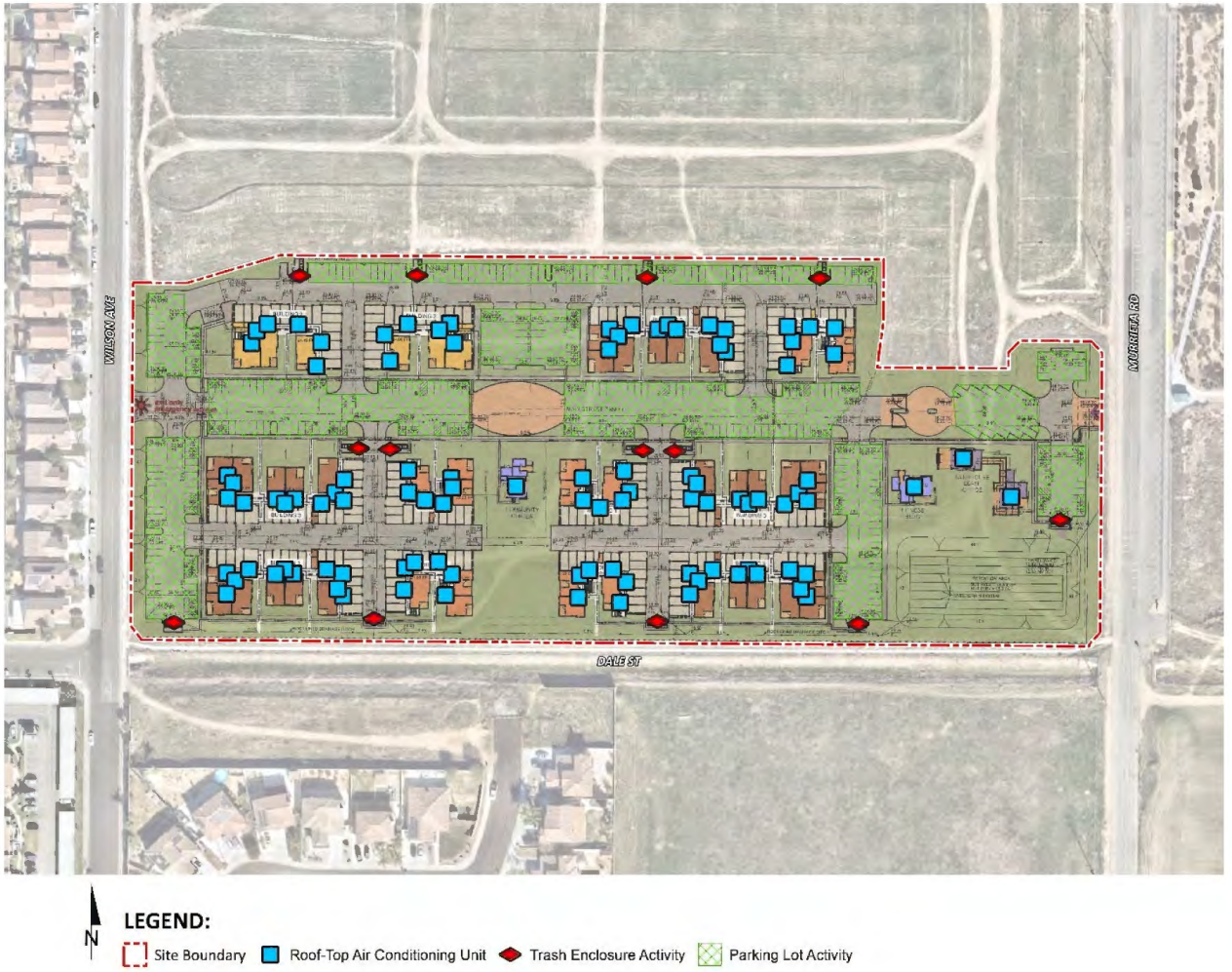
PARKING LOT/GARAGE ACTIVITY

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 60.2 dBA L_{max} and 56.1 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project site. The measured reference noise level at the uniform 50-foot reference distance is 71.1 dBA L_{max} and 56.8 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for each of the Project buildings. Typical trash enclosure activities are estimated to occur for 5 minutes per hour.

EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS



10.2 REFERENCE NOISE LEVELS

To estimate the 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. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The reference project operational noise levels are based on the Project related noise sources shown on Exhibit 10-A. The reference Project operational sound power levels are summarized in Table 10-1.

TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source[1]	Noise Source Height (Feet)	Min./Hour[3]		Reference Noise Level (dBA L_{eq})	Reference Noise Level (dBA L_{max})
		Day	Night	@ 50 Feet	@ 50 Feet
Air Conditioning Units[2]	3'	45	30	44.4	44.6
Parking Lot Vehicle Movements	5'	60	60	56.1	60.2
Trash Enclosure Activity	8'	10	10	56.8	71.1

[1] As measured by Urban Crossroads, Inc.
[2] Carrier 48VGB24 3-ton model packaged air conditioning unit.
[3] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.
"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.

10.3 CADNAA NOISE PREDICTION MODEL

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

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

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source)

propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for simi-hard ground surfaces.

10.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include air conditioning units, parking lot vehicle movements, and trash enclosure activities, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 10-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 42.6 to 62.0 dBA L_{max}.

TABLE 10-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{max})					
	R1	R2	R3	R4	R5	R6
Air Conditioning Units	33.6	45.1	31.8	42.8	46.1	55.9
Parking Lot Vehicle Movements	30.1	34.3	38.8	35.4	35.5	38.5
Trash Enclosure Activity	41.7	49.6	51.9	52.3	49.3	60.7
Total (All Noise Sources)	**42.6**	**51.0**	**52.1**	**52.8**	**51.1**	**62.0**

[1] See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.

Table 10-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 39.5 to 59.4 dBA L_{max}. Appendix 10.1 includes the detailed noise model inputs used to estimate the Project operational noise levels.

TABLE 10-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{max})					
	R1	R2	R3	R4	R5	R6
Air Conditioning Units	33.6	45.1	31.8	42.8	46.1	55.9
Parking Lot Vehicle Movements	29.1	33.3	37.8	34.4	34.5	37.5
Trash Enclosure Activity	37.7	45.6	47.9	48.4	45.4	56.7
Total (All Noise Sources)	**39.5**	**48.5**	**48.4**	**49.6**	**48.9**	**59.4**

[1] See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.

10.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Perris exterior noise level standards at nearby noise-sensitive receiver locations. Table 10-4 shows the operational noise levels associated with Prairie View Apartments Project will satisfy the City of Perris 80 dBA L_{max} daytime and 60 dBA L_{eq} nighttime exterior noise level standards at the nearest receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 10-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Lmax)[2]		Noise Level Standards (dBA Lmax)[3]		Noise Level Standards Exceeded?[4]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	42.6	39.5	80.0	60.0	No	No
R2	51.0	48.5	80.0	60.0	No	No
R3	52.1	48.4	80.0	60.0	No	No
R4	52.8	48.4	80.0	60.0	No	No
R5	51.1	45.4	80.0	60.0	No	No
R6	62.0	56.7	80.0	60.0	No	No

[1] See Exhibit 9-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Table 10-1.
[3] City of Cathedral City Municipal Code, 11.96.303 (Appendix 3.1)
[4] Do the estimated Project operational noise source activities exceed the noise level standards? "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

10.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

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

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment.

Noise level increases are assessed at location where existing receivers would experience an increase in ambient noise levels. In this analysis, R6 is undeveloped and represents a property line and used for determining compliance with the City of Perris noise level limits and other property line standards. Therefore, since no existing receiver is present to experience an increase in noise levels and R6 is not evaluated against the increase criteria.

As indicated on Table 10-5, the Project will generate an unmitigated daytime operational noise level increase ranging from 0.0 to 1.1 dBA L_{max} at the nearest receiver locations. Project-related daytime operational noise level increases are predicted to satisfy the noise level increase significance criteria presented on Table 4-1. Table 10-6 shows that the Project will generate an unmitigated nighttime operational noise level increase ranging from 0.0 to 0.1 dBA L_{max} at the nearest receiver locations. Therefore, the incremental Project operational noise level increases are considered *less than significant* at all receiver locations.

TABLE 10-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria	Increase Criteria Exceeded?
R1	42.6	L1	52.3	52.7	0.4	5.0	No
R2	47.3	L2	72.9	72.9	0.0	1.5	No
R3	48.2	L3	53.7	54.8	1.1	5.0	No
R4	49.0	L4	61.6	61.8	0.2	3.0	No
R5	47.5	L5	58.2	58.6	0.4	5.0	No

[1] See Exhibit 9-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 10-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.

TABLE 10-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria	Increase Criteria Exceeded?
R1	30.2	L1	52.3	52.3	0.0	5.0	No
R2	39.4	L2	72.9	72.9	0.0	1.5	No
R3	37.3	L3	53.7	53.8	0.1	5.0	No
R4	38.8	L4	61.6	61.6	0.0	3.0	No
R5	40.2	L5	58.2	58.3	0.1	5.0	No

[1] See Exhibit 9-A for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 10-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.

11 CONSTRUCTION ANALYSIS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 11-A shows the construction activity boundaries in relation to the nearby sensitive receiver locations previously described in Section 9. City of Perris Municipal Code Section 7.34.060, states that the permitted hours of construction activity are 7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday) and that the noise level standard of 80 dBA L_{max} at residential properties shall apply to the noise-sensitive receiver locations located in the City of Perris.

If Project construction activity occurs outside of the hours specified in the Municipal Code, noise levels shall satisfy the City of Perris construction noise level thresholds of 80 dBA L_{max} during construction activity.

11.1 CONSTRUCTION NOISE LEVELS

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

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

11.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe peak construction noise activities, this construction noise analysis was prepared using reference noise level measurements published in the *Road Construction Noise Model* (RCNM) by the Federal Highway Administration (FHWA) (26). The FHWA model provides a comprehensive source of reference construction noise levels. Table 11-1 provides a summary of the RCNM construction reference noise level measurements expressed in hourly average dBA L_{max} using the estimated RCNM usage factors (26) to describe the construction activities for each stage of Project construction.

EXHIBIT 11-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS

TABLE 11-1: TYPICAL CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{max})[1]	Highest Reference Noise Level (dBA L_{max})
Site Preparation	Crawler Tractors	81	81
	Hauling Trucks	75	
	Rubber Tired Dozers	75	
Grading	Graders	83	83
	Excavators	68	
	Compactors	74	
Building Construction	Cranes	75	76
	Tractors	76	
	Welders	69	
Paving	Pavers	73	76
	Paving Equipment	72	
	Rollers	76	
Architectural Coating	Cranes	75	75
	Air Compressors	71	
	Generator Sets	70	

[1] Update of Noise Database for Prediction of Noise on Construction and Open Sites by the Department for Environment, Food and Rural Affairs (DEFRA) expressed in maximum noise levels L_{max} based on estimated usage factors from the FHWA Roadway Construction Noise Model (RCNM).

11.3 TYPICAL CONSTRUCTION NOISE ANALYSIS

Table 11-2 shows the Project construction equipment reference noise levels used in this analysis and the resulting Project-related construction noise levels at each receiver location when the highest reference noise level is operating at a single point nearest each sensitive receiver location. Table 11-2 shows that the Project-related construction noise levels will range from 58.6 to 75.8 dBA L_{max} at the sensitive receiver locations in the City of Perris.

11.4 TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest residential receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{max} is used as the City's threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest residential receiver locations will satisfy the daytime 80 dBA L_{max} significance threshold during Project construction activities as shown on Table 8-3. Therefore, the noise impacts due to Project construction noise is considered *less than significant*.

TABLE 11-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	55.1	58.6	56.5	52.2	50.8	58.6
R2	63.6	67.1	65.0	60.7	59.3	67.1
R3	63.8	67.3	65.2	60.9	59.5	67.3
R4	62.1	65.6	63.5	59.2	57.8	65.6
R5	63.7	67.2	65.1	60.8	59.4	67.2
R6	72.3	75.8	73.7	69.4	68.0	75.8

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 11.1.

TABLE 11-3: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})			
	Highest Construction Noise Levels[2]	Land Use	Threshold[3]	Threshold Exceeded?[4]
R1	58.6	School	80	No
R2	67.1	Park	80	No
R3	67.3	Residential	80	No
R4	65.6	Residential	80	No
R5	67.2	Residential	80	No
R6	75.8	Residential	80	No

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Highest construction noise level operating at the Project site boundary to nearby receiver locations (Table 11-2).
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

11.5 TYPICAL CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 11-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for building damage using the following vibration assessment methods defined by the Caltrans. To describe the vibration impacts the Caltrans provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 11-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 11-5 presents the expected Project related vibration levels at the nearest receiver locations. R6 is not assessed as it does not represent a location of an actual receiver as there is no existing or proposed building at or near the location. At distances ranging from 75 to 841 feet from Project construction activities, construction vibration velocity levels are estimated to range from less than 0.00 to 0.017 PPV (in/sec). Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec) for older residential buildings, the typical Project construction vibration levels will satisfy the building damage thresholds at all receiver locations. In addition, the typical construction vibration levels at the nearest sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site boundaries.

TABLE 11-5: CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver Location[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]					Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level		
R1	841'	0.000	0.000	0.000	0.000	0.000	0.30	No
R2	79'	0.001	0.006	0.014	0.016	0.016	0.30	No
R3	134'	0.000	0.003	0.006	0.007	0.007	0.30	No
R4	98'	0.000	0.005	0.010	0.011	0.011	0.30	No
R5	75'	0.001	0.007	0.015	0.017	0.017	0.30	No

[1] Construction receiver locations are shown on Exhibit 11-A.
[2] Distance from receiver location to Project construction boundary.
[3] Based on the Vibration Source Levels of Construction Equipment (Table 11-4).
[4] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Tables 19, p. 38
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

12 REFERENCES

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3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
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22. **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.

23. **City of Perris.** *General Plan Circulation Element.* 2008.

24. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.

25. **Urban Crossroads, Inc.** *Southridge Fontana (PAM21-0081) Traffic Analysis.* 2022.

26. **FHWA.** *Roadway Construction Noise Model.* January 2006.

13 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Prairie View Apartments 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 (619) 788-1971.

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EDUCATION

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California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
APA – American Planning Association
AWMA – Air and Waste Management Association

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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APPENDIX 3.1:

CITY OF PERRIS MUNICIPAL CODE

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Rancho Mirage, California Municipal Code

Title 8 HEALTH AND SAFETY

Chapter 8.45 NOISE

8.45.010 Purpose.

8.45.020 Definitions.

8.45.030 Exterior noise level limits.

8.45.040 Noise level measurement.

8.45.050 Special provisions and exemptions.

8.45.060 Additional prohibition.

8.45.065 Landscape maintenance.

8.45.070 Administration.

8.45.080 Violations and enforcement procedures.

8.45.010 Purpose.

The city has established a quality of life and environment in which peace and quiet is highly valued by its residents, visitors and businesses. The existence of excessive noise within the city is a condition which is detrimental to the health, safety, comfort, welfare and quality of life of the citizenry and shall be regulated in the public interest. This chapter has been created to implement the goals and policies of the noise element of the city's general plan and to prohibit undesirable noises in the community. This chapter shall be referred to and cited as the Rancho Mirage noise ordinance. (Ord. 633 § 1(Exh. A), 1995)

8.45.020 Definitions.

Ambient noise level means the all encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

Cumulative period means an additive period of time consisting of individual time segments which may be continuous or interrupted.

Decibel (dBA) means a unit of sound level measured on a sound level meter using the A-weighting network.

Emergency means any occurrence or set of circumstances involving actual or imminent physical danger, crisis, trauma or property damage which demands immediate action.

Noise level means the same as sound level the terms are interchangeable.

Person means any individual, association, partnership, corporation, organization, or public agency, including associated officer(s), employee(s) or department(s).

Sound level means the quantity of decibels measured using the frequency weighting of A of a sound level meter.

Sound level meter means an instrument meeting the American National Standards Institute's standard S1.4-1983 or later revision, for Type 1 or Type 2 specifications; or an instrument and the associated recording and analyzing equipment which will provide equivalent data. (Ord. 633 § 1(Exh. A), 1995)

8.45.030 Exterior noise level limits.

No person shall operate or cause to be operated any source of sound or allow the creation of sound or noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, as measured on any other property, to exceed:

A. The noise level for the applicable zone specified in Table A-1 for a cumulative period of more than thirty minutes in any hour of the applicable time period.

Table A-1

Land Use/Zone	Time of Day	Noise Level (dBA)
Residential, Low Density (R-E, H-R, R-L-2, R-L-3)	7:00 a.m. to 6:00 p.m.	55
	6:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
Residential, Medium and High Density, Hospital, Open Space (OS, R-M, R-H, MHP)	7:00 a.m. to 6:00 p.m.	60
	6:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial Office, Resort Commercial, Mixed Use, Institutional (O, P, Rs-H, M-U)	7:00 a.m. to 6:00 p.m.	65
	6:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	55
Commercial Neighborhood, General Commercial, Commercial Recreation, Light Industrial (C-N, C-G, I-L)	7:00 a.m. to 6:00 p.m.	70
	6:00 p.m. to 10:00 p.m.	65
	10:00 p.m. to 7:00 a.m.	60

B. For cumulative periods of time less than thirty minutes in an hour, all the noise standards in Table A-1 are increased according to Table B-1.

Table B-1

Duration of Sound	dBA Adjustment
15—30 minutes per hour	+ 3
10—15 minutes per hour	+ 5
5—10 minutes per hour	+ 10
1—5 minutes per hour	+ 15
Any period of time less than 1 minute per hour	+ 20

C. If the measured ambient noise level exceeds the dBA limits in Table A-1, the noise limits and their adjustments for the first three categories in Table B-1 shall be increased in five dBA increments as needed to encompass or reflect said ambient noise level. The maximum noise level under the last two categories in Table B-1 shall be increased, if necessary, only to equal the ambient noise level. (Ord. 1015 § 2, 2011; Ord. 633 § 1(Exh. A), 1995)

8.45.040 Noise level measurement.

A. The location selected for measuring exterior noise levels shall be at the point of the property line of the affected property nearest the alleged offending noise source. If possible, the ambient noise shall be measured at the same location along the property line.

B. If the measurement location is on a boundary between two different locations, the noise level limit applicable to the lower noise zone shall apply.

