Meredith International Centre

Noise Impact Analysis

City of Ontario

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(1)	Reference
ADT	Average Daily Traffic
AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
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
HVAC	Heating, Ventilation and Air-Conditioning
INCE	Institute of Noise Control Engineering
Leq	Equivalent continuous (average) sound level
Lmax	Maximum level measured over the time interval
Lmin	Minimum level measured over the time interval
LRT	Light rail transit
mph	Miles per hour
NLR	Noise Level Reduction
ONT	Los Angeles/Ontario International Airport
PA	Planning Area
PCE	Passenger Car Equivalent
Project	Meredith International Centre
RCNM	Roadway Construction Noise Model
REMEL	Reference Energy Mean Emission Level
SPA	Specific Plan Amendment
STC	Sound Transmission Class
VdB	Vibration Decibels

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1 INTRODUCTION

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

1.1 SITE LOCATION

The proposed Meredith International Centre development is located north of the Interstate 10 (I-10) Freeway and east of Vineyard Avenue in the City of Ontario as shown on Exhibit 1-A. Existing land uses within the Project site include a commercial plaza in the eastern portion of the site, west of Archibald Avenue, and the Bernt Elementary School in the northern portion of the site, south of 4th Street.

EXHIBIT 1-A: LOCATION MAP

1.2 Study Area

The Project study area includes single-family and multi-family residential uses located to the west of the Project site, across Vineyard Avenue, as well as neighborhood commercial uses and a construction equipment rental center. Land uses north of the Project site, across 4th Street, include a mix of residential, commercial, and industrial developments. San Bernardino County Flood Control basins are located north/northeast of the site. Commercial uses and the Cucamonga-Guasti Regional Park are located to the east of the Project site, across Archibald Avenue. The I-10 freeway is directly south of the Project site, and the Los Angeles/Ontario International (ONT) Airport is located approximately three-quarter miles south of the Project site. Existing surrounding land uses are graphically presented on Exhibit 1-B.

1.3 Project Description

Consistent with the Project study area, the Meredith International Centre Specific Plan Amendment (SPA) proposes a mix of industrial, commercial, and residential land uses within five planning areas. The Planning Areas (PA) and associated land uses are discussed below, and presented graphically in Exhibit 1-C.

Planning Area 1 (PA 1) encompasses 146.6 acres in the northwesterly corner of the Project site and is the largest of the Planning Areas. Uses allowed within this Planning Area would include general light industrial and warehouse/distribution operations. The Specific Plan Amendment allows two build-out scenarios within Planning Area 1: Option A which would not include the existing public school in the Project site; and Option B which includes the public school. Both the Option A and Option B site plans for PA 1 are shown on Exhibits 1-D and 1-E, respectively. For the purposes of this analysis, it is assumed that Planning Area 1 will be constructed and occupied by 2017.

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The Project site is currently designated as light industrial and warehouse/distribution operation based on the Meredith International Centre SPA. For the purposes of this analysis, the targeted types of tenants for occupancy of the facility would include those permitted under the light industrial and warehouse/distribution operation designation of the site, such as manufacturing, fabrication, assembly, processing, trucking, equipment, automobile and truck sales and services or similar uses. The on-site Project-related noise sources are expected to include: idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods. This analysis does not account for any special noise generators that may consist of outdoor compressors, air scrubbers, heavy materials handlings, emergency generators, etc. This noise analysis is intended to describe noise level impacts associated with the expected typical warehouse and distribution storage activities within PA 1 of the Project site.

Planning Area 2 (PA 2) encompasses 43.7 acres of land located in the southwestern portion of the Specific Plan area. It is bordered on the north by Inland Empire Boulevard, on the south by the I-10 Freeway, on the west by North Vineyard Avenue, and on the east by the Cucamonga Creek Channel. The Urban Commercial designation of Planning Area 2 allows for a range of commercial uses that benefit from the property's adjacency to the I-10 Freeway and the ONT Airport. Planning Area 2 is designed as a highly active area offering a variety of market-driven commercial uses such as retail and fast food restaurants. Up to 200 overnight lodging rooms also are permitted in Planning Area 2, with the intention of serving the surrounding community and region, such as visitors to the nearby Ontario Convention Center and the ONT Airport. Since the future tenants were unknown at the time of this analysis, the on-site Project related noise sources are expected to include drive-through speakerphones and parking lot activities at potential fast food restaurants within PA 2. For the purposes of this analysis, it is assumed that PA 2 will be constructed and occupied by 2020.

<u>Planning Area 3</u> (PA 3) is comprised of 25.3 acres of land located in the southeastern portion of the Specific Plan property. As shown in Exhibit 1-C, Planning Area 3 is bordered on the north by Inland Empire Boulevard, on the south by the I-10 Freeway, on the west by the Deer Creek Channel, and on the east by Archibald Avenue. Similar to Planning Area 2, the Urban Commercial designation of Planning Area 3 allows for a range of commercial uses that benefit from proximity to transportation corridors. Located closer to the SPA's proposed Urban Residential area (within Planning Area 4), and to the planned alignment of the Gold Line LRT corridor, Planning Area 3 is envisioned to offer smaller, pedestrian-oriented retail. Up to 400 overnight lodging rooms also are permitted in Planning Area 3. Similar to PA 2, the future tenants were unknown at the time of this analysis. The on-site Project-related noise sources are expected to include drive-through speakerphones and parking lot activities at potential fast food restaurants within PA 3. For the purposes of this analysis, it is assumed that PA 3 will be constructed and occupied by 2020.

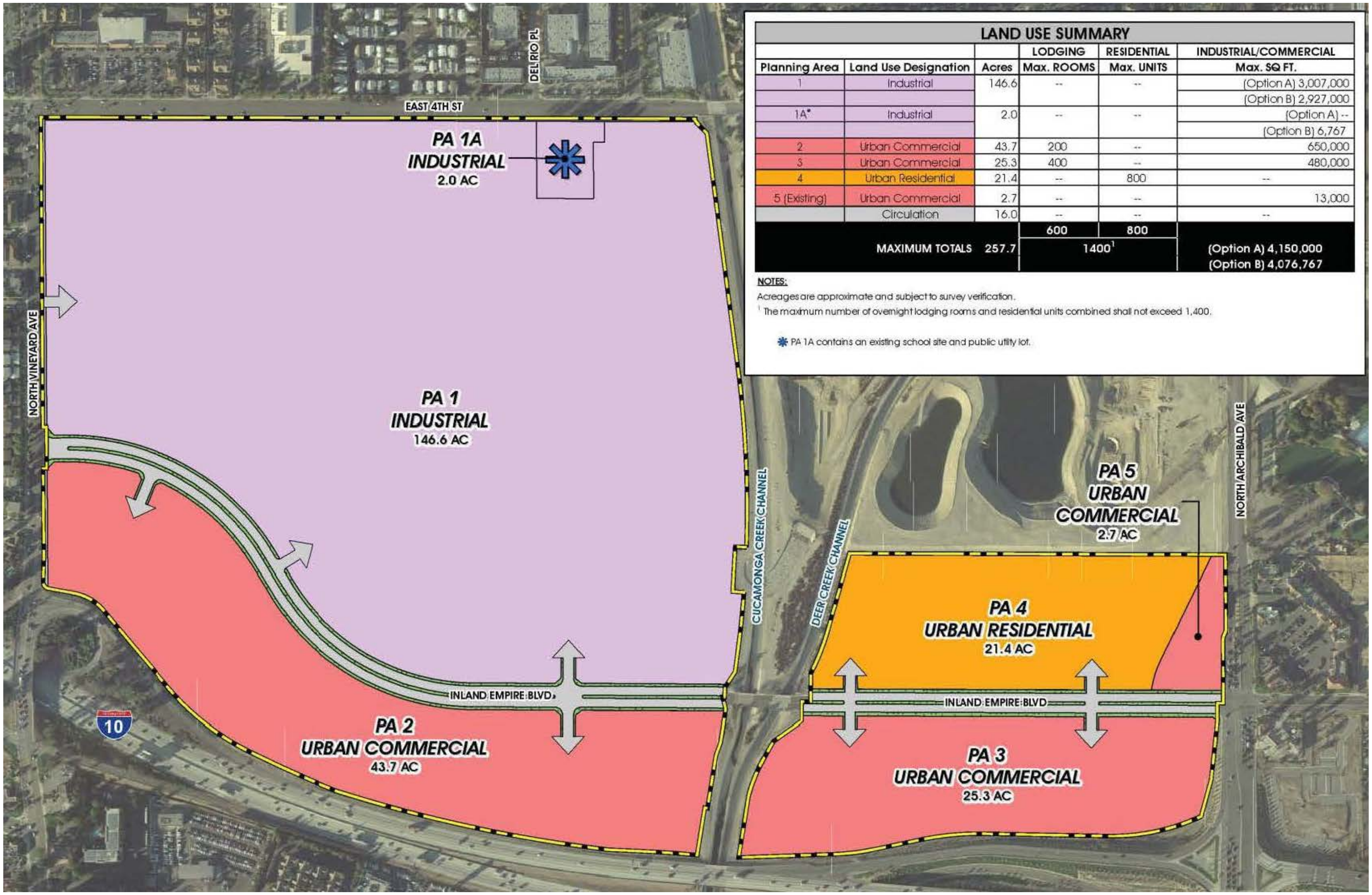
<u>Planning Area 4</u> (PA 4) comprises of 21.4 acres of land located in the southeastern portion of the Specific Plan area, and would contain Urban Residential uses. As shown in Exhibit 1-B, this area is bordered on the north by San Bernardino County Flood Control District (SBFCD) facilities, on the south by Inland Empire Boulevard, on the west by the Deer Creek Channel, and on the east by Planning Area 5. The Urban Residential designation of Planning Area 4 allows for high-density and medium-high density residential land uses (for-sale or for-rent multi-family residential units) within walking distance to a variety of shopping and employment opportunities, Cucamonga-Guasti Regional Park, and the planned Gold Line LRT corridor. For the purposes of this analysis, it is assumed that Planning Area 4 will be constructed and occupied by 2020.