C. Upon receipt of a complaint or a request to investigate, the code compliance officer, equipped with an American National Standards Institute Type 2 or better sound level meter, may investigate the complaint. The investigation shall consist of measurements and the gathering of data to adequately define the noise problem and shall include the following:

1. Type and measurement of noise source;

2. Location of noise source relative to complainant's or affected property;

3. Time period during which noise source is considered to be intrusive;

4. Total duration of noise levels measured;

5. Date(s) and time(s) of noise measurement survey. (Ord. 633 § 1(Exh. A), 1995)

8.45.050 Special provisions and exemptions.

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

A. School bands, school athletic and other activities occurring on a school campus;

B. Outdoor gatherings, dance, shows, entertainment for events authorized through the city's special events process;

C. Activities conducted in public parks and public playgrounds that are dependent upon such facilities for their operation;

D. Any emission of sound for purposes of alerting persons to an emergency or the general emission of sound during performance of emergency work;

E. Construction, alteration, repair, grading or improvement of any building, structure, road or improvement to real property for which a permit has been issued by the city if said construction occurs within the allowable hours set forth in Section 15.04.030(A)(10);

F. The operation of any equipment and machinery at any time within any zone by the city, its employees, or any agent or franchisee of the city in the course of performing maintenance, construction or trash collection. (Ord. 633 § 1(Exh. A), 1995)

8.45.060 Additional prohibition.

It is unlawful and a nuisance for any person to keep, maintain or permit upon any lot or parcel of land within the city under his or her control any animal, including any fowl, which by any sound or cry shall habitually disturb the peace and comfort of any person in the reasonable and comfortable enjoyment of life or property. (Ord. 633 § 1(Exh. A), 1995)

8.45.065 Landscape maintenance.

A. It is unlawful and a public nuisance for any person to permit or perform for-hire landscape and non- emergency exterior hardscape maintenance activities such as, but not limited to, tree trimming, re-seeding, lawn mowing, leaf blowing, dust and debris clearing and any other landscaping or nonemergency exterior hardscape maintenance activities which utilize any motorized saw, sander, drill, grinder, leaf-blower, lawnmower, hedge trimmer, edger, or any other similar tool or device any time on Saturday and Sunday and between the hours of six p.m. and seven a.m. the next day during weekdays, unless otherwise provided in this section.

B. The regular mowing or grooming of golf courses, grass tennis courts, grass croquet courts, and lawn bowling areas shall be exempt from the restrictions set forth in this section. The allowed work hours for mowing or green preparation for golf courses, grass tennis courts, grass croquet courts, and lawn bowling areas shall be between five thirty a.m. and seven p.m., seven days per week and during all seasons of the year.

C. Nothing set forth in this section shall permit any person from engaging in any activities that exceed the exterior noise level limits set forth in Section 8.45.030 or otherwise constitute a public nuisance as set forth in Section 14.60.325 of the Municipal Code. (Ord. 979, § 1, 2009; Ord. 936, § 3, 2006)

8.45.070 Administration.

The noise control program established by this chapter shall be administered by and is the responsibility of the code compliance division as directed by the director of the community development department. (Ord. 633 § 1(Exh. A), 1995)

8.45.080 Violations and enforcement procedures.

Violations of this chapter are declared to be a nuisance and subject to the procedures, remedies and penalties set forth in Title 14. (Ord. 916 §4, 2006; Ord. 633 § 1(Exh. A), 1995)

Contact:

City Clerk: 760-324-4511

APPENDIX 5.1:

NOISE MEASUREMENT PHOTOS

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JN: 13747 Study Area Photos

L1_E
33, 47' 36.910000"117, 12' 34.950000"

L1_N
33, 47' 36.820000"117, 12' 34.900000"

L1_S
33, 47' 36.870000"117, 12' 34.930000"

L1_W
33, 47' 36.910000"117, 12' 34.930000"

L2_E
33, 47' 33.220000"117, 12' 30.700000"

L2_N
33, 47' 33.310000"117, 12' 30.720000"

JN: 13747 Study Area Photos

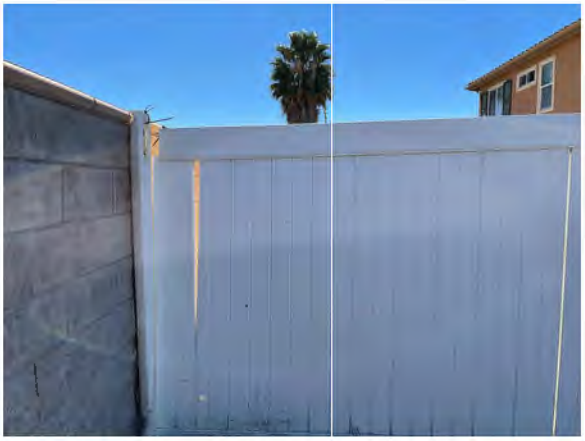
L2_S
33, 47' 33.230000"117, 12' 30.670000"

L2_W
33, 47' 33.260000"117, 12' 30.750000"

L3_E
33, 47' 23.910000"117, 12' 39.180000"

L3_N
33, 47' 23.890000"117, 12' 39.210000"

L3_S
33, 47' 23.920000"117, 12' 39.180000"



L3_W
33, 47' 23.930000"117, 12' 39.180000"

JN: 13747 Study Area Photos

L4_E
33, 47' 24.570000"117, 12' 47.200000"

L4_N
33, 47' 24.530000"117, 12' 47.230000"

L4_S
33, 47' 24.570000"117, 12' 47.230000"

L4_W
33, 47' 24.590000"117, 12' 47.200000"

L5_E
33, 47' 29.260000"117, 12' 47.610000"

L5_N
33, 47' 29.280000"117, 12' 47.640000"

JN: 13747 Study Area Photos

L5_S
33, 47' 29.220000"117, 12' 47.560000"

L5_W
33, 47' 29.260000"117, 12' 47.640000"

L6_E
33, 47' 29.940000"117, 12' 43.850000"

L6_N
33, 47' 29.920000"117, 12' 43.820000"

L6_S
33, 47' 29.920000"117, 12' 43.850000"

L6_W
33, 47' 29.940000"117, 12' 43.850000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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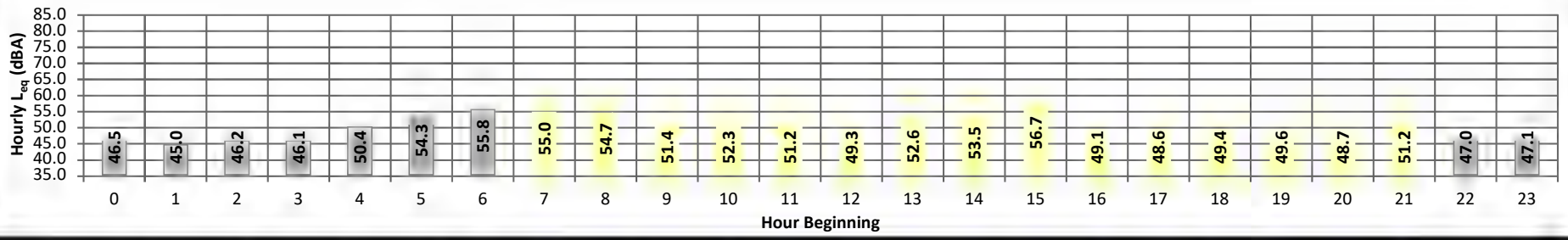
24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L1 - Located north of the Project site near Sky View *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* Elementary School at 625 Mildred Street. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	46.5	54.0	42.1	53.6	53.1	51.5	50.3	46.5	44.7	42.9	42.5	42.2	46.5	10.0	56.5
	1	45.0	48.9	42.4	48.6	48.3	47.6	47.1	45.5	44.4	43.1	42.8	42.5	45.0	10.0	55.0
	2	46.2	51.9	43.4	51.3	51.0	49.7	48.7	46.4	45.3	44.0	43.7	43.5	46.2	10.0	56.2
	3	46.1	51.1	43.5	50.8	50.4	49.0	48.3	46.6	45.3	44.1	43.9	43.6	46.1	10.0	56.1
	4	50.4	55.0	48.0	54.8	54.5	53.4	52.5	50.7	49.6	48.5	48.4	48.2	50.4	10.0	60.4
	5	54.3	60.0	51.7	59.7	59.2	58.0	57.0	54.3	53.3	52.2	52.0	51.8	54.3	10.0	64.3
	6	55.8	60.2	53.3	59.9	59.6	58.5	57.9	56.4	55.0	53.8	53.6	53.4	55.8	10.0	65.8
Day	7	55.0	60.0	51.9	59.6	59.2	58.3	57.7	55.5	54.3	52.5	52.3	52.0	55.0	0.0	55.0
	8	54.7	61.2	48.3	60.8	60.6	60.0	59.4	56.2	51.8	49.0	48.8	48.4	54.7	0.0	54.7
	9	51.4	57.5	46.0	57.2	56.9	56.2	55.5	52.3	49.7	46.9	46.6	46.2	51.4	0.0	51.4
	10	52.3	59.7	40.8	59.0	58.5	57.6	56.8	53.4	49.7	43.2	42.3	41.1	52.3	0.0	52.3
	11	51.2	59.5	38.1	58.8	58.2	57.1	56.5	52.9	46.6	40.1	39.1	38.3	51.2	0.0	51.2
	12	49.3	57.6	40.4	57.2	56.7	55.1	54.3	49.6	45.7	41.7	41.1	40.6	49.3	0.0	49.3
	13	52.6	60.5	42.1	59.9	59.3	58.0	57.3	54.2	49.3	43.8	42.9	42.3	52.6	0.0	52.6
	14	53.5	63.0	41.4	62.8	62.5	60.9	59.7	52.6	47.5	43.1	42.5	41.7	53.5	0.0	53.5
	15	56.7	63.7	41.1	63.3	62.8	62.1	61.4	58.6	54.7	44.2	43.1	41.4	56.7	0.0	56.7
	16	49.1	60.6	38.8	60.3	59.3	56.3	53.8	46.8	43.6	40.0	39.5	38.9	49.1	0.0	49.1
	17	48.6	57.5	40.4	57.1	56.6	55.3	53.6	48.6	45.0	41.6	41.0	40.6	48.6	0.0	48.6
	18	49.4	58.3	40.4	57.8	57.3	56.1	54.8	49.0	44.6	41.5	41.1	40.6	49.4	0.0	49.4
	19	49.6	60.8	40.8	60.5	59.8	56.8	53.5	47.4	44.6	41.8	41.4	41.0	49.6	5.0	54.6
	20	48.7	55.4	41.1	55.0	54.7	54.0	53.3	49.8	46.2	42.1	41.7	41.2	48.7	5.0	53.7
	21	51.2	59.9	42.4	59.5	59.1	57.7	56.2	51.6	47.4	43.4	43.0	42.5	51.2	5.0	56.2
Night	22	47.0	54.0	42.6	53.6	53.2	52.0	50.9	47.1	45.2	43.4	43.1	42.7	47.0	10.0	57.0
	23	47.1	54.2	42.2	53.8	53.3	52.2	51.3	47.3	44.9	43.0	42.7	42.3	47.1	10.0	57.1

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	48.6	55.4	38.1	55.0	54.7	54.0	53.3	46.8	43.6	40.0	39.1	38.3
	Max	56.7	63.7	51.9	63.3	62.8	62.1	61.4	58.6	54.7	52.5	52.3	52.0
Energy Average		52.3	Average:		59.2	58.8	57.4	56.3	51.9	48.0	43.7	43.1	42.5
Night	Min	45.0	48.9	42.1	48.6	48.3	47.6	47.1	45.5	44.4	42.9	42.5	42.2
	Max	55.8	60.2	53.3	59.9	59.6	58.5	57.9	56.4	55.0	53.8	53.6	53.4
Energy Average		50.5	Average:		54.0	53.6	52.4	51.6	49.0	47.5	46.1	45.9	45.6

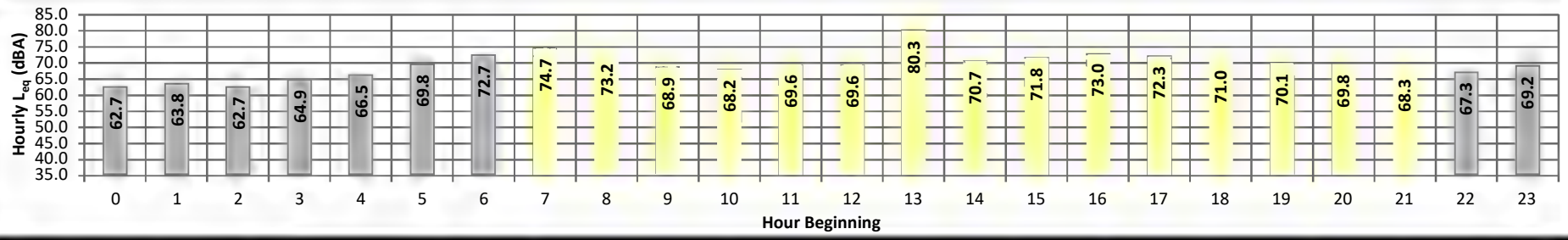
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
51.7	**52.3**	**50.5**

24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L2 - Located northeast of the Project site near Patriot Park at *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* 525 Murrieta Road. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	62.7	74.9	49.9	74.4	73.6	70.9	68.0	58.4	54.1	51.0	50.5	50.1	62.7	10.0	72.7
	1	63.8	77.7	48.6	76.8	75.6	71.4	67.9	57.3	52.0	49.4	49.0	48.7	63.8	10.0	73.8
	2	62.7	75.4	49.5	74.9	74.1	71.4	67.6	56.6	53.0	50.4	50.0	49.6	62.7	10.0	72.7
	3	64.9	77.7	49.4	77.0	75.9	72.8	70.1	60.6	53.8	50.2	49.8	49.5	64.9	10.0	74.9
	4	66.5	78.6	55.9	78.0	76.9	73.9	71.3	64.5	59.2	56.7	56.4	56.0	66.5	10.0	76.5
	5	69.8	80.1	61.2	79.7	79.0	76.7	74.9	68.8	64.6	62.0	61.7	61.3	69.8	10.0	79.8
	6	72.7	84.3	62.5	83.6	82.6	79.5	77.3	71.6	66.7	63.3	62.9	62.6	72.7	10.0	82.7
Day	7	74.7	85.3	61.6	84.6	83.6	80.8	79.3	75.1	70.2	62.8	62.2	61.7	74.7	0.0	74.7
	8	73.2	84.6	57.3	83.8	82.7	80.1	78.2	72.8	66.8	58.7	58.0	57.4	73.2	0.0	73.2
	9	68.9	80.7	50.5	80.0	79.1	76.3	74.5	67.6	59.5	51.8	51.1	50.7	68.9	0.0	68.9
	10	68.2	80.4	46.4	79.7	78.8	76.0	73.8	65.6	57.7	48.8	47.9	46.7	68.2	0.0	68.2
	11	69.6	83.3	42.6	82.4	81.0	76.8	73.9	65.7	57.5	45.5	44.0	42.8	69.6	0.0	69.6
	12	69.6	81.9	57.3	81.1	79.8	76.5	74.5	67.9	62.0	57.9	57.7	57.4	69.6	0.0	69.6
	13	80.3	88.8	67.1	88.3	87.8	86.6	85.8	81.0	75.5	69.8	68.2	67.2	80.3	0.0	80.3
	14	70.7	82.3	49.7	81.6	80.5	77.3	75.5	70.4	64.9	53.5	51.8	50.1	70.7	0.0	70.7
	15	71.8	83.4	49.0	82.6	81.6	78.8	77.1	71.0	64.3	52.4	50.8	49.3	71.8	0.0	71.8
	16	73.0	84.0	62.8	83.1	81.8	79.3	77.7	72.9	68.4	64.5	64.4	63.1	73.0	0.0	73.0
	17	72.3	83.6	48.5	82.8	81.7	78.9	77.4	72.5	65.7	52.1	50.3	48.8	72.3	0.0	72.3
	18	71.0	81.3	49.3	80.5	79.7	77.7	76.5	71.6	64.8	52.7	51.2	49.5	71.0	0.0	71.0
	19	70.1	80.7	49.2	80.1	79.3	77.3	75.8	69.8	62.2	51.8	50.6	49.6	70.1	5.0	75.1
	20	69.8	81.2	49.9	80.6	79.7	77.1	75.2	68.8	61.7	52.0	51.0	50.1	69.8	5.0	74.8
	21	68.3	80.5	52.3	79.7	78.8	76.0	73.9	65.7	58.6	53.7	53.1	52.5	68.3	5.0	73.3
Night	22	67.3	80.0	51.2	79.3	78.2	74.9	72.3	64.1	58.5	52.2	51.8	51.3	67.3	10.0	77.3
	23	69.2	83.0	50.6	82.4	81.3	77.3	72.4	63.1	56.3	51.7	51.2	50.7	69.2	10.0	79.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	68.2	80.4	42.6	79.7	78.8	76.0	73.8	65.6	57.5	45.5	44.0	42.8
	Max	80.3	88.8	67.1	88.3	87.8	86.6	85.8	81.0	75.5	69.8	68.2	67.2
Energy Average		72.9	Average:		82.1	81.1	78.4	76.6	70.6	64.0	55.2	54.2	53.1
Night	Min	62.7	74.9	48.6	74.4	73.6	70.9	67.6	56.6	52.0	49.4	49.0	48.7
	Max	72.7	84.3	62.5	83.6	82.6	79.5	77.3	71.6	66.7	63.3	62.9	62.6
Energy Average		67.9	Average:		78.5	77.5	74.3	71.3	62.8	57.6	54.1	53.7	53.3

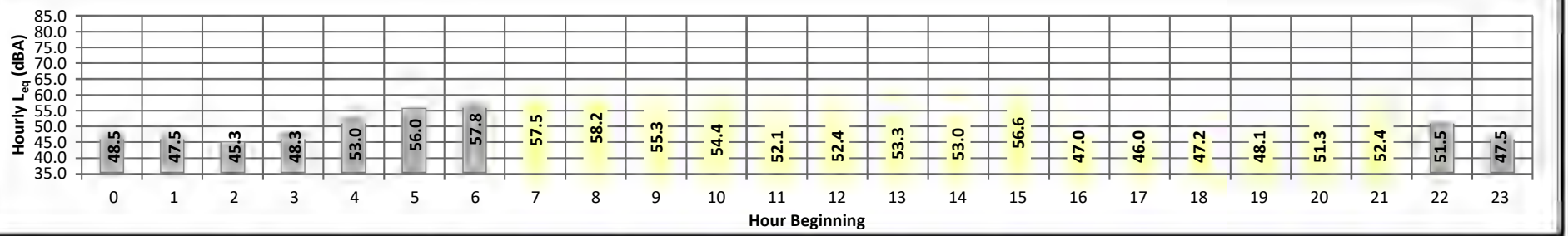
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
71.6	**72.9**	**67.9**

24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L3 - Located south of the Project site near single-family *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* residence at 379 Lady Bell Way. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	48.5	54.0	45.4	53.6	53.1	52.0	51.1	49.0	47.7	46.1	45.8	45.5	48.5	10.0	58.5
	1	47.5	52.4	44.1	52.1	51.7	50.9	50.4	48.3	46.6	44.9	44.5	44.2	47.5	10.0	57.5
	2	45.3	49.8	42.7	49.4	49.0	48.1	47.5	45.8	44.7	43.3	43.1	42.8	45.3	10.0	55.3
	3	48.3	52.1	45.6	51.9	51.6	50.9	50.4	48.8	47.8	46.4	46.1	45.7	48.3	10.0	58.3
	4	53.0	57.1	50.8	56.8	56.4	55.6	55.0	53.4	52.5	51.5	51.2	50.9	53.0	10.0	63.0
	5	56.0	59.8	53.9	59.5	59.0	58.2	57.8	56.4	55.5	54.5	54.3	54.0	56.0	10.0	66.0
	6	57.8	61.6	55.1	61.2	60.9	60.3	59.8	58.5	57.3	55.8	55.5	55.2	57.8	10.0	67.8
Day	7	57.5	61.7	54.7	61.4	61.2	60.5	60.0	58.2	56.7	55.3	55.1	54.8	57.5	0.0	57.5
	8	58.2	64.8	53.2	64.5	64.1	63.3	62.5	58.8	56.1	53.9	53.6	53.3	58.2	0.0	58.2
	9	55.3	62.2	50.1	61.7	61.1	59.6	58.7	56.2	53.7	51.0	50.6	50.2	55.3	0.0	55.3
	10	54.4	61.9	42.5	61.4	60.7	59.9	59.0	55.7	51.6	44.8	43.9	42.8	54.4	0.0	54.4
	11	52.1	61.2	40.5	60.5	59.7	58.0	57.3	52.9	48.1	42.4	41.7	40.9	52.1	0.0	52.1
	12	52.4	60.1	44.7	59.4	58.8	57.6	56.8	53.2	49.9	46.4	45.7	45.0	52.4	0.0	52.4
	13	53.3	61.3	45.6	60.7	60.1	58.8	57.8	54.0	50.6	47.1	46.6	45.9	53.3	0.0	53.3
	14	53.0	61.6	44.3	61.0	60.3	59.1	57.7	53.5	49.4	45.7	45.1	44.5	53.0	0.0	53.0
	15	56.6	66.3	43.2	65.7	64.8	62.8	60.9	57.7	51.1	45.2	44.3	43.4	56.6	0.0	56.6
	16	47.0	55.0	40.2	54.4	53.8	52.7	51.8	47.3	44.4	41.4	40.9	40.4	47.0	0.0	47.0
	17	46.0	52.1	41.8	51.7	51.3	50.2	49.5	46.6	44.5	42.6	42.3	41.9	46.0	0.0	46.0
	18	47.2	53.6	42.1	53.0	52.6	51.4	50.6	48.2	45.9	42.9	42.6	42.2	47.2	0.0	47.2
	19	48.1	54.6	44.3	54.1	53.6	52.4	51.3	48.3	46.9	45.1	44.8	44.5	48.1	5.0	53.1
	20	51.3	57.6	47.1	57.2	56.8	55.7	54.7	51.7	50.0	48.0	47.6	47.3	51.3	5.0	56.3
	21	52.4	60.9	47.1	60.2	59.7	58.5	56.5	52.5	49.8	47.9	47.6	47.2	52.4	5.0	57.4
Night	22	51.5	60.8	45.5	60.3	59.8	57.7	55.8	50.6	48.5	46.4	46.0	45.7	51.5	10.0	61.5
	23	47.5	53.8	44.1	53.3	52.7	51.4	50.2	47.8	46.3	44.9	44.6	44.2	47.5	10.0	57.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	46.0	52.1	40.2	51.7	51.3	50.2	49.5	46.6	44.4	41.4	40.9	40.4
	Max	58.2	66.3	54.7	65.7	64.8	63.3	62.5	58.8	56.7	55.3	55.1	54.8
Energy Average		53.7	Average:		59.1	58.6	57.4	56.3	53.0	49.9	46.6	46.2	45.6
Night	Min	45.3	49.8	42.7	49.4	49.0	48.1	47.5	45.8	44.7	43.3	43.1	42.8
	Max	57.8	61.6	55.1	61.2	60.9	60.3	59.8	58.5	57.3	55.8	55.5	55.2
Energy Average		52.6	Average:		55.3	54.9	53.9	53.1	51.0	49.6	48.2	47.9	47.6

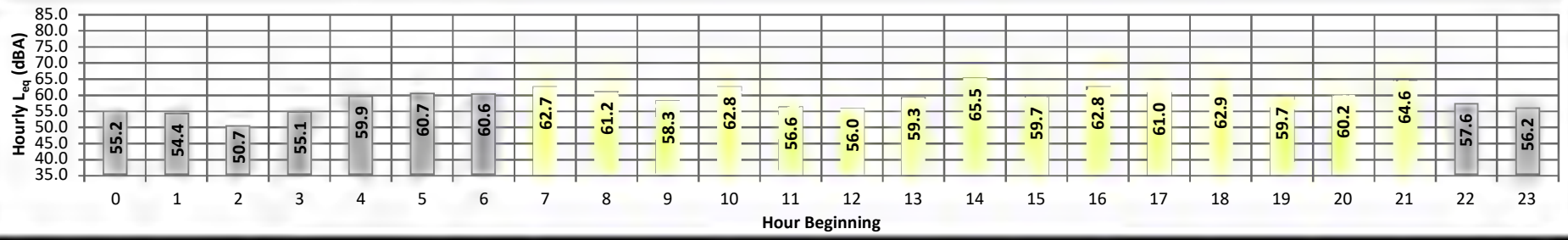
L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
53.3	**53.7**	**52.6**

24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L4 - Located southwest of the Project site near Park Towne *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* Apartments at 290 Wilson Avenue. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	55.2	66.5	42.1	66.2	65.6	63.5	61.3	52.4	45.6	42.9	42.6	42.2	55.2	10.0	65.2
	1	54.4	67.2	41.0	66.7	65.8	62.7	59.9	48.6	43.7	41.6	41.4	41.1	54.4	10.0	64.4
	2	50.7	61.8	42.3	61.4	60.5	58.0	55.9	48.8	44.8	43.0	42.7	42.4	50.7	10.0	60.7
	3	55.1	67.2	46.8	66.7	65.7	62.7	59.8	51.3	48.6	47.3	47.1	46.9	55.1	10.0	65.1
	4	59.9	72.0	51.3	71.4	70.4	67.3	64.5	56.6	53.4	51.9	51.7	51.4	59.9	10.0	69.9
	5	60.7	71.9	53.6	71.4	70.6	67.8	65.0	58.6	55.9	54.2	54.0	53.7	60.7	10.0	70.7
	6	60.6	70.6	54.5	70.1	69.3	67.0	65.2	59.8	56.9	55.1	54.8	54.6	60.6	10.0	70.6
Day	7	62.7	72.4	53.6	72.0	71.4	69.3	67.7	62.5	58.5	54.6	54.1	53.7	62.7	0.0	62.7
	8	61.2	72.2	51.1	71.6	70.5	67.7	66.0	60.5	56.4	52.4	51.7	51.2	61.2	0.0	61.2
	9	58.3	70.1	45.6	69.7	68.8	65.8	63.4	56.0	50.7	46.7	46.3	45.8	58.3	0.0	58.3
	10	62.8	76.0	45.6	75.4	74.3	70.4	66.9	59.1	53.8	47.3	46.5	45.8	62.8	0.0	62.8
	11	56.6	68.7	41.2	68.0	66.9	63.4	61.2	55.2	50.3	43.2	42.1	41.3	56.6	0.0	56.6
	12	56.0	66.8	42.3	66.4	65.5	63.1	61.4	55.1	49.5	44.0	43.4	42.5	56.0	0.0	56.0
	13	59.3	71.9	44.2	71.1	70.5	66.7	63.7	56.5	51.7	45.8	45.1	44.4	59.3	0.0	59.3
	14	65.5	78.2	45.5	77.9	77.2	74.4	70.2	59.5	54.4	47.7	46.6	45.8	65.5	0.0	65.5
	15	59.7	69.7	48.0	69.0	68.3	66.7	64.5	59.6	55.5	49.7	49.1	48.2	59.7	0.0	59.7
	16	62.8	71.6	51.4	71.2	70.6	68.7	67.2	63.4	59.9	54.4	53.5	52.2	62.8	0.0	62.8
	17	61.0	71.6	45.0	71.3	70.6	68.2	66.3	60.4	54.5	46.9	46.0	45.2	61.0	0.0	61.0
	18	62.9	74.7	45.8	74.3	73.6	71.0	67.9	60.4	54.8	47.7	46.7	45.9	62.9	0.0	62.9
	19	59.7	72.0	44.2	71.5	70.7	67.8	64.5	56.3	51.1	45.7	45.0	44.4	59.7	5.0	64.7
	20	60.2	71.0	44.2	70.4	69.7	67.7	65.8	59.7	52.4	45.5	44.9	44.4	60.2	5.0	65.2
	21	64.6	76.1	45.4	75.5	74.8	71.3	69.1	63.4	62.0	46.9	46.2	45.5	64.6	5.0	69.6
Night	22	57.6	69.9	43.9	69.3	68.4	65.4	62.5	54.4	48.2	44.6	44.3	44.0	57.6	10.0	67.6
	23	56.2	67.9	43.9	67.6	66.9	64.3	62.0	52.4	47.2	44.7	44.3	44.0	56.2	10.0	66.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.0	66.8	41.2	66.4	65.5	63.1	61.2	55.1	49.5	43.2	42.1	41.3
	Max	65.5	78.2	53.6	77.9	77.2	74.4	70.2	63.4	62.0	54.6	54.1	53.7
Energy Average		61.6	Average:		71.7	70.9	68.1	65.7	59.2	54.4	47.9	47.2	46.4
Night	Min	50.7	61.8	41.0	61.4	60.5	58.0	55.9	48.6	43.7	41.6	41.4	41.1
	Max	60.7	72.0	54.5	71.4	70.6	67.8	65.2	59.8	56.9	55.1	54.8	54.6
Energy Average		57.7	Average:		67.9	67.0	64.3	61.8	53.7	49.4	47.3	47.0	46.7

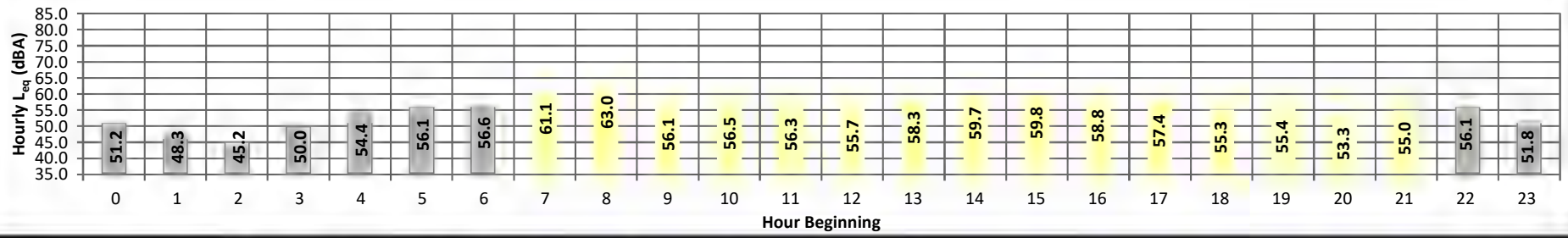
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
60.6	**61.6**	**57.7**

24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L5 - Located west of the Project site near single-family *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* residence at 512 Wilson Avenue. *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	51.2	62.3	39.3	61.8	61.5	59.8	58.0	47.2	41.7	39.9	39.6	39.3	51.2	10.0	61.2
	1	48.3	59.9	39.0	59.5	59.0	56.6	53.7	43.6	41.3	39.7	39.4	39.1	48.3	10.0	58.3
	2	45.2	56.4	38.9	55.6	54.8	51.7	49.7	42.7	41.0	39.4	39.2	39.0	45.2	10.0	55.2
	3	50.0	61.4	42.0	61.0	60.5	58.0	55.0	46.2	44.1	42.6	42.4	42.1	50.0	10.0	60.0
	4	54.4	66.4	45.5	65.9	65.3	62.3	59.6	50.2	47.3	45.9	45.8	45.5	54.4	10.0	64.4
	5	56.1	66.7	48.8	66.3	65.9	63.7	61.3	53.5	50.6	49.3	49.1	48.9	56.1	10.0	66.1
	6	56.6	64.9	51.0	64.5	64.1	62.2	60.9	56.2	54.1	52.3	52.0	51.3	56.6	10.0	66.6
Day	7	61.1	70.6	51.1	69.9	69.0	67.2	65.9	61.8	57.3	52.1	51.6	51.2	61.1	0.0	61.1
	8	63.0	77.4	47.9	76.5	75.0	69.5	65.7	58.4	53.1	48.8	48.4	48.0	63.0	0.0	63.0
	9	56.1	68.3	43.2	67.4	66.3	63.5	61.3	53.6	49.9	44.8	44.1	43.4	56.1	0.0	56.1
	10	56.5	67.4	41.3	66.6	65.5	63.2	61.7	56.1	51.5	44.6	43.3	41.7	56.5	0.0	56.5
	11	56.3	66.7	42.0	66.2	65.2	63.1	61.6	56.2	52.0	42.9	42.5	42.1	56.3	0.0	56.3
	12	55.7	67.1	40.2	66.3	65.3	63.1	61.2	54.1	49.0	42.6	41.5	40.5	55.7	0.0	55.7
	13	58.3	68.9	44.2	68.4	67.4	64.7	63.0	58.0	54.2	46.5	45.7	44.7	58.3	0.0	58.3
	14	59.7	70.8	40.8	70.3	69.3	66.8	65.0	59.3	52.4	42.7	41.8	41.0	59.7	0.0	59.7
	15	59.8	72.2	40.0	71.4	70.3	66.8	64.5	58.5	53.1	43.3	42.2	40.7	59.8	0.0	59.8
	16	58.8	70.9	38.0	70.3	69.1	66.1	64.3	57.1	49.6	40.1	39.3	38.4	58.8	0.0	58.8
	17	57.4	69.3	40.5	68.6	67.5	64.5	62.3	56.2	49.2	42.8	41.7	40.8	57.4	0.0	57.4
	18	55.3	65.5	40.9	65.0	64.4	62.2	60.8	55.2	48.5	42.2	41.6	41.1	55.3	0.0	55.3
	19	55.4	68.2	40.1	67.6	66.5	63.2	60.1	51.8	45.6	41.2	40.8	40.3	55.4	5.0	60.4
	20	53.3	63.9	39.9	63.3	62.7	60.7	59.0	52.3	46.7	41.1	40.5	40.1	53.3	5.0	58.3
	21	55.0	67.4	40.2	66.6	65.6	62.3	60.0	52.6	47.5	41.1	40.7	40.3	55.0	5.0	60.0
Night	22	56.1	65.8	40.8	65.3	64.6	62.5	60.9	56.8	52.6	42.7	42.0	41.0	56.1	10.0	66.1
	23	51.8	64.9	39.0	64.2	63.1	59.5	56.5	47.1	42.4	40.0	39.6	39.2	51.8	10.0	61.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	53.3	63.9	38.0	63.3	62.7	60.7	59.0	51.8	45.6	40.1	39.3	38.4
	Max	63.0	77.4	51.1	76.5	75.0	69.5	65.9	61.8	57.3	52.1	51.6	51.2
Energy Average		58.2	Average:		68.3	67.3	64.5	62.4	56.1	50.6	43.8	43.0	42.3
Night	Min	45.2	56.4	38.9	55.6	54.8	51.7	49.7	42.7	41.0	39.4	39.2	39.0
	Max	56.6	66.7	51.0	66.3	65.9	63.7	61.3	56.8	54.1	52.3	52.0	51.3
Energy Average		53.6	Average:		62.7	62.1	59.6	57.3	49.3	46.1	43.5	43.2	42.8

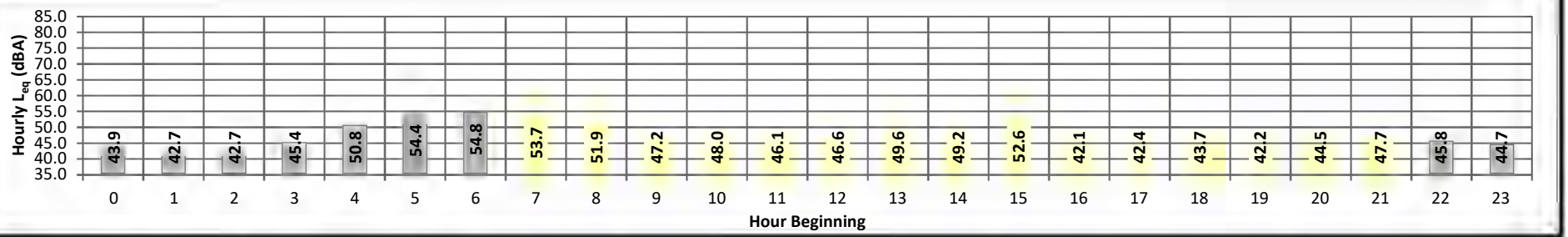
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
57.0	**58.2**	**53.6**

24-Hour Noise Level Measurement Summary

Date: Thursday, February 17, 2022 *Location:* L5 - Located at the northern edge of the Project's perimeter. *Meter:* Piccolo II *JN:* 13747