<u>Planning Area 5</u> (PA 5) encompasses 2.7 acres and is located at the northwest corner of Archibald Avenue and Inland Empire Boulevard. The site is currently developed with retail and service commercial uses, including fast food restaurants, a convenience store, and a self-serve fueling station. The on-site Project related noise sources include two existing drive-through speakerphones within PA5. For the purposes of this analysis, it is assumed that PA 5 is currently developed with existing noise sources that include two existing drive-through speakerphones and parking lot activities.

EXHIBIT 1-B: EXISTING LAND USES

Source: Figure 3.3-1, Applied Planning, Inc.

EXHIBIT 1-C: PLANNING AREAS



Source: Figure 3.4-1, Applied Planning, Inc.

EXHIBIT 1-D: SITE PLAN (OPTION A)

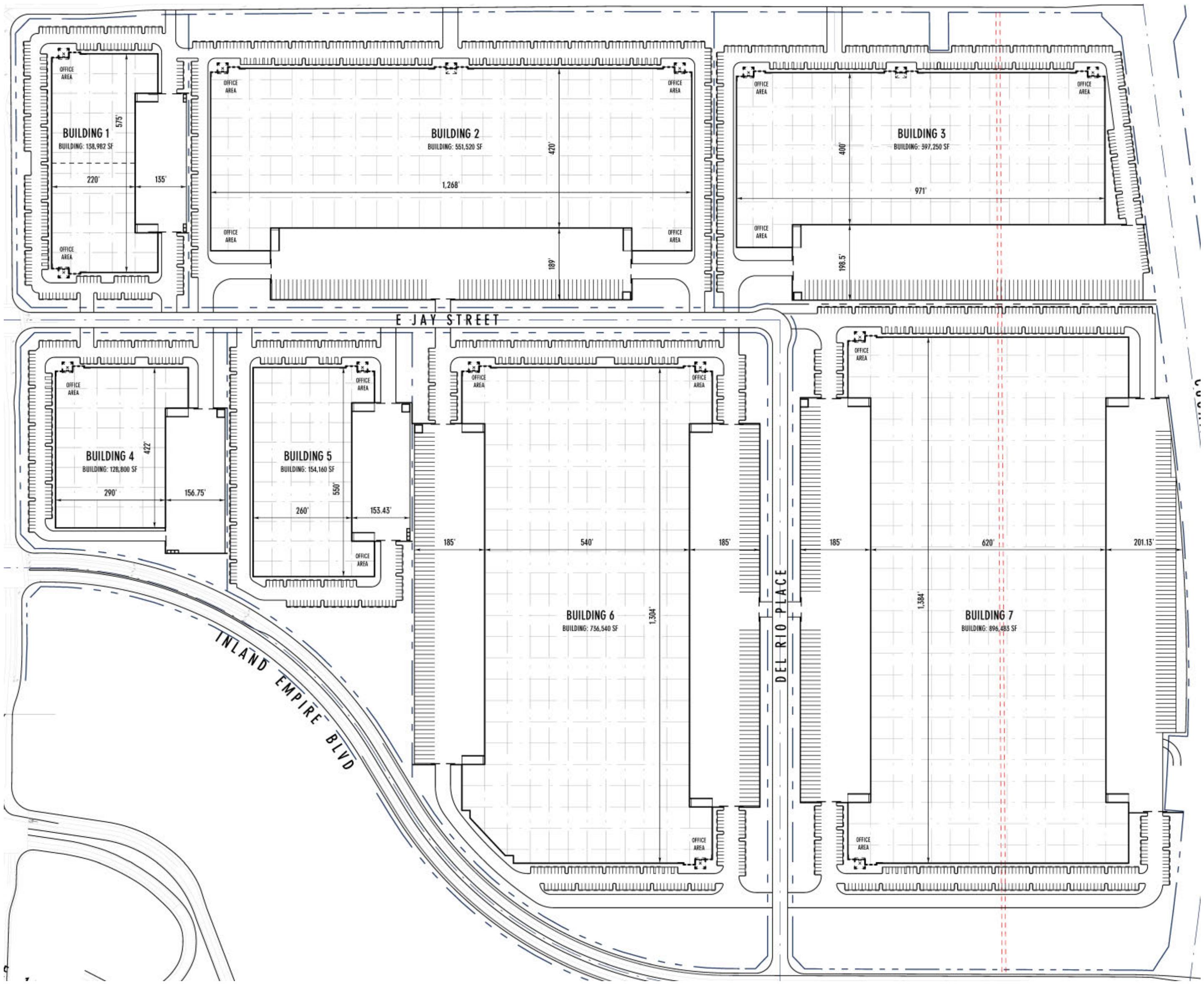
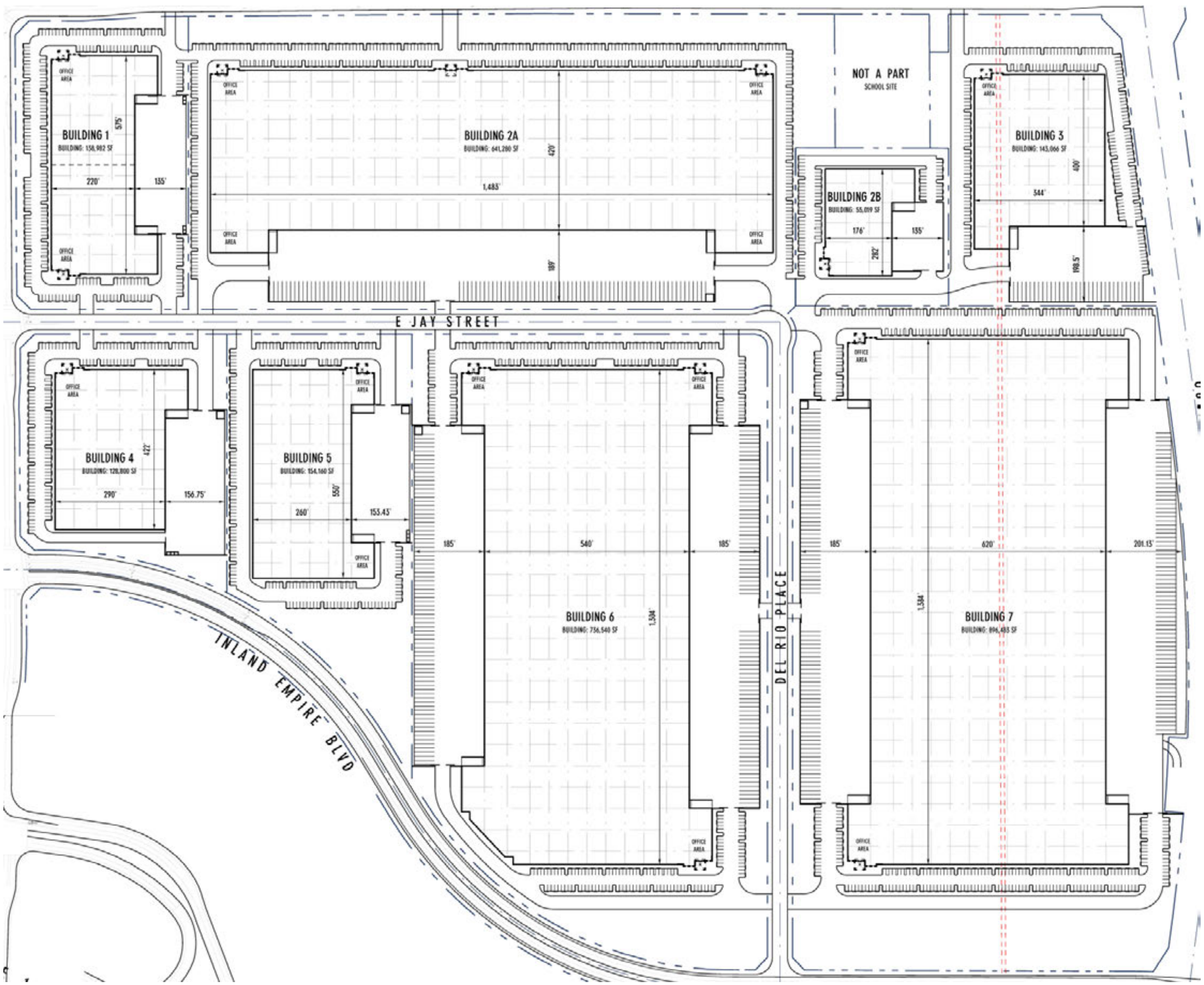