Project: Prairie View *Source:* *Analyst:* A. Khan

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	43.9	49.3	40.8	49.0	48.5	47.5	46.7	44.1	43.0	41.4	41.2	40.9	43.9	10.0	53.9
	1	42.7	46.4	40.2	46.2	46.0	45.4	44.9	43.2	42.1	40.8	40.6	40.3	42.7	10.0	52.7
	2	42.7	46.3	40.4	46.1	45.8	45.0	44.5	43.3	42.4	41.0	40.7	40.5	42.7	10.0	52.7
	3	45.4	49.3	43.1	49.0	48.7	47.8	47.3	45.8	44.9	43.7	43.4	43.2	45.4	10.0	55.4
	4	50.8	53.7	48.7	53.5	53.3	52.9	52.5	51.3	50.4	49.3	49.0	48.8	50.8	10.0	60.8
	5	54.4	58.1	52.4	57.7	57.3	56.5	56.0	54.9	54.1	52.9	52.7	52.4	54.4	10.0	64.4
	6	54.8	57.8	53.0	57.6	57.4	56.9	56.5	55.2	54.4	53.5	53.3	53.1	54.8	10.0	64.8
Day	7	53.7	58.2	51.6	57.4	57.0	56.1	55.5	54.2	53.3	52.1	51.9	51.7	53.7	0.0	53.7
	8	51.9	57.8	47.1	57.5	57.2	56.3	55.6	53.0	50.1	47.9	47.5	47.2	51.9	0.0	51.9
	9	47.2	53.1	41.7	52.5	51.9	50.9	50.3	48.1	46.1	43.2	42.7	41.9	47.2	0.0	47.2
	10	48.0	55.1	38.4	54.4	53.8	52.8	52.1	49.6	45.7	40.3	39.5	38.7	48.0	0.0	48.0
	11	46.1	53.8	35.8	53.2	52.6	51.4	50.5	47.6	43.7	37.9	36.9	36.0	46.1	0.0	46.1
	12	46.6	54.9	37.0	53.9	53.1	51.7	50.9	48.2	43.6	38.6	38.0	37.2	46.6	0.0	46.6
	13	49.6	58.6	38.8	57.9	56.9	55.1	54.2	50.7	46.0	40.4	39.7	39.0	49.6	0.0	49.6
	14	49.2	62.6	37.4	60.7	59.4	55.4	52.6	47.9	43.6	38.9	38.3	37.7	49.2	0.0	49.2
	15	52.6	60.1	38.4	59.6	59.1	58.2	57.5	54.4	49.3	41.4	40.5	38.9	52.6	0.0	52.6
	16	42.1	49.9	34.2	49.5	49.1	47.8	46.9	42.6	39.2	35.4	34.9	34.4	42.1	0.0	42.1
	17	42.4	48.9	36.6	48.4	48.1	47.3	46.5	43.0	40.7	37.9	37.3	36.8	42.4	0.0	42.4
	18	43.7	50.7	37.2	50.4	50.0	49.2	48.3	44.3	41.3	37.9	37.6	37.3	43.7	0.0	43.7
	19	42.2	48.1	37.7	47.8	47.4	46.5	45.6	42.8	41.0	38.8	38.1	37.8	42.2	5.0	47.2
	20	44.5	51.6	38.7	51.1	50.6	48.9	48.0	45.4	42.8	39.9	39.2	38.8	44.5	5.0	49.5
	21	47.7	54.8	41.3	54.5	54.1	53.0	52.1	48.5	44.7	42.0	41.7	41.4	47.7	5.0	52.7
Night	22	45.8	53.3	41.4	53.0	52.6	51.2	49.8	45.7	43.6	42.0	41.8	41.5	45.8	10.0	55.8
	23	44.7	49.5	41.4	49.2	48.9	48.0	47.3	45.5	43.9	42.2	42.0	41.6	44.7	10.0	54.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	42.1	48.1	34.2	47.8	47.4	46.5	45.6	42.6	39.2	35.4	34.9	34.4
	Max	53.7	62.6	51.6	60.7	59.4	58.2	57.5	54.4	53.3	52.1	51.9	51.7
Energy Average		48.7	Average:		53.9	53.4	52.0	51.1	48.0	44.7	40.8	40.3	39.7
Night	Min	42.7	46.3	40.2	46.1	45.8	45.0	44.5	43.2	42.1	40.8	40.6	40.3
	Max	54.8	58.1	53.0	57.7	57.4	56.9	56.5	55.2	54.4	53.5	53.3	53.1
Energy Average		49.8	Average:		51.3	51.0	50.1	49.5	47.7	46.5	45.2	45.0	44.7

L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
49.1	**48.7**	**49.8**

APPENDIX 7.1:

ON-SITE TRAFFIC NOISE WORKSHEETS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Wilson Avenue
Lot No: Building 2

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	125.0 feet
Centerline Dist. to Observer:	135.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,421.3 feet
Road Elevation:	1,417.8 feet
Barrier Elevation:	1,421.3 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.80		
Medium Trucks:	1,420.10		
Heavy Trucks:	1,425.81	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	117.653
Medium Trucks:	117.509
Heavy Trucks:	117.347

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.68	-1.20	*-0.91*	0.000	0.000
Medium Trucks:	71.09	-21.72	-5.67	-1.20	*-1.00*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-5.66	-1.20	*-1.25*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.1	46.1	44.8	38.7	47.2	47.8
Medium Trucks:	42.5	38.6	31.1	39.8	46.0	46.1
Heavy Trucks:	44.7	40.7	37.3	41.9	48.1	48.2
Vehicle Noise:	50.5	47.7	45.6	45.1	51.9	52.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.1	46.1	44.8	38.7	47.2	47.8
Medium Trucks:	42.5	38.6	31.1	39.8	46.0	46.1
Heavy Trucks:	44.7	40.7	37.3	41.9	48.1	48.2
Vehicle Noise:	50.5	47.7	45.6	45.1	51.9	52.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Wilson Avenue
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	125.0 feet
Barrier Distance to Observer:	5.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,422.5 feet
Road Elevation:	1,417.3 feet
Barrier Elevation:	1,422.5 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.30		
Medium Trucks:	1,419.60		
Heavy Trucks:	1,425.31	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.722
Medium Trucks:	107.529
Heavy Trucks:	107.260

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.10	-1.20	*-1.69*	0.000	0.000
Medium Trucks:	71.09	-21.72	-5.09	-1.20	*-1.78*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-5.08	-1.20	*-2.04*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.7	46.6	45.3	39.3	47.7	48.4
Medium Trucks:	43.1	39.2	31.7	40.4	46.6	46.6
Heavy Trucks:	45.3	41.2	37.8	42.5	48.7	48.8
Vehicle Noise:	51.1	48.3	46.2	45.7	52.5	52.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.7	46.6	45.3	39.3	47.7	48.4
Medium Trucks:	43.1	39.2	31.7	40.4	46.6	46.6
Heavy Trucks:	45.3	41.2	37.8	42.5	48.7	48.8
Vehicle Noise:	51.1	48.3	46.2	45.7	52.5	52.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Dale Street
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	175	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	33	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	33.0	feet
Centerline Dist. to Observer:	35.0	feet
Barrier Distance to Observer:	2.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,421.9	feet
Road Elevation:	1,417.5	feet
Barrier Elevation:	1,421.9	feet
Road Grade:	1.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.50		
Medium Trucks:	1,419.80		
Heavy Trucks:	1,425.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	12.584
Medium Trucks:	10.975
Heavy Trucks:	8.482

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	8.88	-1.20	*-1.67*	0.000	0.000
Medium Trucks:	71.09	-24.21	9.78	-1.20	*-2.15*	0.000	0.000
Heavy Trucks:	77.24	-28.16	11.45	-1.20	*-3.64*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.1	56.8	50.8	59.2	59.9
Medium Trucks:	55.5	51.6	44.1	52.8	59.0	59.0
Heavy Trucks:	59.3	55.3	51.9	56.5	62.7	62.8
Vehicle Noise:	63.5	60.5	58.2	58.8	65.5	65.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.1	56.8	50.8	59.2	59.9
Medium Trucks:	55.5	51.6	44.1	52.8	59.0	59.0
Heavy Trucks:	59.3	55.3	51.9	56.5	62.7	62.8
Vehicle Noise:	63.5	60.5	58.2	58.8	65.5	65.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Dale Street
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	175	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	33	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	33.0	feet
Centerline Dist. to Observer:	35.0	feet
Barrier Distance to Observer:	2.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,419.2	feet
Road Elevation:	1,417.4	feet
Barrier Elevation:	1,419.2	feet
Road Grade:	1.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.40		
Medium Trucks:	1,419.70		
Heavy Trucks:	1,425.41	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	10.781
Medium Trucks:	9.501
Heavy Trucks:	8.453

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	9.89	-1.20	*-2.22*	0.000	0.000
Medium Trucks:	71.09	-24.21	10.71	-1.20	*-2.79*	0.000	0.000
Heavy Trucks:	77.24	-28.16	11.48	-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:	61.2	59.2	57.8	51.8	60.2	60.9
Medium Trucks:	56.4	52.5	45.0	53.7	59.9	60.0
Heavy Trucks:	59.4	55.3	51.9	56.6	62.8	62.9
Vehicle Noise:	64.2	61.3	59.0	59.3	65.9	66.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.2	59.2	57.8	51.8	60.2	60.9
Medium Trucks:	56.4	52.5	45.0	53.7	59.9	60.0
Heavy Trucks:	59.4	55.3	51.9	56.6	62.8	62.9
Vehicle Noise:	64.2	61.3	59.0	59.3	65.9	66.2

Friday, July 1, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Murrieta Road
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	320.0 feet
Centerline Dist. to Observer:	330.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,423.9 feet
Road Elevation:	1,415.5 feet
Barrier Elevation:	1,423.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.50		
Medium Trucks:	1,417.80		
Heavy Trucks:	1,423.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	310.177
Medium Trucks:	310.086
Heavy Trucks:	309.934

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-11.99	-1.20	*-0.99*	0.000	0.000
Medium Trucks:	71.09	-16.95	-11.99	-1.20	*-1.02*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-11.99	-1.20	*-1.11*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.5	44.5	43.2	37.2	45.6	46.2
Medium Trucks:	40.9	37.0	29.5	38.3	44.5	44.5
Heavy Trucks:	43.1	39.1	35.7	40.4	46.6	46.6
Vehicle Noise:	48.9	46.2	44.1	43.6	50.4	50.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.5	44.5	43.2	37.2	45.6	46.2
Medium Trucks:	40.9	37.0	29.5	38.3	44.5	44.5
Heavy Trucks:	43.1	39.1	35.7	40.4	46.6	46.6
Vehicle Noise:	48.9	46.2	44.1	43.6	50.4	50.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Murrieta Road
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	930	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	39	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	310.0	feet
Centerline Dist. to Observer:	350.0	feet
Barrier Distance to Observer:	40.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,419.2	feet
Road Elevation:	1,414.9	feet
Barrier Elevation:	1,419.2	feet
Road Grade:	1.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,414.90		
Medium Trucks:	1,417.20		
Heavy Trucks:	1,422.91	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	330.055
Medium Trucks:	329.999
Heavy Trucks:	329.927

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-12.40	-1.20	*-0.21*	0.000	0.000
Medium Trucks:	71.09	-16.95	-12.40	-1.20	*-0.24*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-12.40	-1.20	*-0.33*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.1	44.1	42.8	36.8	45.2	45.8
Medium Trucks:	40.5	36.6	29.1	37.9	44.1	44.1
Heavy Trucks:	42.7	38.7	35.3	39.9	46.1	46.2
Vehicle Noise:	48.5	45.8	43.7	43.2	50.0	50.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.1	44.1	42.8	36.8	45.2	45.8
Medium Trucks:	40.5	36.6	29.1	37.9	44.1	44.1
Heavy Trucks:	42.7	38.7	35.3	39.9	46.1	46.2
Vehicle Noise:	48.5	45.8	43.7	43.2	50.0	50.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard No Wall
Road Name: Murrieta Road
Lot No: Clubhouse

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	160.0 feet
Barrier Distance to Observer:	40.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.7 feet
Road Elevation:	1,415.2 feet
Barrier Elevation:	1,419.7 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.20		
Medium Trucks:	1,417.50		
Heavy Trucks:	1,423.21	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	139.464
Medium Trucks:	139.327
Heavy Trucks:	139.148

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-6.79	-1.20	*-0.09*	0.000	0.000
Medium Trucks:	71.09	-16.95	-6.78	-1.20	*-0.15*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-6.77	-1.20	*-0.36*	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:	51.7	49.7	48.4	42.4	50.8	51.5
Medium Trucks:	46.2	42.3	34.8	43.5	49.7	49.7
Heavy Trucks:	48.4	44.3	40.9	45.6	51.8	51.9
Vehicle Noise:	54.1	51.4	49.3	48.8	55.6	55.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.7	49.7	48.4	42.4	50.8	51.5
Medium Trucks:	46.2	42.3	34.8	43.5	49.7	49.7
Heavy Trucks:	48.4	44.3	40.9	45.6	51.8	51.9
Vehicle Noise:	54.1	51.4	49.3	48.8	55.6	55.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Wilson Avenue
Lot No: Building 2

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	125.0 feet
Centerline Dist. to Observer:	135.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,421.3 feet
Road Elevation:	1,417.8 feet
Barrier Elevation:	1,421.3 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.80		
Medium Trucks:	1,420.10		
Heavy Trucks:	1,425.81	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	117.708
Medium Trucks:	117.530
Heavy Trucks:	117.298

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.68	-1.20	*0.16*	-6.480	-9.480
Medium Trucks:	71.09	-21.72	-5.67	-1.20	*0.12*	-6.160	-9.160
Heavy Trucks:	77.24	-25.68	-5.66	-1.20	*0.06*	-5.600	-8.600

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.1	46.1	44.8	38.7	47.2	47.8
Medium Trucks:	42.5	38.6	31.1	39.8	46.0	46.1
Heavy Trucks:	44.7	40.7	37.3	41.9	48.1	48.2
Vehicle Noise:	50.5	47.7	45.6	45.1	51.9	52.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	41.6	39.6	38.3	32.3	40.7	41.3
Medium Trucks:	36.3	32.4	24.9	33.7	39.9	39.9
Heavy Trucks:	39.1	35.1	31.7	36.3	42.5	42.6
Vehicle Noise:	44.3	41.5	39.3	39.2	45.9	46.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Wilson Avenue
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	125.0 feet
Barrier Distance to Observer:	5.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,422.5 feet
Road Elevation:	1,417.3 feet
Barrier Elevation:	1,422.5 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.30		
Medium Trucks:	1,419.60		
Heavy Trucks:	1,425.31	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	107.887
Medium Trucks:	107.662
Heavy Trucks:	107.325

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.11	-1.20	*0.22*	-6.940	-9.940
Medium Trucks:	71.09	-21.72	-5.10	-1.20	*0.19*	-6.720	-9.720
Heavy Trucks:	77.24	-25.68	-5.08	-1.20	*0.12*	-6.160	-9.160

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.6	46.6	45.3	39.3	47.7	48.4
Medium Trucks:	43.1	39.2	31.7	40.4	46.6	46.6
Heavy Trucks:	45.3	41.2	37.8	42.5	48.7	48.8
Vehicle Noise:	51.0	48.3	46.2	45.7	52.5	52.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	41.7	39.7	38.4	32.4	40.8	41.4
Medium Trucks:	36.3	32.4	24.9	33.7	39.9	39.9
Heavy Trucks:	39.1	35.1	31.7	36.3	42.5	42.6
Vehicle Noise:	44.4	41.6	39.4	39.2	46.0	46.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Dale Street
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	35.0 feet
Barrier Distance to Observer:	2.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,421.9 feet
Road Elevation:	1,417.5 feet
Barrier Elevation:	1,421.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.50		
Medium Trucks:	1,419.80		
Heavy Trucks:	1,425.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	12.636
Medium Trucks:	10.339
Heavy Trucks:	4.630

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	8.86	-1.20	*0.97*	-10.210	-13.210
Medium Trucks:	71.09	-24.21	10.16	-1.20	*0.78*	-9.620	-12.620
Heavy Trucks:	77.24	-28.16	15.40	-1.20	*0.35*	-7.750	-10.750

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.1	56.8	50.8	59.2	59.8
Medium Trucks:	55.8	51.9	44.4	53.2	59.4	59.4
Heavy Trucks:	63.3	59.2	55.8	60.5	66.7	66.8
Vehicle Noise:	65.5	62.2	59.5	61.6	68.0	68.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	49.9	47.9	46.6	40.6	49.0	49.6
Medium Trucks:	46.2	42.3	34.8	43.6	49.7	49.8
Heavy Trucks:	55.5	51.5	48.1	52.7	58.9	59.0
Vehicle Noise:	57.0	53.4	50.5	53.5	59.8	59.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Dale Street
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	35.0 feet
Barrier Distance to Observer:	2.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,417.4 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.40		
Medium Trucks:	1,419.70		
Heavy Trucks:	1,425.41	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	10.036
Medium Trucks:	7.739
Heavy Trucks:	2.442

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	10.36	-1.20	*0.76*	-9.540	-12.540
Medium Trucks:	71.09	-24.21	12.05	-1.20	*0.58*	-8.900	-11.900
Heavy Trucks:	77.24	-28.16	19.56	-1.20	*0.19*	-6.720	-9.720

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.6	59.6	58.3	52.3	60.7	61.3
Medium Trucks:	57.7	53.8	46.3	55.1	61.3	61.3
Heavy Trucks:	67.4	63.4	60.0	64.6	70.8	70.9
Vehicle Noise:	68.8	65.2	62.4	65.3	71.7	71.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.1	50.1	48.8	42.8	51.2	51.8
Medium Trucks:	48.8	44.9	37.4	46.2	52.4	52.4
Heavy Trucks:	60.7	56.7	53.3	57.9	64.1	64.2
Vehicle Noise:	61.5	57.8	54.7	58.3	64.6	64.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Murrieta Road
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	320.0 feet
Centerline Dist. to Observer:	330.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,423.9 feet
Road Elevation:	1,415.5 feet
Barrier Elevation:	1,423.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.50		
Medium Trucks:	1,417.80		
Heavy Trucks:	1,423.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	310.262
Medium Trucks:	310.161
Heavy Trucks:	309.985

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-11.99	-1.20	*0.10*	-6.000	-9.000
Medium Trucks:	71.09	-16.95	-11.99	-1.20	*0.09*	-5.900	-8.900
Heavy Trucks:	77.24	-20.91	-11.99	-1.20	*0.07*	-5.700	-8.700

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.5	44.5	43.2	37.2	45.6	46.2
Medium Trucks:	40.9	37.0	29.5	38.3	44.5	44.5
Heavy Trucks:	43.1	39.1	35.7	40.4	46.5	46.6
Vehicle Noise:	48.9	46.2	44.1	43.6	50.4	50.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	40.5	38.5	37.2	31.2	39.6	40.2
Medium Trucks:	35.0	31.1	23.6	32.4	38.6	38.6
Heavy Trucks:	37.4	33.4	30.0	34.7	40.8	40.9
Vehicle Noise:	43.0	40.3	38.1	37.8	44.5	44.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Murrieta Road
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	310.0 feet
Centerline Dist. to Observer:	350.0 feet
Barrier Distance to Observer:	40.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,414.9 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,414.90		
Medium Trucks:	1,417.20		
Heavy Trucks:	1,422.91	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	330.040
Medium Trucks:	329.968
Heavy Trucks:	329.866

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-12.40	-1.20	*0.06*	-5.600	-8.600
Medium Trucks:	71.09	-16.95	-12.40	-1.20	*0.05*	-5.500	-8.500
Heavy Trucks:	77.24	-20.91	-12.39	-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:	46.1	44.1	42.8	36.8	45.2	45.8
Medium Trucks:	40.5	36.6	29.1	37.9	44.1	44.1
Heavy Trucks:	42.7	38.7	35.3	39.9	46.1	46.2
Vehicle Noise:	48.5	45.8	43.7	43.2	50.0	50.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	40.5	38.5	37.2	31.2	39.6	40.2
Medium Trucks:	35.0	31.1	23.6	32.4	38.6	38.6
Heavy Trucks:	37.5	33.5	30.1	34.7	40.9	41.0
Vehicle Noise:	43.0	40.3	38.1	37.8	44.6	44.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Murrieta Road
Lot No: Clubhouse