EXHIBIT 1-E: SITE PLAN (OPTION B)



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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	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
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.(1) 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.(2) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

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 twenty-four hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Ontario relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a 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.

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 ft) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a 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 resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure.

2.4 TRAFFIC NOISE PREDICTION

Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance,* provided by the Federal Highway Administration, the level of traffic noise depends on three primary factors: the volume of the traffic, the speed of the traffic, and the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks.(3) A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise level impacts will increase.

2.5 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for a particular 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 any and all of these three elements.

2.6 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the view of the noise source. (3)

2.7 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 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. (4)

2.8 COMMUNITY RESPONSE TO NOISE

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

- Fear associated with noise producing activities;
- Socio-economic status and educational level of the receiver;
- Noise receiver's perception that they are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Receiver's belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (5) 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. (5)

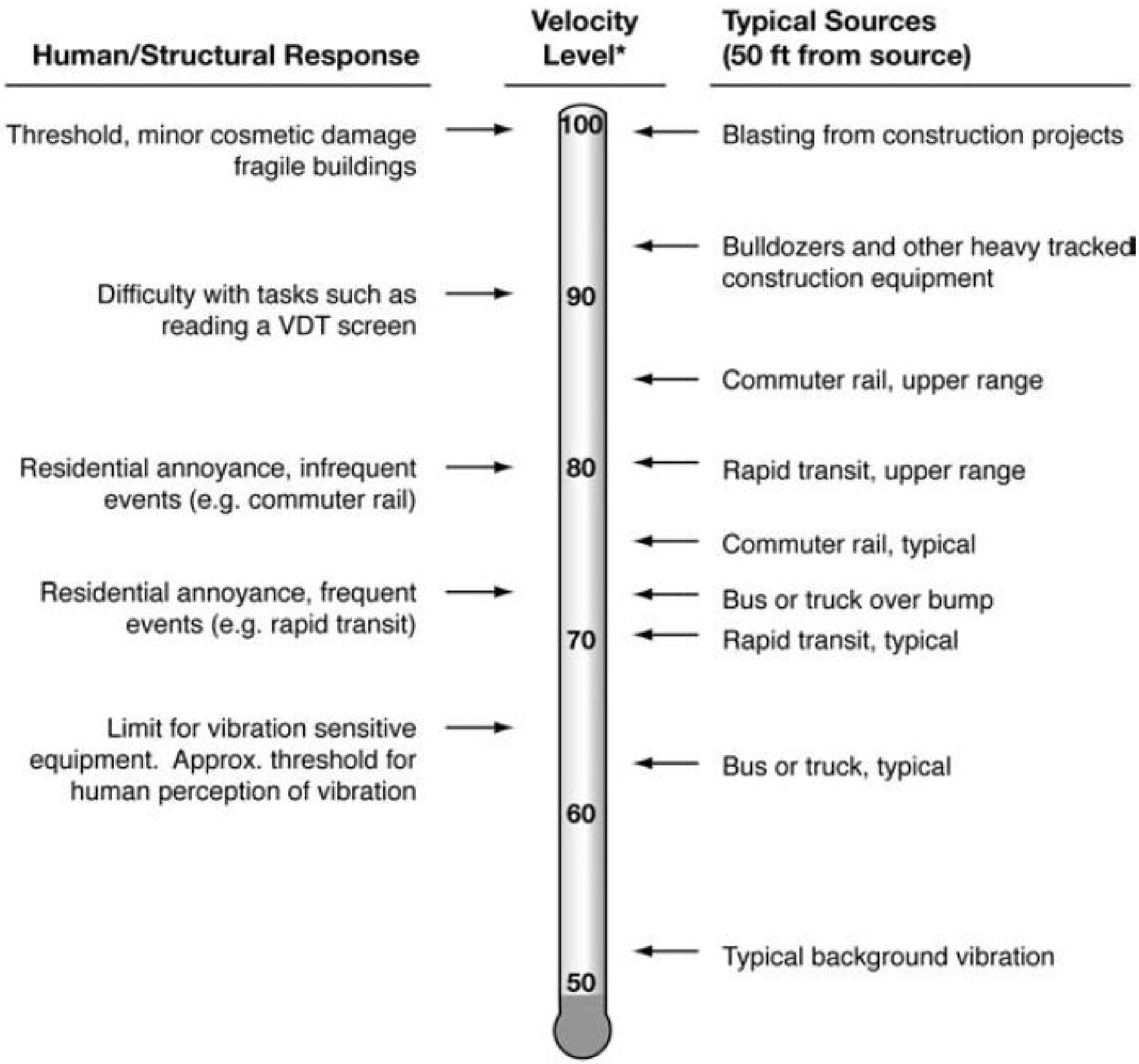
Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (3)

2.9 VIBRATION

According to the Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment (6), 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. Vibration is often described in units of velocity (inches per second), and discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts are generally associated with activities such as train operations, construction and heavy truck movements.

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-B illustrates common vibration sources and the human and structural response to ground-borne vibration.