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	160.0 feet
Barrier Distance to Observer:	40.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.7 feet
Road Elevation:	1,415.2 feet
Barrier Elevation:	1,419.7 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.20		
Medium Trucks:	1,417.50		
Heavy Trucks:	1,423.21	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	139.160
Medium Trucks:	138.943
Heavy Trucks:	138.634

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-6.77	-1.20	*0.23*	-7.010	-10.010
Medium Trucks:	71.09	-16.95	-6.76	-1.20	*0.16*	-6.480	-9.480
Heavy Trucks:	77.24	-20.91	-6.75	-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:	51.8	49.7	48.4	42.4	50.8	51.5
Medium Trucks:	46.2	42.3	34.8	43.5	49.7	49.7
Heavy Trucks:	48.4	44.3	40.9	45.6	51.8	51.9
Vehicle Noise:	54.2	51.4	49.3	48.8	55.6	55.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	44.7	42.7	41.4	35.4	43.8	44.5
Medium Trucks:	39.7	35.8	28.3	37.0	43.2	43.3
Heavy Trucks:	43.1	39.0	35.6	40.3	46.5	46.6
Vehicle Noise:	47.7	44.9	42.6	42.8	49.5	49.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 2

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	125.0 feet
Centerline Dist. to Observer:	160.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,421.3 feet
Road Elevation:	1,417.8 feet
Barrier Elevation:	1,421.3 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.80		
Medium Trucks:	1,420.10		
Heavy Trucks:	1,425.81	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	142.672
Medium Trucks:	142.494
Heavy Trucks:	142.263

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-6.93	-1.20	*0.17*	-6.560	-9.560
Medium Trucks:	71.09	-21.72	-6.93	-1.20	*0.12*	-6.160	-9.160
Heavy Trucks:	77.24	-25.68	-6.92	-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:	46.8	44.8	43.5	37.5	45.9	46.5
Medium Trucks:	41.2	37.3	29.8	38.6	44.8	44.8
Heavy Trucks:	43.4	39.4	36.0	40.7	46.9	46.9
Vehicle Noise:	49.2	46.5	44.4	43.9	50.7	51.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	40.3	38.3	36.9	30.9	39.3	40.0
Medium Trucks:	35.1	31.2	23.7	32.4	38.6	38.6
Heavy Trucks:	38.2	34.2	30.8	35.5	41.7	41.7
Vehicle Noise:	43.1	40.3	38.0	38.1	44.8	45.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	130.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,422.5 feet
Road Elevation:	1,417.3 feet
Barrier Elevation:	1,422.5 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.30		
Medium Trucks:	1,419.60		
Heavy Trucks:	1,425.31	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	112.838
Medium Trucks:	112.613
Heavy Trucks:	112.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.41	-1.20	*0.19*	-6.720	-9.720
Medium Trucks:	71.09	-21.72	-5.39	-1.20	*0.15*	-6.400	-9.400
Heavy Trucks:	77.24	-25.68	-5.37	-1.20	*0.08*	-5.800	-8.800

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.3	46.3	45.0	39.0	47.4	48.1
Medium Trucks:	42.8	38.9	31.4	40.1	46.3	46.3
Heavy Trucks:	45.0	40.9	37.5	42.2	48.4	48.5
Vehicle Noise:	50.8	48.0	45.9	45.4	52.2	52.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	41.6	39.6	38.3	32.3	40.7	41.3
Medium Trucks:	36.4	32.5	25.0	33.7	39.9	39.9
Heavy Trucks:	39.2	35.1	31.7	36.4	42.6	42.7
Vehicle Noise:	44.3	41.5	39.3	39.2	46.0	46.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Dale Street
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,421.9 feet
Road Elevation:	1,417.5 feet
Barrier Elevation:	1,421.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.50		
Medium Trucks:	1,419.80		
Heavy Trucks:	1,425.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	27.429
Medium Trucks:	25.132
Heavy Trucks:	19.423

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	3.81	-1.20	*1.70*	-11.700	-14.700
Medium Trucks:	71.09	-24.21	4.38	-1.20	*1.14*	-10.580	-13.580
Heavy Trucks:	77.24	-28.16	6.06	-1.20	*0.17*	-6.560	-9.560

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.1	53.1	51.8	45.7	54.2	54.8
Medium Trucks:	50.1	46.2	38.7	47.4	53.6	53.6
Heavy Trucks:	53.9	49.9	46.5	51.1	57.3	57.4
Vehicle Noise:	58.3	55.3	53.1	53.5	60.1	60.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	43.4	41.4	40.1	34.0	42.5	43.1
Medium Trucks:	39.5	35.6	28.1	36.8	43.0	43.0
Heavy Trucks:	47.4	43.3	39.9	44.6	50.8	50.9
Vehicle Noise:	49.3	45.9	43.1	45.6	52.0	52.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Dale Street
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,417.4 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.40		
Medium Trucks:	1,419.70		
Heavy Trucks:	1,425.41	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	24.829
Medium Trucks:	22.532
Heavy Trucks:	17.235

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	4.46	-1.20	*1.07*	-10.440	-13.440
Medium Trucks:	71.09	-24.21	5.09	-1.20	*0.61*	-9.030	-12.030
Heavy Trucks:	77.24	-28.16	6.83	-1.20	*0.01*	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.7	53.7	52.4	46.4	54.8	55.4
Medium Trucks:	50.8	46.9	39.4	48.1	54.3	54.3
Heavy Trucks:	54.7	50.7	47.3	51.9	58.1	58.2
Vehicle Noise:	59.0	56.0	53.7	54.2	60.9	61.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.3	43.3	42.0	36.0	44.4	45.0
Medium Trucks:	41.7	37.8	30.3	39.1	45.3	45.3
Heavy Trucks:	49.6	45.6	42.2	46.8	53.0	53.1
Vehicle Noise:	51.5	48.0	45.2	47.8	54.2	54.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Murrieta Road
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	320.0 feet
Centerline Dist. to Observer:	355.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,423.9 feet
Road Elevation:	1,415.5 feet
Barrier Elevation:	1,423.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.50		
Medium Trucks:	1,417.80		
Heavy Trucks:	1,423.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	335.226
Medium Trucks:	335.125
Heavy Trucks:	334.949

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-12.50	-1.20	*0.09*	-5.900	-8.900
Medium Trucks:	71.09	-16.95	-12.50	-1.20	*0.07*	-5.700	-8.700
Heavy Trucks:	77.24	-20.91	-12.49	-1.20	*0.04*	-5.400	-8.400

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.0	44.0	42.7	36.7	45.1	45.7
Medium Trucks:	40.4	36.5	29.0	37.8	44.0	44.0
Heavy Trucks:	42.6	38.6	35.2	39.8	46.0	46.1
Vehicle Noise:	48.4	45.7	43.6	43.1	49.9	50.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	40.1	38.1	36.8	30.8	39.2	39.8
Medium Trucks:	34.7	30.8	23.3	32.1	38.3	38.3
Heavy Trucks:	37.2	33.2	29.8	34.4	40.6	40.7
Vehicle Noise:	42.7	39.9	37.8	37.5	44.3	44.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Murrieta Road
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	310.0 feet
Centerline Dist. to Observer:	390.0 feet
Barrier Distance to Observer:	80.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,414.9 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,414.90		
Medium Trucks:	1,417.20		
Heavy Trucks:	1,422.91	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	370.034
Medium Trucks:	369.961
Heavy Trucks:	369.860

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-13.14	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	71.09	-16.95	-13.14	-1.20	*0.05*	-5.500	-8.500
Heavy Trucks:	77.24	-20.91	-13.14	-1.20	*0.01*	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.4	43.4	42.1	36.0	44.5	45.1
Medium Trucks:	39.8	35.9	28.4	37.1	43.3	43.4
Heavy Trucks:	42.0	38.0	34.6	39.2	45.4	45.5
Vehicle Noise:	47.8	45.0	42.9	42.4	49.2	49.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	39.7	37.7	36.4	30.3	38.8	39.4
Medium Trucks:	34.3	30.4	22.9	31.6	37.8	37.9
Heavy Trucks:	36.9	32.9	29.5	34.1	40.3	40.4
Vehicle Noise:	42.3	39.5	37.3	37.1	43.9	44.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Murrieta Road
Lot No: Clubhouse

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	195.0 feet
Barrier Distance to Observer:	75.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	1,419.7 feet
Road Elevation:	1,415.2 feet
Barrier Elevation:	1,419.7 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.20		
Medium Trucks:	1,417.50		
Heavy Trucks:	1,423.21	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	174.154
Medium Trucks:	173.937
Heavy Trucks:	173.628

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-8.23	-1.20	*0.29*	-7.430	-10.430
Medium Trucks:	71.09	-16.95	-8.22	-1.20	*0.19*	-6.720	-9.720
Heavy Trucks:	77.24	-20.91	-8.21	-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:	50.3	48.3	47.0	41.0	49.4	50.0
Medium Trucks:	44.7	40.8	33.3	42.1	48.2	48.3
Heavy Trucks:	46.9	42.9	39.5	44.1	50.3	50.4
Vehicle Noise:	52.7	49.9	47.8	47.4	54.2	54.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	42.9	40.9	39.5	33.5	41.9	42.6
Medium Trucks:	38.0	34.1	26.6	35.3	41.5	41.6
Heavy Trucks:	41.6	37.6	34.2	38.8	45.0	45.1
Vehicle Noise:	46.0	43.1	40.8	41.2	47.9	48.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 2

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	125.0 feet
Centerline Dist. to Observer:	160.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,421.3 feet
Road Elevation:	1,417.8 feet
Barrier Elevation:	1,421.3 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.80		
Medium Trucks:	1,420.10		
Heavy Trucks:	1,425.81	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	143.618
Medium Trucks:	143.357
Heavy Trucks:	142.864

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-6.98	-1.20	*-0.25*	0.000	0.000
Medium Trucks:	71.09	-21.72	-6.97	-1.20	*-0.33*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-6.94	-1.20	*-0.59*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.8	44.8	43.5	37.4	45.9	46.5
Medium Trucks:	41.2	37.3	29.8	38.6	44.7	44.8
Heavy Trucks:	43.4	39.4	36.0	40.6	46.8	46.9
Vehicle Noise:	49.2	46.4	44.3	43.8	50.7	50.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.8	44.8	43.5	37.4	45.9	46.5
Medium Trucks:	41.2	37.3	29.8	38.6	44.7	44.8
Heavy Trucks:	43.4	39.4	36.0	40.6	46.8	46.9
Vehicle Noise:	49.2	46.4	44.3	43.8	50.7	50.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	130.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,422.5 feet
Road Elevation:	1,417.3 feet
Barrier Elevation:	1,422.5 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.30		
Medium Trucks:	1,419.60		
Heavy Trucks:	1,425.31	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	113.924
Medium Trucks:	113.559
Heavy Trucks:	112.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.47	-1.20	*-1.76*	0.000	0.000
Medium Trucks:	71.09	-21.72	-5.45	-1.20	*-1.89*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-5.41	-1.20	*-2.26*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.3	46.3	45.0	39.0	47.4	48.0
Medium Trucks:	42.7	38.8	31.3	40.1	46.2	46.3
Heavy Trucks:	45.0	40.9	37.5	42.2	48.4	48.5
Vehicle Noise:	50.7	48.0	45.8	45.4	52.2	52.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.3	46.3	45.0	39.0	47.4	48.0
Medium Trucks:	42.7	38.8	31.3	40.1	46.2	46.3
Heavy Trucks:	45.0	40.9	37.5	42.2	48.4	48.5
Vehicle Noise:	50.7	48.0	45.8	45.4	52.2	52.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Dale Street
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,421.9 feet
Road Elevation:	1,417.5 feet
Barrier Elevation:	1,421.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.50		
Medium Trucks:	1,419.80		
Heavy Trucks:	1,425.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.188
Medium Trucks:	26.891
Heavy Trucks:	30.952

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	3.40	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	71.09	-24.21	3.94	-1.20	*0.00*	-4.900	-7.900
Heavy Trucks:	77.24	-28.16	3.02	-1.20	*-0.38*	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:	54.7	52.7	51.4	45.3	53.8	54.4
Medium Trucks:	49.6	45.7	38.2	47.0	53.1	53.2
Heavy Trucks:	50.9	46.9	43.5	48.1	54.3	54.4
Vehicle Noise:	57.1	54.3	52.2	51.7	58.5	58.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	49.0	47.0	45.7	39.6	48.1	48.7
Medium Trucks:	44.7	40.8	33.3	42.1	48.2	48.3
Heavy Trucks:	50.9	46.9	43.5	48.1	54.3	54.4
Vehicle Noise:	53.6	50.4	47.9	49.5	56.0	56.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Dale Street
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,417.4 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.40		
Medium Trucks:	1,419.70		
Heavy Trucks:	1,425.41	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	26.588
Medium Trucks:	32.130
Heavy Trucks:	30.179

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	4.01	-1.20	*0.00*	-4.900	-7.900
Medium Trucks:	71.09	-24.21	2.78	-1.20	*-0.06*	0.000	0.000
Heavy Trucks:	77.24	-28.16	3.19	-1.20	*-0.88*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.3	53.3	52.0	45.9	54.4	55.0
Medium Trucks:	48.5	44.6	37.1	45.8	52.0	52.0
Heavy Trucks:	51.1	47.0	43.6	48.3	54.5	54.6
Vehicle Noise:	57.3	54.6	52.7	51.6	58.5	58.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.4	48.4	47.1	41.0	49.5	50.1
Medium Trucks:	48.5	44.6	37.1	45.8	52.0	52.0
Heavy Trucks:	51.1	47.0	43.6	48.3	54.5	54.6
Vehicle Noise:	54.9	51.7	49.0	50.7	57.2	57.4

Friday, July 1, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Murrieta Road
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	320.0 feet
Centerline Dist. to Observer:	355.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,423.9 feet
Road Elevation:	1,415.5 feet
Barrier Elevation:	1,423.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.50		
Medium Trucks:	1,417.80		
Heavy Trucks:	1,423.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	335.681
Medium Trucks:	335.536
Heavy Trucks:	335.242

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-12.51	-1.20	*-0.49*	0.000	0.000
Medium Trucks:	71.09	-16.95	-12.50	-1.20	*-0.53*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-12.50	-1.20	*-0.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.0	44.0	42.7	36.7	45.1	45.7
Medium Trucks:	40.4	36.5	29.0	37.8	44.0	44.0
Heavy Trucks:	42.6	38.6	35.2	39.8	46.0	46.1
Vehicle Noise:	48.4	45.7	43.6	43.1	49.9	50.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.0	44.0	42.7	36.7	45.1	45.7
Medium Trucks:	40.4	36.5	29.0	37.8	44.0	44.0
Heavy Trucks:	42.6	38.6	35.2	39.8	46.0	46.1
Vehicle Noise:	48.4	45.7	43.6	43.1	49.9	50.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Murrieta Road
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	310.0 feet
Centerline Dist. to Observer:	390.0 feet
Barrier Distance to Observer:	80.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,414.9 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,414.90		
Medium Trucks:	1,417.20		
Heavy Trucks:	1,422.91	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	370.439
Medium Trucks:	370.332
Heavy Trucks:	370.130

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-13.15	-1.20	*-0.13*	0.000	0.000
Medium Trucks:	71.09	-16.95	-13.15	-1.20	*-0.16*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-13.14	-1.20	*-0.26*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.4	43.4	42.1	36.0	44.5	45.1
Medium Trucks:	39.8	35.9	28.4	37.1	43.3	43.3
Heavy Trucks:	42.0	37.9	34.5	39.2	45.4	45.5
Vehicle Noise:	47.8	45.0	42.9	42.4	49.2	49.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.4	43.4	42.1	36.0	44.5	45.1
Medium Trucks:	39.8	35.9	28.4	37.1	43.3	43.3
Heavy Trucks:	42.0	37.9	34.5	39.2	45.4	45.5
Vehicle Noise:	47.8	45.0	42.9	42.4	49.2	49.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Murrieta Road
Lot No: Clubhouse

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	195.0 feet
Barrier Distance to Observer:	75.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	1,419.7 feet
Road Elevation:	1,415.2 feet
Barrier Elevation:	1,419.7 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.20		
Medium Trucks:	1,417.50		
Heavy Trucks:	1,423.21	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	175.392
Medium Trucks:	175.164
Heavy Trucks:	174.729

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-8.28	-1.20	*0.00*	0.000	0.000
Medium Trucks:	71.09	-16.95	-8.27	-1.20	*-0.01*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-8.25	-1.20	*-0.14*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	48.2	46.9	40.9	49.3	50.0
Medium Trucks:	44.7	40.8	33.3	42.0	48.2	48.2
Heavy Trucks:	46.9	42.8	39.4	44.1	50.3	50.4
Vehicle Noise:	52.6	49.9	47.8	47.3	54.1	54.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	48.2	46.9	40.9	49.3	50.0
Medium Trucks:	44.7	40.8	33.3	42.0	48.2	48.2
Heavy Trucks:	46.9	42.8	39.4	44.1	50.3	50.4
Vehicle Noise:	52.6	49.9	47.8	47.3	54.1	54.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 2

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	125.0 feet
Centerline Dist. to Observer:	160.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,421.3 feet
Road Elevation:	1,417.8 feet
Barrier Elevation:	1,421.3 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.80		
Medium Trucks:	1,420.10		
Heavy Trucks:	1,425.81	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	144.991
Medium Trucks:	144.588
Heavy Trucks:	143.743

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-7.04	-1.20	*-1.86*	0.000	0.000
Medium Trucks:	71.09	-21.72	-7.02	-1.20	*-2.08*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-6.98	-1.20	*-2.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.7	44.7	43.4	37.4	45.8	46.4
Medium Trucks:	41.1	37.2	29.7	38.5	44.7	44.7
Heavy Trucks:	43.4	39.3	35.9	40.6	46.8	46.9
Vehicle Noise:	49.1	46.4	44.3	43.8	50.6	50.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.7	44.7	43.4	37.4	45.8	46.4
Medium Trucks:	41.1	37.2	29.7	38.5	44.7	44.7
Heavy Trucks:	43.4	39.3	35.9	40.6	46.8	46.9
Vehicle Noise:	49.1	46.4	44.3	43.8	50.6	50.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Wilson Avenue
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	310 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	130.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,422.5 feet
Road Elevation:	1,417.3 feet
Barrier Elevation:	1,422.5 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.30		
Medium Trucks:	1,419.60		
Heavy Trucks:	1,425.31	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	115.781
Medium Trucks:	115.243
Heavy Trucks:	114.096