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



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

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

3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. (7) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.506 on Environmental Comfort. (8) These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA Leq for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 THE ONTARIO PLAN SAFETY ELEMENT

The City of Ontario Policy Plan identifies several policies to minimize the impacts of excessive noise levels throughout the community in Section S4, Noise Hazards, of the Safety Element, included in Appendix 3.1. The Noise Hazards section establishes a goal of maintaining *an environment where noise does not adversely affect the public's health, safety and welfare.*(9) To satisfy this goal, the Policy Plan identifies several policies related to: noise mitigation;

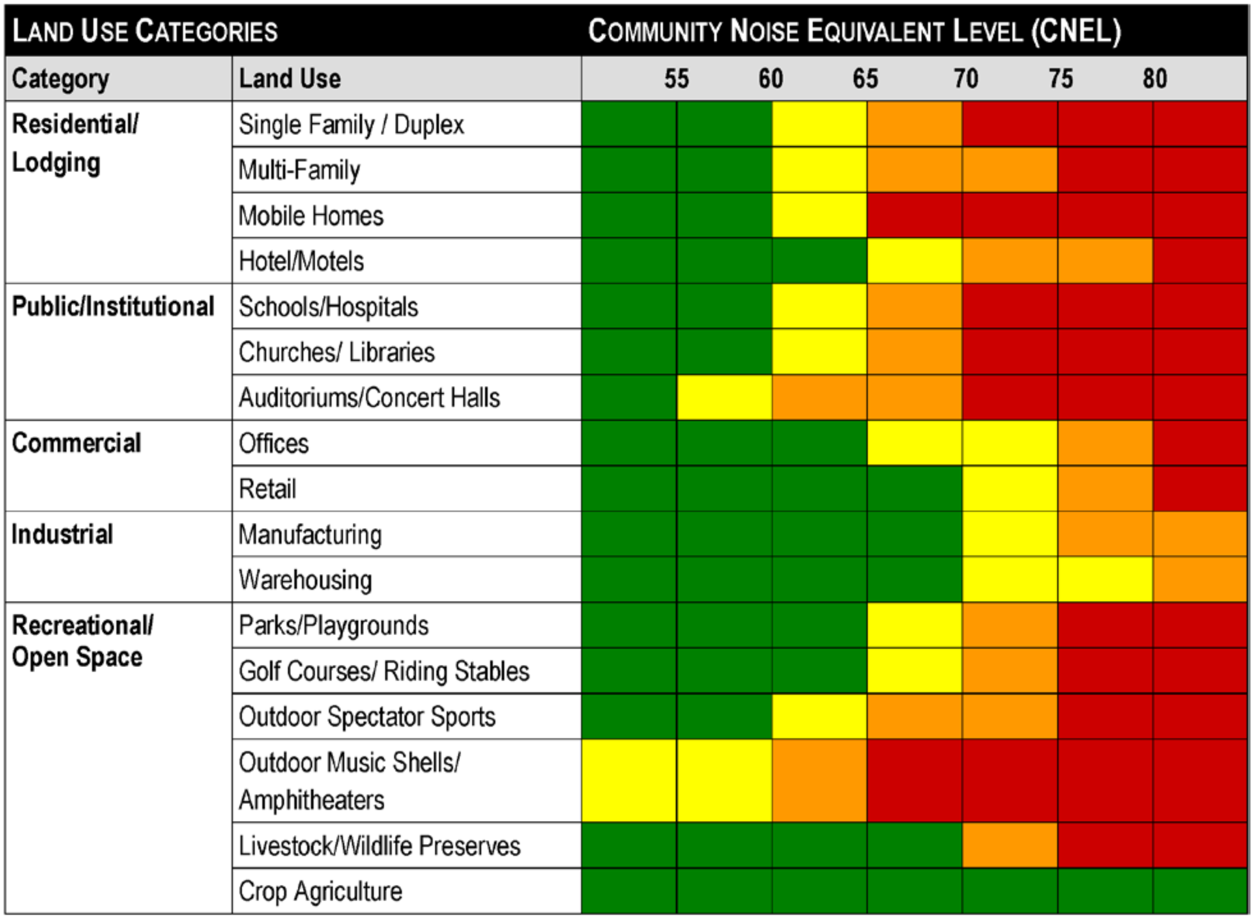
coordination with transportation authorities; airport noise mitigation; truck traffic; roadway design; and airport noise compatibility.

3.3.1 LAND USE COMPATIBILITY

The *Noise Level Exposure and Land Use Compatibility Guidelines*, shown on Exhibit 3-A (following), describes categories of compatibility and not specific noise standards. These guidelines are based on the Governor's Office of Planning and Research (7) and are used to assess the compatibility of community noise exposure by land use category. According to the *Noise Level Exposure and Land Use Compatibility Guidelines*, noise sensitive land uses such as Single and Multi-Family residences are considered *clearly acceptable* with exterior noise levels below 60 dBA CNEL and *normally acceptable* with noise levels below 65 dBA CNEL. For office and retail land uses, exterior noise levels below 75 dBA CNEL are considered *normally acceptable* and noise levels of less than 80 are considered *normally unacceptable*. Manufacturing and warehousing land uses are considered *normally acceptable* with noise levels below 75 and 80 dBA CNEL, respectively, and *normally unacceptable* with noise levels of less than 80 and 85 dBA CNEL, respectively.

Consistent with the land use compatibility guidelines, this noise study has been prepared to satisfy a *normally acceptable* exterior noise level of less than 65 dBA CNEL and an interior noise level of less than 45 dBA CNEL for the Multi-Family Residential land use within the Meredith International Centre Specific Plan Amendment Project site (Meredith SPA Project site, Project site). The 65 dBA CNEL *normally acceptable* exterior noise guidelines apply to first floor patio areas for multi-family residential units. The on-site noise levels at the Industrial and Commercial land uses within the Project site will be evaluated based on the interior noise levels in indoor office areas based on the ONT Airport Land Use Compatibility Plan (ONT ALUCP). The Ontario Plan Noise Hazards section is included in Appendix 3.1.

EXHIBIT 3-A: NOISE LEVEL EXPOSURE AND LAND USE COMPATIBILITY GUIDELINES



LEGEND

Clearly Acceptable:	No special noise insulation required, assuming buildings of normal conventional construction.
Normally Acceptable:	Acoustical reports will be required for major new residential construction. Conventional construction with closed windows and fresh air supply systems of air conditioning will normally suffice.
Normally Unacceptable:	New construction should be discouraged. Noise/aviation easements required for all new construction. If new construction does proceed, a detailed analysis of noise reduction requirements must be made and necessary noise insulation features included.
Clearly Unacceptable:	No new construction should be permitted.

3.3.2 LA/ONTARIO INTERNATIONAL AIRPORT LAND USE COMPATIBILITY

The LA/Ontario International Airport Land Use Compatibility Plan (ONT ALUCP) was adopted by Ontario City Council on April 19, 2011.(10) The basic function of the ONT ALUCP is to promote compatibility between ONT and the land uses that surround it. As required by State law, the ALUCP provides guidance to affected local jurisdictions with regard to airport land use compatibility matters involving the ONT Airport. The main objective of the ALUCP is to avoid future compatibility conflicts rather than to remedy existing incompatibilities. Also, the ALUCP is aimed at addressing future land uses and development, not airport activity. The ALUCP does not place any restrictions on the present and future role, configuration, or use of the airport. The geographic scope of the ONT ALUCP is the Airport Influence Area (AIA), the area in which current or future airport-related noise, safety, airspace protection and/or overflight factors may affect land uses or impose restrictions on those uses.