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.48	-5.57	-1.20	*-6.73*	0.000	0.000
Medium Trucks:	71.09	-21.72	-5.54	-1.20	*-7.03*	0.000	0.000
Heavy Trucks:	77.24	-25.68	-5.48	-1.20	*-7.82*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.2	46.2	44.9	38.8	47.3	47.9
Medium Trucks:	42.6	38.7	31.2	40.0	46.1	46.2
Heavy Trucks:	44.9	40.8	37.4	42.1	48.3	48.4
Vehicle Noise:	50.6	47.9	45.7	45.3	52.1	52.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.2	46.2	44.9	38.8	47.3	47.9
Medium Trucks:	42.6	38.7	31.2	40.0	46.1	46.2
Heavy Trucks:	44.9	40.8	37.4	42.1	48.3	48.4
Vehicle Noise:	50.6	47.9	45.7	45.3	52.1	52.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Dale Street
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,421.9 feet
Road Elevation:	1,417.5 feet
Barrier Elevation:	1,421.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.50		
Medium Trucks:	1,419.80		
Heavy Trucks:	1,425.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	40.010
Medium Trucks:	38.473
Heavy Trucks:	35.016

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	1.35	-1.20	*-0.26*	0.000	0.000
Medium Trucks:	71.09	-24.21	1.60	-1.20	*-0.55*	0.000	0.000
Heavy Trucks:	77.24	-28.16	2.22	-1.20	*-1.96*	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:	52.6	50.6	49.3	43.3	51.7	52.3
Medium Trucks:	47.3	43.4	35.9	44.6	50.8	50.8
Heavy Trucks:	50.1	46.1	42.7	47.3	53.5	53.6
Vehicle Noise:	55.3	52.5	50.3	50.2	56.9	57.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.6	50.6	49.3	43.3	51.7	52.3
Medium Trucks:	47.3	43.4	35.9	44.6	50.8	50.8
Heavy Trucks:	50.1	46.1	42.7	47.3	53.5	53.6
Vehicle Noise:	55.3	52.5	50.3	50.2	56.9	57.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Dale Street
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	175 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	33 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	33.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	17.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,417.4 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,417.40		
Medium Trucks:	1,419.70		
Heavy Trucks:	1,425.41	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.276
Medium Trucks:	36.829
Heavy Trucks:	33.646

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-6.97	1.64	-1.20	*-0.60*	0.000	0.000
Medium Trucks:	71.09	-24.21	1.89	-1.20	*-1.06*	0.000	0.000
Heavy Trucks:	77.24	-28.16	2.48	-1.20	*-3.00*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.9	50.9	49.6	43.6	52.0	52.6
Medium Trucks:	47.6	43.7	36.2	44.9	51.1	51.1
Heavy Trucks:	50.4	46.3	42.9	47.6	53.8	53.9
Vehicle Noise:	55.6	52.8	50.6	50.4	57.2	57.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.9	50.9	49.6	43.6	52.0	52.6
Medium Trucks:	47.6	43.7	36.2	44.9	51.1	51.1
Heavy Trucks:	50.4	46.3	42.9	47.6	53.8	53.9
Vehicle Noise:	55.6	52.8	50.6	50.4	57.2	57.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Murrieta Road
Lot No: Building 1

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	320.0 feet
Centerline Dist. to Observer:	355.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,423.9 feet
Road Elevation:	1,415.5 feet
Barrier Elevation:	1,423.9 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.50		
Medium Trucks:	1,417.80		
Heavy Trucks:	1,423.51	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	336.401
Medium Trucks:	336.195
Heavy Trucks:	335.749

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-12.52	-1.20	*-2.73*	0.000	0.000
Medium Trucks:	71.09	-16.95	-12.52	-1.20	*-2.83*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-12.51	-1.20	*-3.10*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.0	44.0	42.7	36.7	45.1	45.7
Medium Trucks:	40.4	36.5	29.0	37.8	43.9	44.0
Heavy Trucks:	42.6	38.6	35.2	39.8	46.0	46.1
Vehicle Noise:	48.4	45.7	43.5	43.1	49.9	50.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	46.0	44.0	42.7	36.7	45.1	45.7
Medium Trucks:	40.4	36.5	29.0	37.8	43.9	44.0
Heavy Trucks:	42.6	38.6	35.2	39.8	46.0	46.1
Vehicle Noise:	48.4	45.7	43.5	43.1	49.9	50.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Murrieta Road
Lot No: Building 3

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	310.0 feet
Centerline Dist. to Observer:	390.0 feet
Barrier Distance to Observer:	80.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,419.2 feet
Road Elevation:	1,414.9 feet
Barrier Elevation:	1,419.2 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,414.90		
Medium Trucks:	1,417.20		
Heavy Trucks:	1,422.91	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	370.992
Medium Trucks:	370.830
Heavy Trucks:	370.489

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-13.16	-1.20	*-0.94*	0.000	0.000
Medium Trucks:	71.09	-16.95	-13.16	-1.20	*-1.03*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-13.15	-1.20	*-1.27*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.4	43.4	42.0	36.0	44.5	45.1
Medium Trucks:	39.8	35.9	28.4	37.1	43.3	43.3
Heavy Trucks:	42.0	37.9	34.5	39.2	45.4	45.5
Vehicle Noise:	47.8	45.0	42.9	42.4	49.2	49.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	45.4	43.4	42.0	36.0	44.5	45.1
Medium Trucks:	39.8	35.9	28.4	37.1	43.3	43.3
Heavy Trucks:	42.0	37.9	34.5	39.2	45.4	45.5
Vehicle Noise:	47.8	45.0	42.9	42.4	49.2	49.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Third Floor With Wall
Road Name: Murrieta Road
Lot No: Clubhouse

Project Name: Prairie View Apartments
Job Number: 13747
Analyst: C. Shields

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	930 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	39 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	120.0 feet
Centerline Dist. to Observer:	195.0 feet
Barrier Distance to Observer:	75.0 feet
Observer Height (Above Pad):	23.0 feet
Pad Elevation:	1,419.7 feet
Road Elevation:	1,415.2 feet
Barrier Elevation:	1,419.7 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	75.5%	14.0%	10.5%	97.42%
Medium Trucks:	48.9%	2.2%	48.9%	1.84%
Heavy Trucks:	47.3%	5.4%	47.3%	0.74%

Noise Source Elevations (in feet)

Autos:	1,415.20		
Medium Trucks:	1,417.50		
Heavy Trucks:	1,423.21	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	176.568
Medium Trucks:	176.225
Heavy Trucks:	175.499

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	0.29	-8.32	-1.20	*-0.30*	0.000	0.000
Medium Trucks:	71.09	-16.95	-8.31	-1.20	*-0.43*	0.000	0.000
Heavy Trucks:	77.24	-20.91	-8.28	-1.20	*-0.84*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	48.2	46.9	40.9	49.3	49.9
Medium Trucks:	44.6	40.7	33.2	42.0	48.1	48.2
Heavy Trucks:	46.8	42.8	39.4	44.1	50.3	50.4
Vehicle Noise:	52.6	49.9	47.8	47.3	54.1	54.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.2	48.2	46.9	40.9	49.3	49.9
Medium Trucks:	44.6	40.7	33.2	42.0	48.1	48.2
Heavy Trucks:	46.8	42.8	39.4	44.1	50.3	50.4
Vehicle Noise:	52.6	49.9	47.8	47.3	54.1	54.4

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APPENDIX 8.1:

OFF-SITE TRAFFIC NOISE WORKSHEETS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,450	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	2,512	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.05	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-15.19	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-19.14	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	68.6	66.8	60.7	69.4	70.0
Medium Trucks:	63.4	62.7	56.4	54.8	63.3	63.5
Heavy Trucks:	64.2	63.7	54.6	55.9	64.2	64.4
Vehicle Noise:	71.5	70.6	67.4	62.7	71.3	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	131	282	608
CNEL:	65	140	303	652

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,450	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,192	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.19	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-18.43	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-22.38	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.4	65.3	63.6	57.5	66.1	66.7
Medium Trucks:	60.2	59.5	53.1	51.6	60.0	60.3
Heavy Trucks:	61.0	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	68.2	67.3	64.2	59.5	68.0	68.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	172	370
CNEL:	40	85	184	397

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,750	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,052	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	0.82	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-16.42	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-20.37	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.7	57.6	55.8	49.8	58.4	59.0
Medium Trucks:	53.5	52.8	46.5	44.9	53.4	53.6
Heavy Trucks:	56.7	56.1	47.1	48.4	56.7	56.8
Vehicle Noise:	61.6	60.7	56.8	52.9	61.4	61.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	134
CNEL:	14	31	66	142

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,050	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	252	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.39	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.63	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.58	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.9	53.8	52.1	46.0	54.6	55.2
Medium Trucks:	49.8	49.1	42.7	41.2	49.6	49.9
Heavy Trucks:	53.0	52.4	43.4	44.6	53.0	53.1
Vehicle Noise:	57.8	56.9	53.0	49.1	57.6	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	23	49
CNEL:	5	11	24	52

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,450	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	202	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.34	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.58	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.54	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.9	52.9	51.1	45.0	53.7	54.3
Medium Trucks:	48.8	48.1	41.8	40.2	48.7	48.9
Heavy Trucks:	52.0	51.4	42.4	43.7	52.0	52.1
Vehicle Noise:	56.8	56.0	52.1	48.2	56.7	57.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	42
CNEL:	4	10	21	45

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,450	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	202	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.34	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.58	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.54	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.9	52.9	51.1	45.0	53.7	54.3
Medium Trucks:	48.8	48.1	41.8	40.2	48.7	48.9
Heavy Trucks:	52.0	51.4	42.4	43.7	52.0	52.1
Vehicle Noise:	56.8	56.0	52.1	48.2	56.7	57.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	42
CNEL:	4	10	21	45

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	421	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.62	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.86	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.81	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	54.3	53.7	47.3	45.8	54.2	54.4
Heavy Trucks:	56.2	55.6	46.6	47.8	56.2	56.3
Vehicle Noise:	62.3	61.4	58.0	53.6	62.1	62.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	56	120
CNEL:	13	28	59	128

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	421	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.62	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.86	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.81	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	54.3	53.7	47.3	45.8	54.2	54.4
Heavy Trucks:	56.2	55.6	46.6	47.8	56.2	56.3
Vehicle Noise:	62.3	61.4	58.0	53.6	62.1	62.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	56	120
CNEL:	13	28	59	128

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	103	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.26	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.50	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.46	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.0	49.9	48.2	42.1	50.7	51.4
Medium Trucks:	45.9	45.2	38.9	37.3	45.8	46.0
Heavy Trucks:	49.1	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	53.9	53.1	49.2	45.3	53.8	54.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	12	27
CNEL:	3	6	13	28

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,700	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	140	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-7.93	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-25.17	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-29.12	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.3	51.3	49.5	43.5	52.1	52.7
Medium Trucks:	47.2	46.5	40.2	38.6	47.1	47.3
Heavy Trucks:	50.4	49.9	40.8	42.1	50.4	50.5
Vehicle Noise:	55.2	54.4	50.5	46.6	55.1	55.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	7	15	33
CNEL:	3	8	16	35

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	91	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.82	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-27.06	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-31.01	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.5	49.4	47.6	41.6	50.2	50.8
Medium Trucks:	45.3	44.7	38.3	36.8	45.2	45.4
Heavy Trucks:	48.5	48.0	38.9	40.2	48.5	48.7
Vehicle Noise:	53.4	52.5	48.6	44.7	53.2	53.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	2	5	11	25
CNEL:	3	6	12	26

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,150	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	2,570	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.15	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-15.09	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-19.05	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.7	68.7	66.9	60.8	69.5	70.1
Medium Trucks:	63.5	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	64.3	63.8	54.7	56.0	64.3	64.5
Vehicle Noise:	71.6	70.7	67.5	62.8	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	133	286	617
CNEL:	66	143	307	662

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,800	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,221	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.08	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-18.32	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-22.28	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.5	65.4	63.7	57.6	66.2	66.8
Medium Trucks:	60.3	59.6	53.2	51.7	60.1	60.4
Heavy Trucks:	61.1	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	68.3	67.4	64.3	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	38	81	174	376
CNEL:	40	87	187	403

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,950	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,068	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	0.89	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-16.35	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-20.31	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.7	57.7	55.9	49.9	58.5	59.1
Medium Trucks:	53.6	52.9	46.6	45.0	53.5	53.7
Heavy Trucks:	56.8	56.2	47.2	48.4	56.8	56.9
Vehicle Noise:	61.6	60.8	56.9	53.0	61.5	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	63	135
CNEL:	14	31	67	143

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	256	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.32	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.56	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.51	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.0	53.9	52.1	46.1	54.7	55.3
Medium Trucks:	49.8	49.2	42.8	41.3	49.7	49.9
Heavy Trucks:	53.0	52.5	43.4	44.7	53.0	53.2
Vehicle Noise:	57.9	57.0	53.1	49.2	57.7	58.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	49
CNEL:	5	11	24	52

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,750	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	227	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.84	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.08	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.03	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.4	53.4	51.6	45.5	54.2	54.8
Medium Trucks:	49.3	48.6	42.3	40.7	49.2	49.4
Heavy Trucks:	52.5	51.9	42.9	44.2	52.5	52.6
Vehicle Noise:	57.3	56.5	52.6	48.7	57.2	57.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	21	45
CNEL:	5	10	22	48

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,500	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	206	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.25	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.49	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.45	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.0	53.0	51.2	45.1	53.8	54.4
Medium Trucks:	48.9	48.2	41.9	40.3	48.8	49.0
Heavy Trucks:	52.1	51.5	42.5	43.7	52.1	52.2
Vehicle Noise:	56.9	56.1	52.2	48.3	56.8	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	43
CNEL:	5	10	21	45

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,650 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	466 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.17	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.41	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.37	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.5	59.5	57.7	51.6	60.3	60.9
Medium Trucks:	54.8	54.1	47.7	46.2	54.7	54.9
Heavy Trucks:	56.6	56.1	47.0	48.3	56.6	56.7
Vehicle Noise:	62.8	61.9	58.4	54.1	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	28	60	128
CNEL:	14	30	64	137

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	437	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.45	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.69	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.65	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.3	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	54.5	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.4	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	62.5	61.6	58.2	53.8	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	57	123
CNEL:	13	28	61	131

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	103	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.26	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.50	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.46	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.0	49.9	48.2	42.1	50.7	51.4
Medium Trucks:	45.9	45.2	38.9	37.3	45.8	46.0
Heavy Trucks:	49.1	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	53.9	53.1	49.2	45.3	53.8	54.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	12	27
CNEL:	3	6	13	28

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	186	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.71	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.95	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.91	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.6	52.5	50.7	44.7	53.3	53.9
Medium Trucks:	48.4	47.8	41.4	39.9	48.3	48.6
Heavy Trucks:	51.7	51.1	42.0	43.3	51.6	51.8
Vehicle Noise:	56.5	55.6	51.7	47.8	56.3	56.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	18	40
CNEL:	4	9	20	42

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: E + P
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,600	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	132	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-8.19	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-25.43	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-29.39	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.1	51.0	49.2	43.2	51.8	52.4
Medium Trucks:	47.0	46.3	39.9	38.4	46.8	47.1
Heavy Trucks:	50.2	49.6	40.6	41.8	50.2	50.3
Vehicle Noise:	55.0	54.1	50.2	46.3	54.8	55.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	7	15	32
CNEL:	3	7	16	34

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,450	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	3,585	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.59	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-13.64	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.60	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	70.1	68.3	62.3	70.9	71.5
Medium Trucks:	64.9	64.3	57.9	56.4	64.8	65.1
Heavy Trucks:	65.8	65.2	56.2	57.4	65.8	65.9
Vehicle Noise:	73.0	72.1	68.9	64.3	72.8	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	77	166	358	770
CNEL:	83	178	384	826

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,350	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,514	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.15	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-17.39	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-21.34	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.4	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	61.2	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.0	61.5	52.4	53.7	62.0	62.2
Vehicle Noise:	69.3	68.4	65.2	60.5	69.1	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	43	93	201	434
CNEL:	47	100	216	465

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,550	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,365	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	1.95	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-15.28	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-19.24	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.8	58.7	57.0	50.9	59.5	60.1
Medium Trucks:	54.6	54.0	47.6	46.1	54.5	54.8
Heavy Trucks:	57.9	57.3	48.2	49.5	57.9	58.0
Vehicle Noise:	62.7	61.9	57.9	54.0	62.5	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	34	74	159
CNEL:	17	36	78	169

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,150	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	260	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.25	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.49	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.44	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.0	54.0	52.2	46.1	54.8	55.4
Medium Trucks:	49.9	49.2	42.9	41.3	49.8	50.0
Heavy Trucks:	53.1	52.5	43.5	44.7	53.1	53.2
Vehicle Noise:	57.9	57.1	53.2	49.3	57.8	58.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	50
CNEL:	5	11	24	53

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,550	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	210	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.17	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.41	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.36	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.1	53.0	51.3	45.2	53.8	54.4
Medium Trucks:	49.0	48.3	41.9	40.4	48.9	49.1
Heavy Trucks:	52.2	51.6	42.6	43.8	52.2	52.3
Vehicle Noise:	57.0	56.2	52.2	48.3	56.9	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	43
CNEL:	5	10	21	46

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,550	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	210	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.17	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.41	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.36	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.1	53.0	51.3	45.2	53.8	54.4
Medium Trucks:	49.0	48.3	41.9	40.4	48.9	49.1
Heavy Trucks:	52.2	51.6	42.6	43.8	52.2	52.3
Vehicle Noise:	57.0	56.2	52.2	48.3	56.9	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	43
CNEL:	5	10	21	46

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	437	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.45	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.69	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.65	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.3	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	54.5	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.4	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	62.5	61.6	58.2	53.8	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	57	123
CNEL:	13	28	61	131

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	437	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.45	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.69	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.65	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.3	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	54.5	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.4	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	62.5	61.6	58.2	53.8	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	57	123
CNEL:	13	28	61	131

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	107	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.09	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.33	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.29	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.2	50.1	48.3	42.3	50.9	51.5
Medium Trucks:	46.1	45.4	39.0	37.5	45.9	46.2
Heavy Trucks:	49.3	48.7	39.6	40.9	49.3	49.4
Vehicle Noise:	54.1	53.2	49.3	45.4	53.9	54.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	13	28
CNEL:	3	6	14	29

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,800	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	149	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-7.68	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-24.92	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-28.88	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.6	51.5	49.8	43.7	52.3	52.9
Medium Trucks:	47.5	46.8	40.4	38.9	47.4	47.6
Heavy Trucks:	50.7	50.1	41.1	42.3	50.7	50.8
Vehicle Noise:	55.5	54.7	50.7	46.8	55.3	55.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	7	16	34
CNEL:	4	8	17	36

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) NP
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,125	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	93	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.72	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.96	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.92	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.5	49.5	47.7	41.7	50.3	50.9
Medium Trucks:	45.4	44.8	38.4	36.8	45.3	45.5
Heavy Trucks:	48.6	48.1	39.0	40.3	48.6	48.8
Vehicle Noise:	53.5	52.6	48.7	44.8	53.3	53.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	5	12	25
CNEL:	3	6	12	27