Section 6.2 of the ONT ALUCP identifies the noise compatibility polices to avoid the establishment of noise-sensitive land uses in the portions of the ONT Airport AIA that are exposed to significant levels of aircraft noise. The ONT ALUCP aircraft noise contours are shown on Exhibit 3-B. While many of these policies focus on noise sensitive residential development within the noise contours of the airport, the following noise polices are applicable to the proposed Meredith International Centre:

N2 *Residential Development Exceptions: The following types of residential developments are allowed within the CNEL 65 dB contour, if the structure is capable of attenuating exterior noise from all noise sources to an indoor CNEL of 45 dB or less.*

> *N2a* *Multi-Family Residential: Multi-family residential is allowed within the CNEL 65 dB contour if the development can achieve a density that is greater than 8 dwelling units per acre and incorporate interior common space and recreational facilities.*

N3 *Non-residential Development: New nonresidential development is incompatible in locations where the airport-related noise exposure would be highly disruptive to the specific land use. The applicable criteria are indicated in Table 2-3: Noise Criteria.*

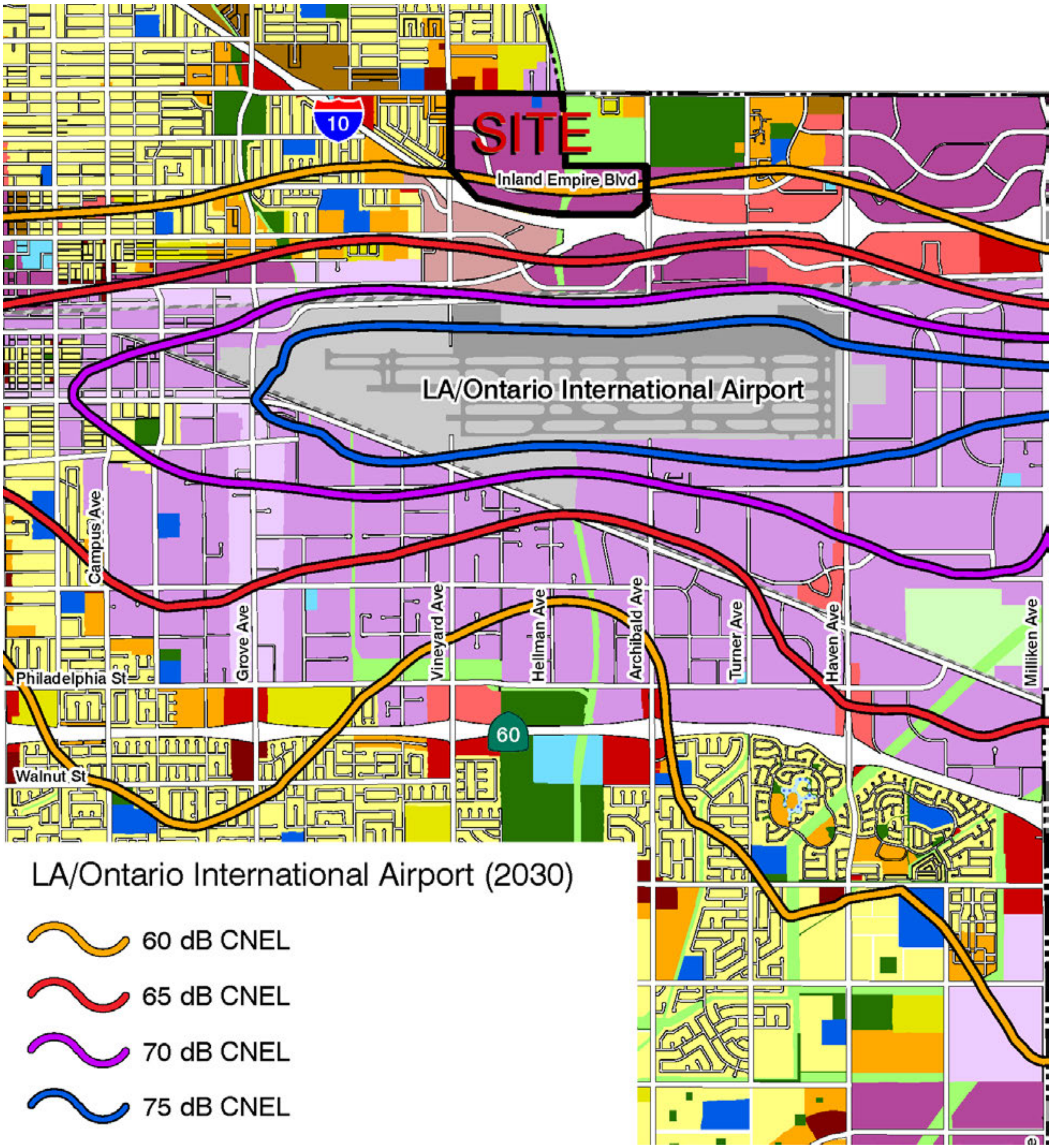
N4 *Maximum Interior Noise Level: To the extent that the criteria in Table 2-3: Noise Criteria and other policies herein permit the development, land uses with interior activities that may be easily disrupted by aircraft noise should be required to incorporate exterior-to-interior noise level reduction (NLR) design features for all new structures.*

Table 2-3 of the ONT ALUCP establishes an interior noise level limit of 45 dBA CNEL for residential land use with greater than 8 dwelling units per acre located within the 60 to 65 dBA CNEL noise contours. The proposed land use in Planning Area (PA) 4 of the Meredith International Centre contains multi-family dwelling units with up to 800 units on 21.4 acres. The planned Multi-Family Residential land use is located in the eastern portion of the Project site, north of Inland Empire Road and west of Archibald Avenue adjacent to an existing commercial plaza, as shown on Exhibit 3-C. The Meredith International Centre plan places the Multi-Family Residential mostly north of the LA/Ontario International Airport 60 dBA CNEL noise contour boundary, except for the southeastern corner of PA 4. The planned Multi-Family

Residential land use includes a density of roughly 37 dwelling units per acre, far exceeding the noise policy N2 exempting Multi-Family Residential development within the 60 to 65 dB contour with a density of greater than 8 dwelling units per acre.

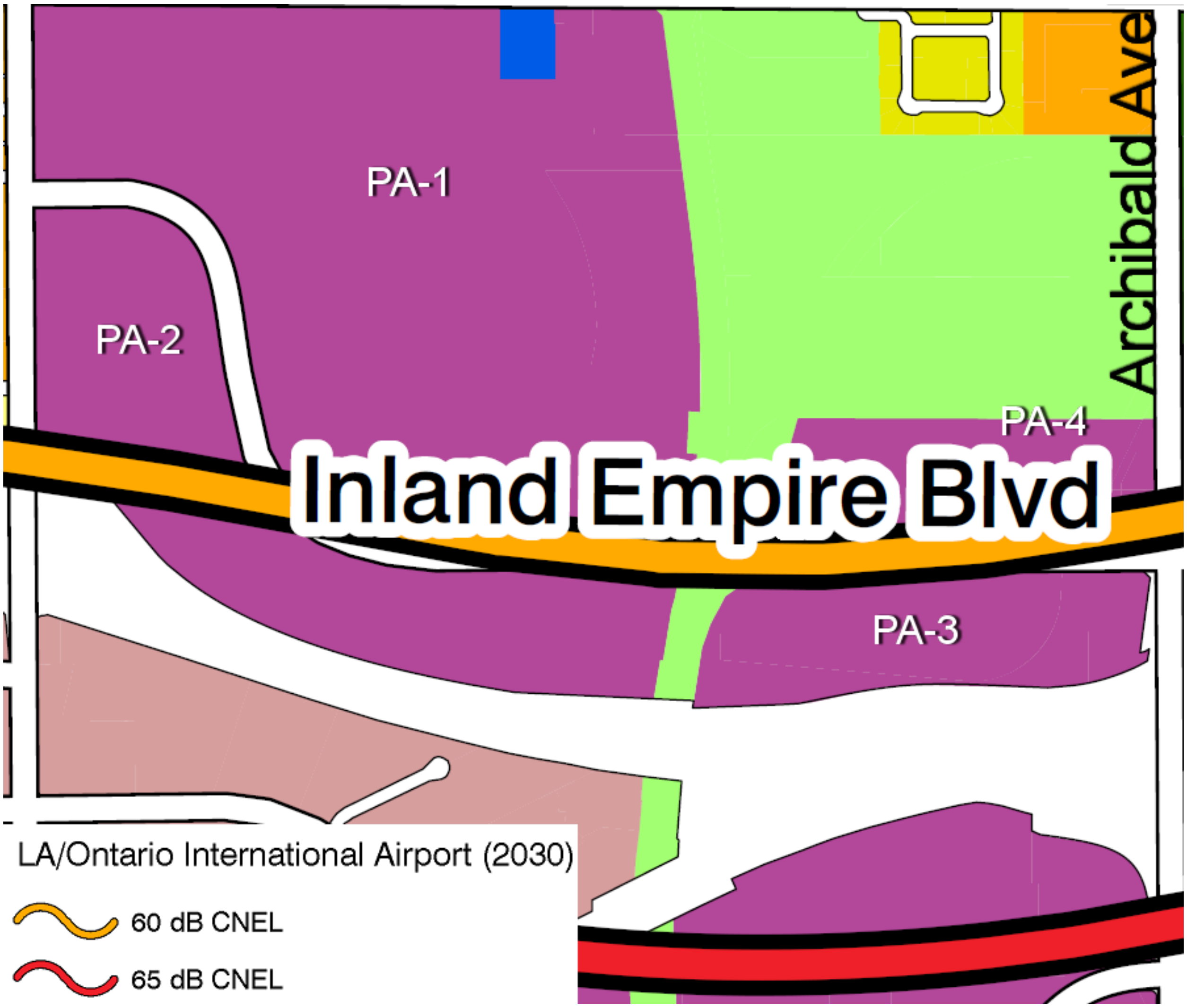
As shown on Exhibits 3-B and 3-C, the commercial land uses in PA 2 and 3 will be located within the 60 to 65 dBA CNEL noise contours, and are considered *normally compatible land use* when interior noise levels in office, retail, and other noise-sensitive indoor spaces are below 50 dBA CNEL. Outdoor dining or gathering places are considered incompatible with noise levels above 70 dBA CNEL. The majority of the proposed industrial land use at the Project site (PA 1) is located north of the airport noise contours, as shown on Exhibit 3-C, however, its southern boundary is overlapped by the 60 dBA CNEL noise contour. Based on a review of the site plans for PA 1, previously shown on Exhibits 1-D and 1-E, the portion of PA 1 potentially within the 60 dBA CNEL noise contour contains water quality basins and the southern part of Building 6. Therefore, indoor office uses located within the southern portion of Building 6 of PA 1 would be considered *normally compatible land use* with interior noise levels below 50 dBA CNEL. The noise polices and noise criteria contained in Table 2-3 of the ALUCP are included in Appendix 3.2.