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,150	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	3,642	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.66	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-13.58	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.53	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	70.2	68.4	62.4	71.0	71.6
Medium Trucks:	65.0	64.3	58.0	56.4	64.9	65.1
Heavy Trucks:	65.9	65.3	56.2	57.5	65.8	66.0
Vehicle Noise:	73.1	72.2	69.0	64.3	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	168	361	779
CNEL:	84	180	388	835

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,650	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,539	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.08	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-17.32	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-21.27	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.5	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	61.3	60.6	54.2	52.7	61.2	61.4
Heavy Trucks:	62.1	61.5	52.5	53.7	62.1	62.2
Vehicle Noise:	69.3	68.4	65.3	60.6	69.1	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	44	94	203	438
CNEL:	47	101	218	470

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,750	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,382	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	2.01	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-15.23	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-19.19	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.9	58.8	57.0	51.0	59.6	60.2
Medium Trucks:	54.7	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	57.9	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	62.7	61.9	58.0	54.1	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	35	74	160
CNEL:	17	37	79	170

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	268	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.11	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.35	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.31	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.2	54.1	52.3	46.3	54.9	55.5
Medium Trucks:	50.0	49.4	43.0	41.5	49.9	50.1
Heavy Trucks:	53.3	52.7	43.6	44.9	53.2	53.4
Vehicle Noise:	58.1	57.2	53.3	49.4	57.9	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	24	51
CNEL:	5	12	25	54

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,850	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	235	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.69	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.92	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.88	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.6	53.5	51.8	45.7	54.3	54.9
Medium Trucks:	49.5	48.8	42.4	40.9	49.3	49.6
Heavy Trucks:	52.7	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	57.5	56.7	52.7	48.8	57.3	57.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	22	47
CNEL:	5	11	23	49

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,550	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	210	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.17	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.41	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.36	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.1	53.0	51.3	45.2	53.8	54.4
Medium Trucks:	49.0	48.3	41.9	40.4	48.9	49.1
Heavy Trucks:	52.2	51.6	42.6	43.8	52.2	52.3
Vehicle Noise:	57.0	56.2	52.2	48.3	56.9	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	43
CNEL:	5	10	21	46

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,850	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	483	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.02	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.26	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.22	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	54.9	54.3	47.9	46.4	54.8	55.0
Heavy Trucks:	56.8	56.2	47.2	48.4	56.8	56.9
Vehicle Noise:	62.9	62.0	58.6	54.2	62.7	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	28	61	131
CNEL:	14	30	65	140

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,500	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	454	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.29	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.53	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.49	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.4	59.3	57.6	51.5	60.2	60.8
Medium Trucks:	54.7	54.0	47.6	46.1	54.5	54.8
Heavy Trucks:	56.5	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	62.7	61.8	58.3	53.9	62.5	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	27	58	126
CNEL:	13	29	62	135

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	107	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.09	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.33	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.29	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.2	50.1	48.3	42.3	50.9	51.5
Medium Trucks:	46.1	45.4	39.0	37.5	45.9	46.2
Heavy Trucks:	49.3	48.7	39.6	40.9	49.3	49.4
Vehicle Noise:	54.1	53.2	49.3	45.4	53.9	54.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	13	28
CNEL:	3	6	14	29

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	190	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.62	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.85	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.81	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.7	52.6	50.8	44.8	53.4	54.0
Medium Trucks:	48.5	47.9	41.5	40.0	48.4	48.6
Heavy Trucks:	51.7	51.2	42.1	43.4	51.7	51.9
Vehicle Noise:	56.6	55.7	51.8	47.9	56.4	56.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	19	40
CNEL:	4	9	20	43

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY(2024) WP
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,650	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	136	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-8.06	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-25.30	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-29.25	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.2	51.1	49.4	43.3	52.0	52.6
Medium Trucks:	47.1	46.4	40.1	38.5	47.0	47.2
Heavy Trucks:	50.3	49.7	40.7	41.9	50.3	50.4
Vehicle Noise:	55.1	54.3	50.4	46.5	55.0	55.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	7	15	32
CNEL:	3	7	16	34

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	54,500	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	4,496	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.58	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-12.66	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.62	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.1	71.1	69.3	63.3	71.9	72.5
Medium Trucks:	65.9	65.3	58.9	57.3	65.8	66.0
Heavy Trucks:	66.8	66.2	57.1	58.4	66.8	66.9
Vehicle Noise:	74.0	73.1	69.9	65.3	73.8	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	90	193	416	896
CNEL:	96	207	446	961

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,900	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	2,137	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.35	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-15.89	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-19.85	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.9	67.9	66.1	60.0	68.7	69.3
Medium Trucks:	62.7	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	63.5	63.0	53.9	55.2	63.5	63.6
Vehicle Noise:	70.8	69.9	66.7	62.0	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	118	253	546
CNEL:	59	126	272	585

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,000	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,650	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	2.78	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-14.46	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-18.42	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	59.6	57.8	51.7	60.4	61.0
Medium Trucks:	55.5	54.8	48.4	46.9	55.4	55.6
Heavy Trucks:	58.7	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	63.5	62.7	58.8	54.9	63.4	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	84	180
CNEL:	19	41	89	191

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,500	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	289	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-4.79	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.03	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-25.99	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.5	54.4	52.6	46.6	55.2	55.8
Medium Trucks:	50.4	49.7	43.3	41.8	50.2	50.5
Heavy Trucks:	53.6	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	58.4	57.5	53.6	49.7	58.2	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	25	53
CNEL:	6	12	26	57

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,800	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	231	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.76	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.00	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.96	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.5	53.4	51.7	45.6	54.2	54.9
Medium Trucks:	49.4	48.7	42.4	40.8	49.3	49.5
Heavy Trucks:	52.6	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	57.4	56.6	52.7	48.8	57.3	57.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	21	46
CNEL:	5	11	23	49

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,800	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	231	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.76	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.00	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.96	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.5	53.4	51.7	45.6	54.2	54.9
Medium Trucks:	49.4	48.7	42.4	40.8	49.3	49.5
Heavy Trucks:	52.6	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	57.4	56.6	52.7	48.8	57.3	57.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	21	46
CNEL:	5	11	23	49

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,750	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	722	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-2.27	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-19.51	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-23.47	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.4	61.4	59.6	53.5	62.2	62.8
Medium Trucks:	56.7	56.0	49.6	48.1	56.6	56.8
Heavy Trucks:	58.5	57.9	48.9	50.2	58.5	58.6
Vehicle Noise:	64.7	63.8	60.3	56.0	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	17	37	80	172
CNEL:	18	40	85	183

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,850	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	483	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-4.02	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.26	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.22	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	54.9	54.3	47.9	46.4	54.8	55.0
Heavy Trucks:	56.8	56.2	47.2	48.4	56.8	56.9
Vehicle Noise:	62.9	62.0	58.6	54.2	62.7	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	28	61	131
CNEL:	14	30	65	140

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	190	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.62	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.85	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.81	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.7	52.6	50.8	44.8	53.4	54.0
Medium Trucks:	48.5	47.9	41.5	40.0	48.4	48.6
Heavy Trucks:	51.7	51.2	42.1	43.4	51.7	51.9
Vehicle Noise:	56.6	55.7	51.8	47.9	56.4	56.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	19	40
CNEL:	4	9	20	43

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,950	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	161	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-7.33	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-24.57	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-28.53	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.9	51.9	50.1	44.1	52.7	53.3
Medium Trucks:	47.8	47.1	40.8	39.2	47.7	47.9
Heavy Trucks:	51.0	50.4	41.4	42.7	51.0	51.1
Vehicle Noise:	55.8	55.0	51.1	47.2	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	8	17	36
CNEL:	4	8	18	38

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) NP
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,240	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	102	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-9.30	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-26.54	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-30.49	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.0	49.9	48.1	42.1	50.7	51.3
Medium Trucks:	45.9	45.2	38.8	37.3	45.7	46.0
Heavy Trucks:	49.1	48.5	39.4	40.7	49.0	49.2
Vehicle Noise:	53.9	53.0	49.1	45.2	53.7	54.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	12	27
CNEL:	3	6	13	28

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Redlands Ave.
Road Segment: n/o I-215NB Off Ramp

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	55,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	4,558	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.64	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-12.60	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.56	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	71.1	69.4	63.3	71.9	72.6
Medium Trucks:	66.0	65.3	59.0	57.4	65.9	66.1
Heavy Trucks:	66.8	66.2	57.2	58.5	66.8	66.9
Vehicle Noise:	74.1	73.1	70.0	65.3	73.9	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	90	195	420	904
CNEL:	97	209	450	970

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Redlands Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,250	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	2,166	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.40	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-15.83	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-19.79	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.0	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	62.8	62.1	55.7	54.2	62.6	62.9
Heavy Trucks:	63.6	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	70.8	69.9	66.8	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	119	256	551
CNEL:	59	127	274	591

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Redlands Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,200	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	1,667	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	2.82	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	70.80	-14.42	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	77.97	-18.37	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	59.6	57.8	51.8	60.4	61.0
Medium Trucks:	55.5	54.8	48.5	46.9	55.4	55.6
Heavy Trucks:	58.7	58.1	49.1	50.4	58.7	58.8
Vehicle Noise:	63.6	62.7	58.8	54.9	63.4	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	84	182
CNEL:	19	42	89	193

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Wilson Ave.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,550	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	293	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-4.73	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-21.97	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-25.93	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.5	54.5	52.7	46.7	55.3	55.9
Medium Trucks:	50.4	49.7	43.4	41.8	50.3	50.5
Heavy Trucks:	53.6	53.0	44.0	45.3	53.6	53.7
Vehicle Noise:	58.4	57.6	53.7	49.8	58.3	58.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	12	25	54
CNEL:	6	12	27	57

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Wilson Ave.
Road Segment: n/o Dale St.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,100	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	256	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.32	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.56	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.51	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.0	53.9	52.1	46.1	54.7	55.3
Medium Trucks:	49.8	49.2	42.8	41.3	49.7	49.9
Heavy Trucks:	53.0	52.5	43.4	44.7	53.0	53.2
Vehicle Noise:	57.9	57.0	53.1	49.2	57.7	58.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	49
CNEL:	5	11	24	52

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Wilson Ave.
Road Segment: n/o Driveway 1

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,850	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	235	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-5.69	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-22.92	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-26.88	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.6	53.5	51.8	45.7	54.3	54.9
Medium Trucks:	49.5	48.8	42.4	40.9	49.3	49.6
Heavy Trucks:	52.7	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	57.5	56.7	52.7	48.8	57.3	57.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	10	22	47
CNEL:	5	11	23	49

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Murrieta Rd.
Road Segment: n/o San Jacinto Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300 vehicles
Peak Hour Percentage:	8.25%
Peak Hour Volume:	767 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-2.01	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-19.25	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-23.20	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.7	61.6	59.9	53.8	62.4	63.0
Medium Trucks:	56.9	56.3	49.9	48.4	56.8	57.1
Heavy Trucks:	58.8	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	64.9	64.1	60.6	56.2	64.8	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	83	179
CNEL:	19	41	89	191

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Murrieta Rd.
Road Segment: n/o Driveway 2

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,000	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	495	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	24	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	40.0	feet
Centerline Dist. to Observer:	40.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	38.484
Medium Trucks:	38.253
Heavy Trucks:	38.276

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	-3.91	1.60	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	75.75	-21.15	1.64	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	81.57	-25.11	1.64	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.8	59.7	58.0	51.9	60.5	61.1
Medium Trucks:	55.0	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	56.9	56.3	47.3	48.5	56.9	57.0
Vehicle Noise:	63.0	62.1	58.7	54.3	62.8	63.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	133
CNEL:	14	31	66	143

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Dale St.
Road Segment: w/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	190	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.62	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.85	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.81	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.7	52.6	50.8	44.8	53.4	54.0
Medium Trucks:	48.5	47.9	41.5	40.0	48.4	48.6
Heavy Trucks:	51.7	51.2	42.1	43.4	51.7	51.9
Vehicle Noise:	56.6	55.7	51.8	47.9	56.4	56.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	19	40
CNEL:	4	9	20	43

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Dale St.
Road Segment: e/o Redlands Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,500	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	206	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-6.25	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-23.49	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-27.45	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	54.0	53.0	51.2	45.1	53.8	54.4
Medium Trucks:	48.9	48.2	41.9	40.3	48.8	49.0
Heavy Trucks:	52.1	51.5	42.5	43.7	52.1	52.2
Vehicle Noise:	56.9	56.1	52.2	48.3	56.8	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	4	9	20	43
CNEL:	5	10	21	45

Thursday, July 7, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY(2045) WP
Road Name: Dale St.
Road Segment: e/o Wilson Ave.

Project Name: Prairie View Apartments
Job Number: 13747

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,760	vehicles
Peak Hour Percentage:	8.25%	
Peak Hour Volume:	145	vehicles
Vehicle Speed:	25	mph
Near/Far Lane Distance:	12	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.5	feet
Centerline Dist. to Observer:	32.5	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

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

Lane Equivalent Distance (in feet)

Autos:	32.330
Medium Trucks:	32.056
Heavy Trucks:	32.082

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	58.73	-7.78	2.74	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	70.80	-25.02	2.79	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	77.97	-28.97	2.79	-1.20	*-5.71*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.5	51.4	49.7	43.6	52.2	52.8
Medium Trucks:	47.4	46.7	40.3	38.8	47.3	47.5
Heavy Trucks:	50.6	50.0	41.0	42.2	50.6	50.7
Vehicle Noise:	55.4	54.6	50.6	46.7	55.2	55.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	7	16	34
CNEL:	4	8	17	36

Thursday, July 7, 2022

APPENDIX 10.1:

OPERATIONAL MODEL

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13747 - Prairie View

CadnaA Noise Prediction Model: 13747-02_Operation_Lmax.cna
Date: 13.07.22
Analyst: B. Maddux

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	42.2	38.8	45.7	0.0	0.0	0.0		x	Total	5.00	r	6269739.31	2233882.53	5.00
R2		R2	50.4	47.4	54.3	0.0	0.0	0.0		x	Total	5.00	r	6270434.26	2232874.74	5.00
R3		R3	52.1	48.4	55.3	0.0	0.0	0.0		x	Total	5.00	r	6269722.44	2232410.83	5.00
R4		R4	52.7	49.1	56.0	0.0	0.0	0.0		x	Total	5.00	r	6269032.82	2232493.38	5.00
R5		R5	50.5	47.7	54.5	0.0	0.0	0.0		x	Total	5.00	r	6269038.75	2233001.90	5.00
R6		R6	61.7	58.9	65.7	0.0	0.0	0.0		x	Total	5.00	r	6269713.47	2233041.96	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
AC001		AC001	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269225.35	2232760.09	38.00
AC002		AC002	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269232.64	2232750.46	38.00
AC003		AC003	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269225.61	2232731.19	38.00
AC004		AC004	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269288.89	2232730.15	38.00
AC005		AC005	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269312.59	2232730.15	38.00
AC006		AC006	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269364.41	2232737.96	38.00
AC007		AC007	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269299.83	2232724.42	38.00
AC008		AC008	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269376.13	2232754.62	38.00
AC009		AC009	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269375.35	2232728.06	38.00
AC010		AC010	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269346.45	2232723.90	38.00
AC011		AC011	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269246.19	2232725.46	38.00
AC012		AC012	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269373.86	2232633.75	38.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
AC013		AC013	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269353.19	2232639.13	38.00
AC014		AC014	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269224.09	2232634.36	38.00
AC015		AC015	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269235.19	2232624.65	38.00
AC016		AC016	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269374.60	2232604.85	38.00
AC017		AC017	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269310.57	2232633.73	38.00
AC018		AC018	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269252.92	2232639.01	38.00
AC019		AC019	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269299.54	2232639.27	38.00
AC020		AC020	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269286.87	2232633.33	38.00
AC021		AC021	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269367.15	2232614.36	38.00
AC022		AC022	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269223.75	2232607.79	38.00
AC023		AC023	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269945.40	2232723.37	38.00
AC024		AC024	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269963.37	2232737.44	38.00
AC025		AC025	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269851.88	2232638.49	38.00
AC026		AC026	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269952.15	2232638.61	38.00
AC027		AC027	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269887.85	2232729.62	38.00
AC028		AC028	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269823.05	2232633.84	38.00
AC029		AC029	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269898.79	2232723.90	38.00
AC030		AC030	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269974.31	2232727.54	38.00
AC031		AC031	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269824.57	2232730.67	38.00
AC032		AC032	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269898.50	2232638.75	38.00
AC033		AC033	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269973.56	2232604.33	38.00
AC034		AC034	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269834.15	2232624.13	38.00
AC035		AC035	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269885.83	2232632.81	38.00
AC036		AC036	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269966.11	2232613.84	38.00
AC037		AC037	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269824.31	2232759.57	38.00
AC038		AC038	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269822.71	2232607.27	38.00
AC039		AC039	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269972.82	2232633.23	38.00
AC040		AC040	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269911.55	2232729.62	38.00
AC041		AC041	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269831.60	2232749.94	38.00
AC042		AC042	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269975.09	2232754.10	38.00
AC043		AC043	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269845.14	2232724.94	38.00
AC044		AC044	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269909.53	2232633.21	38.00
AC045		AC045	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269718.88	2232949.47	38.00
AC046		AC046	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269747.71	2232954.12	38.00
AC047		AC047	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269729.98	2232939.76	38.00
AC048		AC048	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269781.67	2232948.43	38.00
AC049		AC049	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269869.39	2232919.95	38.00
AC050		AC050	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269794.33	2232954.38	38.00
AC051		AC051	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269718.54	2232922.89	38.00
AC052		AC052	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269847.98	2232954.23	38.00
AC053		AC053	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269868.65	2232948.85	38.00
AC054		AC054	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269861.94	2232929.46	38.00
AC055		AC055	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269805.36	2232948.83	38.00
AC056		AC056	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269732.56	2232595.94	38.00
AC057		AC057	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269740.54	2232623.02	38.00
AC058		AC058	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269680.47	2232631.36	38.00
AC059		AC059	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269678.74	2232603.23	38.00
AC060		AC060	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269692.28	2232638.65	38.00
AC061		AC061	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269723.18	2232639.00	38.00
AC062		AC062	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269685.01	2232728.84	38.00
AC063		AC063	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269684.40	2232757.07	38.00
AC064		AC064	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269744.77	2232739.13	38.00
AC065		AC065	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269735.74	2232728.60	38.00
AC066		AC066	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269706.39	2232718.89	38.00
AC067		AC067	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269737.89	2232766.45	38.00
AC068		AC068	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269506.91	2232605.88	3.00
AC069		AC069	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269454.82	2232641.30	38.00
AC070		AC070	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269453.09	2232613.17	38.00
AC071		AC071	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269459.35	2232738.78	38.00
AC072		AC072	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269480.74	2232728.83	38.00
AC073		AC073	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269466.63	2232648.59	38.00
AC074		AC074	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269514.89	2232632.96	38.00
AC075		AC075	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269458.75	2232767.01	38.00
AC076		AC076	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269497.53	2232648.94	38.00
AC077		AC077	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269504.01	2232724.21	38.00
AC078		AC078	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269514.41	2232756.86	38.00
AC079		AC079	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269516.08	2232744.72	38.00
AC080		AC080	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269256.40	2232931.80	38.00
AC081		AC081	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269262.91	2232947.43	38.00
AC082		AC082	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269276.80	2232956.11	38.00
AC083		AC083	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269316.73	2232955.24	38.00
AC084		AC084	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269340.16	2232901.85	38.00
AC085		AC085	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269346.24	2232932.67	38.00
AC086		AC086	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269435.22	2232907.93	38.00
AC087		AC087	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269428.27	2232941.78	38.00
AC088		AC088	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269458.22	2232956.11	38.00
AC089		AC089	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269512.91	2232956.54	38.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
AC090		AC090	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269499.02	2232948.30	38.00
AC091		AC091	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269518.12	2232931.80	38.00
AC092		AC092	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6270008.91	2232917.31	38.00
AC093		AC093	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6270009.96	2232950.64	38.00
AC094		AC094	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269977.66	2232951.68	38.00
AC095		AC095	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269955.09	2232933.62	38.00
AC096		AC096	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269948.50	2232902.72	38.00
AC097		AC097	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269949.19	2232952.72	38.00
AC098		AC098	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6270113.01	2232745.69	38.00
AC099		AC099	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6270176.29	2232782.67	38.00
AC100		AC100	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6270238.01	2232732.54	38.00
AC101		AC101	76.4	76.4	76.4	Lw	76.4		900.00	0.00	540.00	3.00	g	6269597.91	2232746.60	38.00
Trash01		Trash01	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6270301.48	2232703.26	8.00
Trash02		Trash02	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6270040.39	2232568.89	8.00
Trash03		Trash03	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269761.92	2232792.50	8.00
Trash04		Trash04	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269803.24	2232791.80	8.00
Trash05		Trash05	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269394.90	2232795.62	8.00
Trash06		Trash06	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269435.18	2232794.24	8.00
Trash07		Trash07	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269414.61	2232575.49	8.00
Trash08		Trash08	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269780.93	2232572.45	8.00
Trash09		Trash09	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269155.93	2232570.71	8.00
Trash10		Trash10	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269318.69	2233018.19	8.00
Trash11		Trash11	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269470.16	2233018.63	8.00
Trash12		Trash12	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269767.47	2233015.59	8.00
Trash13		Trash13	102.7	102.7	102.7	Lw	102.7		150.00	0.00	45.00	8.00	a	6269990.56	2233014.72	8.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
Parking01		Parking01	91.6	91.6	91.6	60.2	60.2	60.2	Lw"	60.2					5	a
Parking02		Parking02	87.9	87.9	87.9	60.2	60.2	60.2	Lw"	60.2					5	a
Parking03		Parking03	93.2	93.2	93.2	60.2	60.2	60.2	Lw"	60.2					5	a
Parking04		Parking04	92.4	92.4	92.4	60.2	60.2	60.2	Lw"	60.2					5	a
Parking05		Parking05	89.5	89.5	89.5	60.2	60.2	60.2	Lw"	60.2					5	a
Parking06		Parking06	93.6	93.6	93.6	60.2	60.2	60.2	Lw"	60.2					5	a
Parking07		Parking07	91.0	91.0	91.0	60.2	60.2	60.2	Lw"	60.2					5	a
Parking08		Parking08	87.3	87.3	87.3	60.2	60.2	60.2	Lw"	60.2					5	a
Parking09		Parking09	83.5	83.5	83.5	60.2	60.2	60.2	Lw"	60.2					5	a
Parking10		Parking10	88.3	88.3	88.3	60.2	60.2	60.2	Lw"	60.2					5	a

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
Parking01	5.00	a			6269119.93	2232808.88	0.00	0.00
					6269187.99	2232809.57	0.00	0.00
					6269188.68	2232711.65	0.00	0.00
					6269170.63	2232711.65	0.00	0.00
					6269170.63	2232657.49	0.00	0.00
					6269185.91	2232657.49	0.00	0.00
					6269187.29	2232576.24	0.00	0.00
					6269119.93	2232575.54	0.00	0.00
Parking02	5.00	a			6269121.32	2232889.43	0.00	0.00
					6269122.02	2232994.99	0.00	0.00
					6269169.24	2232994.29	0.00	0.00
					6269169.24	2232950.54	0.00	0.00
					6269189.38	2232952.63	0.00	0.00
					6269191.46	2232888.04	0.00	0.00
Parking03	5.00	a			6269200.49	2232884.57	0.00	0.00
					6269353.96	2232884.57	0.00	0.00
					6269352.57	2232865.13	0.00	0.00
					6269420.63	2232865.82	0.00	0.00
					6269420.63	2232883.88	0.00	0.00
					6269537.99	2232881.79	0.00	0.00
					6269537.29	2232811.65	0.00	0.00
					6269446.32	2232813.04	0.00	0.00
					6269445.63	2232831.10	0.00	0.00
					6269379.66	2232831.10	0.00	0.00
					6269378.96	2232812.35	0.00	0.00
					6269201.18	2232813.04	0.00	0.00
Parking04	5.00	a			6269329.66	2233035.27	0.00	0.00
					6270064.38	2233029.71	0.00	0.00
					6270062.99	2233006.79	0.00	0.00
					6269329.66	2233009.57	0.00	0.00
Parking05	5.00	a			6269553.27	2232975.54	0.00	0.00
					6269681.04	2232974.85	0.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6269681.04	2232902.63	0.00	0.00
					6269551.18	2232904.02	0.00	0.00
Parking06	5.00	a			6270005.35	2232808.88	0.00	0.00
					6269815.77	2232808.88	0.00	0.00
					6269816.03	2232827.80	0.00	0.00
					6269750.92	2232827.80	0.00	0.00
					6269750.66	2232810.35	0.00	0.00
					6269660.04	2232811.13	0.00	0.00
					6269660.56	2232881.19	0.00	0.00
					6269868.11	2232880.66	0.00	0.00
					6269868.63	2232861.65	0.00	0.00
					6269942.59	2232861.65	0.00	0.00
					6269942.85	2232880.14	0.00	0.00
					6270041.81	2232879.88	0.00	0.00
					6270042.59	2232863.74	0.00	0.00
					6270006.39	2232826.24	0.00	0.00
Parking07	5.00	a			6270009.52	2232800.46	0.00	0.00
					6270071.50	2232800.46	0.00	0.00
					6270070.45	2232575.46	0.00	0.00
					6270008.47	2232575.20	0.00	0.00
					6270008.21	2232646.81	0.00	0.00
					6270026.44	2232647.07	0.00	0.00
					6270026.18	2232710.09	0.00	0.00
					6270009.26	2232710.35	0.00	0.00
Parking08	5.00	a			6270334.02	2232798.85	0.00	0.00
					6270333.15	2232708.35	0.00	0.00
					6270271.96	2232708.35	0.00	0.00
					6270271.96	2232798.85	0.00	0.00
Parking09	5.00	a			6270334.89	2232883.05	0.00	0.00
					6270272.17	2232883.70	0.00	0.00
					6270272.39	2232920.16	0.00	0.00
					6270335.32	2232920.16	0.00	0.00
Parking10	5.00	a			6270167.57	2232877.84	0.00	0.00
					6270240.05	2232877.84	0.00	0.00
					6270270.22	2232861.35	0.00	0.00
					6270273.47	2232815.77	0.00	0.00
					6270268.92	2232807.53	0.00	0.00
					6270194.70	2232808.40	0.00	0.00
					6270166.92	2232824.89	0.00	0.00
					6270162.58	2232869.81	0.00	0.00

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	x	0		35.00	a	6269290.09	2232950.77	35.00	0.00
								6269289.57	2232898.69	35.00	0.00
								6269230.20	2232898.16	35.00	0.00
								6269232.28	2232983.58	35.00	0.00
								6269374.47	2232980.46	35.00	0.00
								6269372.91	2232896.60	35.00	0.00
								6269311.97	2232896.08	35.00	0.00
								6269311.97	2232951.29	35.00	0.00
BUILDING		BUILDING00002	x	0		35.00	a	6269401.52	2232896.60	35.00	0.00
								6269402.21	2232980.98	35.00	0.00
								6269544.57	2232980.28	35.00	0.00
								6269541.45	2232897.30	35.00	0.00
								6269485.20	2232898.34	35.00	0.00
								6269485.20	2232948.34	35.00	0.00
								6269461.24	2232948.34	35.00	0.00
								6269459.50	2232895.21	35.00	0.00
BUILDING		BUILDING00003	x	0		35.00	a	6269750.20	2232893.34	35.00	0.00
								6269691.17	2232892.99	35.00	0.00
								6269692.56	2232979.45	35.00	0.00
								6269893.95	2232978.41	35.00	0.00
								6269894.99	2232892.64	35.00	0.00
								6269835.62	2232891.95	35.00	0.00
								6269835.27	2232943.34	35.00	0.00
								6269815.82	2232942.99	35.00	0.00
								6269817.21	2232905.84	35.00	0.00
								6269768.95	2232905.49	35.00	0.00
								6269768.95	2232946.46	35.00	0.00
								6269751.24	2232945.77	35.00	0.00
BUILDING		BUILDING00004	x	0		35.00	a	6269923.19	2232977.71	35.00	0.00
								6270035.17	2232976.93	35.00	0.00
								6270035.69	2232892.56	35.00	0.00

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
								6270002.09	2232892.56	35.00	0.00
								6269999.75	2232943.86	35.00	0.00
								6269981.00	2232943.60	35.00	0.00
								6269980.48	2232901.67	35.00	0.00
								6269967.72	2232901.67	35.00	0.00
								6269967.72	2232892.56	35.00	0.00
								6269924.23	2232896.46	35.00	0.00
BUILDING		BUILDING00005	x	0		35.00	a	6269430.83	2232667.99	35.00	0.00
								6269542.81	2232667.21	35.00	0.00
								6269543.33	2232582.83	35.00	0.00
								6269509.73	2232582.83	35.00	0.00
								6269507.39	2232634.14	35.00	0.00
								6269488.64	2232633.88	35.00	0.00
								6269488.12	2232591.95	35.00	0.00
								6269475.36	2232591.95	35.00	0.00
								6269475.36	2232582.83	35.00	0.00
								6269431.87	2232586.74	35.00	0.00
BUILDING		BUILDING00006	x	0		35.00	a	6269767.26	2232695.93	35.00	0.00
								6269655.27	2232695.87	35.00	0.00
								6269654.12	2232780.24	35.00	0.00
								6269687.72	2232780.49	35.00	0.00
								6269690.44	2232729.21	35.00	0.00
								6269709.19	2232729.61	35.00	0.00
								6269709.40	2232771.54	35.00	0.00
								6269722.16	2232771.64	35.00	0.00
								6269722.09	2232780.75	35.00	0.00
								6269765.61	2232777.17	35.00	0.00
BUILDING		BUILDING00007	x	0		35.00	a	6269855.06	2232578.06	35.00	0.00
								6269796.03	2232577.71	35.00	0.00
								6269797.42	2232664.17	35.00	0.00
								6269998.81	2232663.13	35.00	0.00
								6269999.85	2232577.37	35.00	0.00
								6269940.48	2232576.67	35.00	0.00
								6269940.13	2232628.06	35.00	0.00
								6269920.69	2232627.71	35.00	0.00
								6269922.07	2232590.56	35.00	0.00
								6269873.81	2232590.21	35.00	0.00
								6269873.81	2232631.19	35.00	0.00
								6269856.10	2232630.49	35.00	0.00
BUILDING		BUILDING00008	x	0		35.00	a	6269256.45	2232580.84	35.00	0.00
								6269197.42	2232580.49	35.00	0.00
								6269198.81	2232666.95	35.00	0.00
								6269400.20	2232665.91	35.00	0.00
								6269401.24	2232580.14	35.00	0.00
								6269341.87	2232579.45	35.00	0.00
								6269341.52	2232630.84	35.00	0.00
								6269322.07	2232630.49	35.00	0.00
								6269323.46	2232593.34	35.00	0.00
								6269275.20	2232592.99	35.00	0.00
								6269275.20	2232633.96	35.00	0.00
								6269257.49	2232633.27	35.00	0.00
BUILDING		BUILDING00009	x	0		35.00	a	6269342.11	2232783.02	35.00	0.00
								6269401.14	2232783.50	35.00	0.00
								6269399.95	2232697.04	35.00	0.00
								6269198.56	2232697.62	35.00	0.00
								6269197.32	2232783.38	35.00	0.00
								6269256.70	2232784.21	35.00	0.00
								6269257.16	2232732.82	35.00	0.00
								6269276.60	2232733.22	35.00	0.00
								6269275.13	2232770.37	35.00	0.00
								6269323.39	2232770.82	35.00	0.00
								6269323.49	2232729.85	35.00	0.00
								6269341.19	2232730.59	35.00	0.00
BUILDING		BUILDING00010	x	0		35.00	a	6269937.95	2232781.63	35.00	0.00
								6269996.97	2232782.12	35.00	0.00
								6269995.79	2232695.65	35.00	0.00
								6269794.40	2232696.23	35.00	0.00
								6269793.16	2232781.99	35.00	0.00
								6269852.53	2232782.82	35.00	0.00
								6269852.99	2232731.44	35.00	0.00
								6269872.44	2232731.83	35.00	0.00
								6269870.96	2232768.98	35.00	0.00
								6269919.23	2232769.44	35.00	0.00
								6269919.32	2232728.46	35.00	0.00
								6269937.03	2232729.20	35.00	0.00
BUILDING		BUILDING00011	x	0		35.00	a	6269543.14	2232782.30	35.00	0.00
								6269542.62	2232696.62	35.00	0.00

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
								6269428.29	2232697.14	35.00	0.00
								6269430.64	2232779.17	35.00	0.00
								6269475.17	2232782.30	35.00	0.00
								6269475.17	2232772.92	35.00	0.00
								6269489.23	2232772.92	35.00	0.00
								6269489.23	2232729.17	35.00	0.00
								6269510.84	2232729.17	35.00	0.00
								6269510.06	2232782.30	35.00	0.00
BUILDING		BUILDING00012	x	0		35.00	a	6269593.66	2232782.04	35.00	0.00
								6269620.22	2232779.17	35.00	0.00
								6269620.48	2232763.55	35.00	0.00
								6269613.71	2232763.81	35.00	0.00
								6269612.67	2232731.52	35.00	0.00
								6269586.89	2232732.04	35.00	0.00
								6269586.10	2232753.39	35.00	0.00
								6269577.77	2232753.39	35.00	0.00
								6269578.81	2232771.10	35.00	0.00
								6269594.18	2232772.40	35.00	0.00
BUILDING		BUILDING00013	x	0		35.00	a	6269767.64	2232662.61	35.00	0.00
								6269766.43	2232581.01	35.00	0.00
								6269741.08	2232581.53	35.00	0.00
								6269740.38	2232577.71	35.00	0.00
								6269723.02	2232577.89	35.00	0.00
								6269722.68	2232585.53	35.00	0.00
								6269708.79	2232585.53	35.00	0.00
								6269709.13	2232630.49	35.00	0.00
								6269686.39	2232631.01	35.00	0.00
								6269687.61	2232578.58	35.00	0.00
								6269652.71	2232578.41	35.00	0.00
								6269653.58	2232662.78	35.00	0.00
BUILDING		BUILDING00014	x	0		35.00	a	6270134.75	2232760.85	35.00	0.00
								6270134.75	2232733.94	35.00	0.00
								6270111.66	2232733.94	35.00	0.00
								6270111.66	2232725.95	35.00	0.00
								6270094.82	2232725.95	35.00	0.00
								6270094.99	2232740.71	35.00	0.00
								6270083.53	2232741.06	35.00	0.00
								6270083.53	2232758.94	35.00	0.00
								6270087.18	2232758.77	35.00	0.00
								6270087.87	2232767.10	35.00	0.00
								6270100.55	2232766.93	35.00	0.00
								6270100.55	2232761.02	35.00	0.00
BUILDING		BUILDING00015	x	0		35.00	a	6270160.96	2232795.92	35.00	0.00
								6270199.68	2232794.36	35.00	0.00
								6270198.98	2232768.32	35.00	0.00
								6270160.44	2232769.18	35.00	0.00
BUILDING		BUILDING00016	x	0		35.00	a	6270231.80	2232768.32	35.00	0.00
								6270241.17	2232768.32	35.00	0.00
								6270241.52	2232751.65	35.00	0.00
								6270258.88	2232751.13	35.00	0.00
								6270259.05	2232732.20	35.00	0.00
								6270247.07	2232732.38	35.00	0.00
								6270247.59	2232717.45	35.00	0.00
								6270223.29	2232718.49	35.00	0.00
								6270223.46	2232743.49	35.00	0.00
								6270231.28	2232743.66	35.00	0.00

APPENDIX 11.1:

CONSTRUCTION MODEL

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13747 - Prairie View

CadnaA Noise Prediction Model: 13747-02_Construction.cna
Date: 18.07.22
Analyst: B. Maddux

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	58.6	-46.2	55.6	0.0	0.0	0.0		x	Total	5.00	r	6269739.31	2233882.53	5.00
R2		R2	67.1	-37.7	64.1	0.0	0.0	0.0		x	Total	5.00	r	6270434.26	2232874.74	5.00
R3		R3	67.3	-37.5	64.3	0.0	0.0	0.0		x	Total	5.00	r	6269722.44	2232410.83	5.00
R4		R4	65.6	-39.2	62.6	0.0	0.0	0.0		x	Total	5.00	r	6269032.82	2232493.38	5.00
R5		R5	67.2	-37.5	64.2	0.0	0.0	0.0		x	Total	5.00	r	6269038.75	2233001.90	5.00
R6		R6	75.8	-29.0	72.8	0.0	0.0	0.0		x	Total	5.00	r	6269713.47	2233041.96	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
Construction		CA1	119.8	15.0	15.0	72.4	-32.3	-32.3	PWL-Pt	115					8	a

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
Construction	8.00	a			6269103.00	2233009.43	8.00	0.00
					6269172.96	2233008.97	8.00	0.00
					6269293.48	2233044.74	8.00	0.00
					6270073.47	2233039.59	8.00	0.00
					6270073.05	2232959.93	8.00	0.00
					6270065.01	2232899.94	8.00	0.00
					6270234.36	2232898.86	8.00	0.00

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6270234.43	2232919.47	8.00	0.00
			6270249.40	2232934.50	8.00	0.00
			6270341.67	2232933.73	8.00	0.00
			6270355.60	2232918.61	8.00	0.00
			6270352.77	2232557.74	8.00	0.00
			6270338.80	2232540.27	8.00	0.00
			6269114.04	2232548.68	8.00	0.00
			6269100.13	2232566.28	8.00	0.00