EXHIBIT 3-B: LA/ONTARIO INTERNATIONAL AIRPORT 2030 NOISE CONTOURS



Source: Figure 5.12-3, The Ontario Plan Environmental Impact Report, City of Ontario.

EXHIBIT 3-C: AIRPORT NOISE CONTOURS AT THE PROJECT SITE



Source: Figure 5.12-3, The Ontario Plan Environmental Impact Report, City of Ontario.

3.4 CITY OF ONTARIO MUNICIPAL CODE

To analyze noise impacts originating from a designated fixed location or private property such as the Meredith International Centre, area source (stationary/area source) noise such as the expected drive-thru speakerphones, parking lot activities, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods are typically evaluated against standards established under the City's Municipal Code.

3.4.1 OPERATIONAL NOISE STANDARDS

The Project operational (stationary/area source) noise impacts are governed by the City of Ontario Municipal Code, Title 5, Chapter 29, included in Appendix 3.2. Section 5-29.04(a) identifies acceptable daytime and nighttime ambient exterior noise standards based on land use type. For the Manufacturing and Industrial land uses (Noise Zone V) within the Project site, ambient exterior noise levels may not exceed 70 dBA Leq. For the Project Commercial land uses (Noise Zone III), ambient exterior noise levels may not exceed 65 dBA Leq during the daytime hours (7:00 a.m. to 10:00 p.m.), and may not exceed 60 dBA Leq during nighttime hours (10:00 p.m. to 7:00 a.m.). For the Project Multi-Family residential uses (Noise Zone II), ambient exterior noise levels may not exceed 65 dBA Leq during the daytime hours (7:00 a.m. to 10:00 p.m.), and may not exceed 50 dBA Leq during the nighttime hours (10:00 p.m. to 7:00 a.m.).(11)

Operation of the Project has the potential to impact vicinity off-site land uses. Maximum acceptable Project-stationary/area source noise levels received at the off-site land uses are identified on Table 3-1. Project-source stationary/area-source noise levels received at off-site City of Ontario residential land uses are conservatively evaluated based on the 65 dBA Leq daytime and 45 dBA Leq nighttime noise level standards for Single-Family Residential (Noise Zone I) land uses. As stated in Section 5-29.11 of the Municipal Code: *It is unlawful for any person to create any noise that causes the outdoor noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in § 5-29.04 prescribed for the assigned Noise Zone I.* Based on this standard, Project-related operational noise impacts at the Bernt Elementary School will be evaluated based on the 65 dBA Leq daytime and 45 dBA Leq nighttime noise level standards.(11) The City of Ontario Municipal Code stationary/area source noise level standards are shown on Table 3-1 and included in Appendix 3.3. Since nearby noise-sensitive receivers are also located in the City of Rancho Cucamonga, this report includes the relevant noise regulations of the City of Rancho Cucamonga as shown on Table 3-1 and described in Section 3.5.

TABLE 3-1: EXTERIOR NOISE LEVEL LIMITS

City	Zoning District	Time Period	Maximum Permissible Exterior Noise Levels[3]				
			Leq (Average)	L_{25} (15 min)	L_{17} (10 min)	L_8 (5 min)	Lmax (<1 min)
Ontario[1]	Residential	Daytime (7am-10pm)	65	65	-	-	85
		Nighttime (10pm-7am)	45	45	-	-	65
	Commercial	Daytime (7am-10pm)	65	65	-	-	85
		Nighttime (10pm-7am)	60	60	-	-	80
	Industrial	Anytime	70	70	-	-	90
Rancho Cucamonga[2]	Residential	Daytime (7am-10pm)	65	65	70	79	80
		Nighttime (10pm-7am)	60	60	65	74	75

[1] Source: Section5-29.04 of the City of Ontario Municipal Code (Appendix 3.3).
[2] Source: Section17.66.050 of the City of Rancho Cucamonga Development Code (Appendix 3.4).
[3] Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L25 is the noise level exceeded 25% of the time.

3.4.2 CONSTRUCTION NOISE STANDARDS

The City of Ontario has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 5-29.09 of the Municipal Code states: *No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.*(11) While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receivers. To allow for a quantified determination of what the Noise Control Ordinance constitutes as a *detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City* due to construction activity, relevant quantified construction noise standards established in other cities within the County of San Bernardino were used in this analysis to assess the Project construction noise level limits.

Within the County of San Bernardino, construction noise level limits of 65 dBA Leq are identified in the following cities: Rancho Cucamonga (Development Code, Section 17.66.050(D)(4)(a) Noise Standards); Adelanto (Code of Ordinances, Section 17.90.020(d) Construction Practices); and Chino (Municipal Code, Section 9.40.060(D) Special Provisions). While not enforceable regulations within the City of Ontario, the reference construction noise limits identified by other cities in the County of San Bernardino provide an acceptable threshold for determining the relative significance of Project construction noise levels.

3.4.3 CONSTRUCTION VIBRATION STANDARDS

The City of Ontario Municipal Code, Section 9-1.3310, has established a standard of vibration displacement for sensitive land uses as the basis for determining the relative significance of potential Project-related vibration impacts. In order to assess the Project construction-related vibration impacts for specific types of construction equipment, the City of Ontario vibration displacement standards, included in Appendix 3.2, were translated into Peak Particle Velocity (PPV). The following equation is provided by the *Caltrans Transportation and Construction-Induced Vibration Guidance Manual* (12) and is used to obtain the equivalent PPV for each vibration displacement at a given frequency:

$$V = 2 \pi f (D/2)$$

Where "V" is the zero-to-peak velocity or PPV; "f" is the frequency (in Hertz); and "D/2" is the zero-to-peak displacement. The City of Ontario vibration standards shown on Table 3-2 identify the maximum displacement at a given frequency of vibration.

TABLE 3-2: CITY OF ONTARIO VIBRATION STANDARDS

Frequency (cycles/sec)	Vibration Displacement (inches)[1]		Peak Particle Velocity (PPV)[2]	
	Steady State	Impact	Steady State	Impact
Under 10	0.0055	0.0010	1.7279	0.3142
10—19	0.0044	0.0008	2.6264	0.4775
20—29	0.0033	0.0006	3.0065	0.5466
30—39	0.0002	0.0004	0.2450	0.4901
40 and over	0.0001	0.0002	0.1257	0.2513
Peak	0.0055	0.0010	3.0065	0.5466

[1] Source: City of Ontario Municipal Code, Section 9-1.3310.
[2] Calculated Peak Particle Velocity (PPV) based on the basic vibration formula for provided in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.

3.4.4 CHAPTER 15: SOUND TRANSMISSION CONTROL IN HIGH NOISE IMPACT AREAS

The City of Ontario recognizes that noise levels from the ONT Airport may exceed the standards set forth in the State's Land Use Compatibility for Community Noise exposure for the majority of surrounding land uses. Therefore, the City has established additional requirements for sound transmission control for new development in high noise impact areas surrounding the airport. These requirements are detailed in Title 8, Chapter 15, *Sound Transmission Control in High Noise Impact Areas*, of the City's Municipal Code for the purpose of allowing new development in the vicinity of the airport to safeguard health, property, and public welfare of the community.(13) The building requirements for high noise impact areas are limited to existing and new residential construction, such as the proposed multi-family land use in PA 4 of the Project site and requires interior noise levels of 45 dBA CNEL for land uses located within the 60 to 65 dBA CNEL noise contours. However, the sound transmission control requirements for noise-sensitive land uses outlined in Chapter 15 do not apply to the non noise-sensitive commercial and industrial land uses contained within PA 1, 2, and 3 of the Meredith International Centre.

3.5 CITY OF RANCHO CUCAMONGA DEVELOPMENT CODE NOISE STANDARDS

Although the Project site is located within the City of Ontario, it is adjacent to noise-sensitive receivers located in the City of Rancho Cucamonga, and thus this report presents the relevant City of Rancho Cucamonga's noise regulations. To analyze the noise impacts on the residential land uses near the Project site, the operational (stationary/area source) and construction-related noise impacts are evaluated against standards established under the City's Development Code.

3.5.1 OPERATIONAL NOISE STANDARDS

The City of Rancho Cucamonga Development Code has established noise level limits for its residential zones when the noise levels are measured at the property line. Section 17.66.050(F)(1) states the exterior noise level limits for residential land uses shall be 65 dBA during the daytime hours (7:00 a.m. to 10:00 p.m.) and 60 dBA during the nighttime hours (10:00 p.m. to 7:00 a.m.).(14) For analysis purposes, the potential Project-related operational noise impacts on sensitive receivers in the City of Rancho Cucamonga are evaluated based on the City of Rancho Cucamonga Development Code noise standards (Section 17.66.050(F)(1)), shown on Table 3-1 and included in Appendix 3.4.

3.5.2 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation. According to Section 17.66.050(D)(4)(a) of the City of Rancho Cucamonga Development Code the following activities are exempt from the provisions of the noise standards: *Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities: when adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided that noise levels created do not exceed the base noise level standard of 65 dBA when measured at the adjacent property line.*(14) If Project construction activities occur during the permitted hours of 7:00 a.m. and 8:00 p.m. on weekdays, including Saturdays, and do not occur on Sundays or national holidays, and the noise level does not exceed 65 dBA at nearby residential land uses within the City of Rancho Cucamonga, the construction noise level impacts are considered exempt from the noise standards. Since the Project is located within the City of Ontario, the City of Rancho Cucamonga standards for construction activity are only applied to those potentially impacted sensitive receivers in the City of Rancho Cucamonga. The City of Rancho Cucamonga Development Code Noise Standards are included in Appendix 3.4.

3.5.3 CONSTRUCTION VIBRATION STANDARDS

The City of Rancho Cucamonga Development Code, Section 17.66.050(D)(4)(a), identifies exemptions from the noise standards for: *Noise sources associated with, or vibration created* *by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities*…do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or any time on Sunday or a national holiday.(14) However, for analysis purposes, the potential vibration impacts created by Project construction are evaluated based on the City of Rancho Cucamonga established vibration standards (Section 17.66.070(A)) for: *Uses that generate vibrations that may be considered a public nuisance or hazard on any adjacent property shall be cushioned or isolated to prevent generation of vibrations*.(15) The standards are presented in acceleration (of gravity) at a given frequency (cycles per second) as measured at the property line of adjacent land uses. At a frequency of 50 cycles per second (CPS), the vibration standard is 0.002g inches per second squared (in/sec^2). In order to apply the City of Rancho Cucamonga vibration standards to the potential impacts of the Project they must be converted from acceleration to velocity, as the FTA reference vibration levels for construction equipment, provided in Table 6-1, are in terms of velocity (in/sec). The *Transportation and Construction-Induced Vibration Guidance Manual*, prepared by Caltrans, provides the following equation for acceleration in terms of gravity:

$$Ag = (2\pi fV)/386.102$$

Where "Ag" is the peak acceleration of gravity, "f" is the frequency, and "V" is the peak particle velocity. In order to find the equivalent velocity for each acceleration standard provided by the City of Rancho Cucamonga Development Code, the velocity, "V," can be derived from:(12)

$$V = Ag/0.0163f$$

The City of Rancho Cucamonga Development Code vibration standards in acceleration by frequency and the equivalent calculated velocities are shown on Table 3-3.

TABLE 3-3: CITY OF RANCHO CUCAMONGA VIBRATION STANDARDS

Frequency (CPS)[1]	Acceleration (in/sec^2)[1]	Velocity (in/sec)[2]
50	0.0020	0.0025
51	0.0010	0.0012
52	0.0010	0.0012
53	0.0010	0.0012
54	0.0010	0.0011
55	0.0010	0.0011
56	0.0010	0.0011
Peak	0.0020	0.0025

[1] Source: City of Rancho Cucamonga Development Code, Section 17.66.070(A).
[2] Calculated velocity vibration standards converted from acceleration based on equations found in the Caltrans Transportation and Construction-Induced Vibration Guidance Manual, September 2013.

4 THRESHOLDS OF SIGNIFICANCE

This section outlines the applicable thresholds of significance that were used assess the potential Project impacts.

4.1 STANDARDS OF SIGNIFICANCE

Based on the noise criteria presented in Section 3, and direction provided within the CEQA Guidelines as implemented by the City of Ontario, Project noise impacts would be considered potentially significant if the Project is determined to result in or cause the following conditions:

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

4.2 NOISE IMPACT SIGNIFICANCE CRITERIA

The Meredith International Centre noise impact significance criteria are discussed below.

Threshold Consideration: *Potential to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*

Project Stationary/Area-Source Noise Exceeding City Standards Would be Considered Potentially Significant. The City of Ontario Municipal Code Section 5-29.04(a), *Exterior Noise Standards* shown on Table 4-1 establishes the maximum acceptable noise levels that can be generated by stationary/area noise sources as received at on-site and off-site land uses within the City of Ontario. Table 4-1 also identifies the City of Rancho Cucamonga Development Code, Table 17.66.050-1, *Residential Noise Limits* for the maximum acceptable noise levels that can be generated by stationary/area noise sources as received at the Single-Family Residential land uses located in the City of Rancho Cucamonga that are adjacent to the Project site. Project stationary/area-source noise that would cause or result in noise levels exceeding the levels in Table 4-1 would potentially expose persons to noise levels in excess of standards established in the City of Ontario Municipal Code and the City of Rancho Cucamonga Development Code, and would therefore be potentially significant.

TABLE 4-1: EXTERIOR NOISE LEVEL STANDARDS (IN DBA) FOR RECEIVING LAND USES

Land Use	City of Ontario		City of Rancho Cucamonga	
	Daytime	Nighttime	Daytime	Nighttime
Single-Family Residential	65	45	65	60
Multi-Family Residential	65	50	N/A	N/A
Commercial	65	60	N/A	N/A
Industrial	70	70	N/A	N/A

[1] Source: City of Ontario Municipal Code Chapter 29 Noise , Section 5-29.05.
[2] Source: City of Rancho Cucamonga Development Code Chapter 17.66 Performance Standards, Table 17.66.050-1.
Notes: "Daytime" = 7:00 a.m. to 10:00 p.m. the same day; "Nighttime" = 10:01 p.m. to 6:59 a.m. the following day. "N/A" = The land use is not located adjacent to the Project site and therefore the standards are not applicable.

The City of Ontario also has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 5-29.09, *Construction Activity Noise Regulations*, of the Municipal Code states: *No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.*(11) While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receivers. To allow for a quantified determination of what the Noise Control Ordinance constitutes as a *detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City* due to construction activity, relevant quantified construction noise standards established in other cities within the County of San Bernardino were used in this analysis to assess the Project construction noise levels.

Within the County of San Bernardino, construction noise level limits of 65 dBA Leq are identified in the following cities: Rancho Cucamonga (Development Code, Section 17.66.050(D)(4)(a) Noise Standards); Adelanto (Code of Ordinances, Section 17.90.020(d) Construction Practices); and Chino (Municipal Code, Section 9.40.060(D) Special Provisions). While not enforceable regulations within the City of Ontario, the construction noise limits identified by other cities in the County of San Bernardino provide an acceptable threshold for determining the relative significance of Project construction noise levels.

The City of Rancho Cucamonga also establishes additional restrictions on construction-source noise. More specifically, the City of Rancho Cucamonga Development Code, Section 17.66.050(D)(4), *Special Exclusions,* provides the following: *When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8 p.m. and 7 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.*(14) Project construction stationary/area-source noise that would cause or result in noise levels exceeding 65 dBA Leq would potentially expose persons to vibration levels in excess of standards established as the acceptable threshold for determining the relative significance of Project construction noise levels and the City of Rancho Cucamonga Development Code, and would therefore be potentially significant.

Project Vehicular-Source Noise Exceeding City Standards Would be Considered Potentially Significant. City General Policies (City of Ontario Policy Plan, Safety Element, Noise Hazards) establish parameters for vehicular-source noise along City roadways. In this regard, City Policy Plan Policies act to ensure that when exterior noise levels exceed 65 dBA CNEL at sensitive receivers mitigation is provided to ensure that interior noise levels of 45 dBA CNEL are maintained. Project vehicular-source noise that would cause or result in noise levels exceeding 65 dBA CNEL would potentially expose persons to noise levels in excess of standards established in the local general plan, and would therefore be potentially significant.

Project Stationary/Area-Source Vibration Exceeding City Standards Would be Considered Potentially Significant. The City of Ontario Municipal Code Section 9-1.3310, Table 33-3, *Maximum Vibration in M Districts* establishes the maximum acceptable vibration levels that can be generated by stationary/area vibration sources from Industrial land uses. Table 3-2 of this report shows the City of Ontario vibration standards, and Table 3-3 identifies the City of Rancho Cucamonga vibration standards for sensitive receivers located in the City of Rancho Cucamonga located near the Project site. The City of Rancho Cucamonga Development Code, Section 17.66.050(D)(4)(a) establishes the vibrations standards used in this analysis. Project construction stationary/area-source vibration that would cause or result in vibration levels exceeding the levels in Tables 3-2 and 3-3 would potentially expose persons to vibration levels in excess of standards established in the City of Ontario Municipal Code and the City of Rancho Cucamonga Development Code, and would therefore be potentially significant.

Vehicular-Source Noise Exceeding the City Standards at Land Uses Within the Project Would be Considered Potentially Significant. City General Policies (City of Ontario Policy Plan, Safety Element, Noise Hazards) establish parameters for vehicular-source noise along City roadways. In this regard, City Policy Plan Policies act to ensure that when exterior noise levels exceed 65 dBA CNEL at sensitive receivers within the Project site, mitigation is provided to ensure that interior noise levels of 45 dBA CNEL are maintained for the Multi-Family Residential dwellings. Vehicular-source noise that would cause or result in noise levels exceeding 65 dBA CNEL would potentially expose persons to noise levels in excess of standards established in the local general plan, and would therefore be potentially significant.

Summary

The potential for the Project to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would occur if:

- Project stationary/area-source or vehicular-source noise would exceed City of Ontario Noise Ordinance Standards or City of Rancho Cucamonga Development Code Noise Standards; or would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways; or

- Project stationary/area-source vibration would exceed City of Ontario Vibration Standards or City of Rancho Cucamonga Development Code Vibration Standards; or
- Project Multi-Family Residential land uses would experience noise levels which would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways.

Threshold Consideration: *Potential to result in or cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project; or*

Threshold Consideration: *Potential to result in or cause a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.*

Perceptible Project Stationary/Area-Source Noise Exceeding Maximum Acceptable Ambient Conditions Would be Considered Substantial and Potentially Significant. For the purposes of this analysis, the City of Ontario's *Exterior Noise Standards* are also defined as the maximum acceptable ambient condition when considering stationary/area-source noise impacts. For each land use within the Project, the respective daytime and nighttime noise level standards shall apply: 70 dBA Leq (daytime and nighttime) for Industrial; 65dBA Leq (daytime) and 60 dBA Leq (nighttime) for Commercial; and 65 dBA Leq (daytime) and 50 dBA Leq (nighttime) for Multi-Family Residential. In this regard, the maximum acceptable ambient noise conditions established in this analysis reflect local standards for acceptable noise conditions; correlate with Policies established in the City Policy Plan; and are consistent with applicable California Office of Planning and Research (OPR) Land Use/Noise Compatibility Guidelines. (7)

When ambient noise conditions are within acceptable parameters, as shown in Table 4-1, and perceptible (3.0 dBA or greater) Project stationary/area-source noise (whether temporary/periodic or permanent) would individually or in combination with ambient noise levels, exceed the standards in Table 4-1, Project source increases in ambient conditions could adversely affect area land uses, and land use/noise compatibility standards may not be maintained. Project stationary/area-source noise of 3.0 dBA or greater that would cause ambient conditions to exceed the standards in Table 4-1 would, on this basis, be considered substantial and potentially significant.

Perceptible Project Vehicular-Source Noise Exceeding Maximum Acceptable Ambient Conditions Would be Considered Substantial and Potentially Significant. Similarly, when considering vehicular-source noise, the City's 65 dBA CNEL standard reflected in the City Policy Plan is defined as the maximum acceptable ambient condition when considering vehicular-source noise impacts. When ambient noise conditions are within acceptable parameters (65 dBA CNEL) and perceptible (3.0 dBA or greater) Project vehicular-source noise would, individually or in combination with ambient conditions, exceed 65 dBA CNEL, Project-source increases in ambient conditions could adversely affect area land uses, and land use/noise compatibility standards may not be maintained. Project vehicular-source noise of 3.0 dBA or greater that would cause ambient conditions to exceed 65 dBA CNEL would on this basis be considered substantial and potentially significant.

When Noise Levels Exceed Maximum Acceptable Ambient Conditions, Project Stationary/Area-Source Noise Increases of 1.5 dBA or Greater Would be Considered Substantial and Potentially Significant. If however, ambient conditions already exceed minimum acceptable standards, subsequent increases in noise levels may be considered substantial as they would contribute to already deficient conditions. Neither the City nor the State have established a quantified incremental increase in noise levels that could be considered *substantial* in instances where ambient conditions may already be considered unacceptable. Guidance in this case is however, provided at the federal level through the Federal Interagency Committee on Noise (FICON). (16) In this regard, FICON guidance facilitates assessment of project-generated increases in noise levels that take into account ambient noise conditions. Although the FICON guidance was specifically developed to assess aircraft noise impacts, this guidance is broadly relevant to all environmental noise assessments in determining perceived effects of noise. Germane to this analysis, the FICON guidance indicates that when ambient noise conditions are at or above normally acceptable standards, increases in noise of 1.5 dBA or greater would contribute to existing deficiencies, potentially resulting in increased community annoyance, citizen complaints, and potential litigation.

FICON guidance as applied within this analysis would indicate that when ambient conditions equal or exceed the City's maximum acceptable standards for stationary/area-sources (Table 4-1), Project stationary/area-source noise increases of 1.5 dBA or greater in ambient conditions could result in increased community annoyance, citizen complaints, and potential litigation. For the purposes of this analysis then, when ambient conditions equal or exceed maximum acceptable standards for stationary/area-sources, Project stationary/area-source noise increases of 1.5 dBA more in ambient conditions would therefore be considered substantial, and therefore potentially significant.

When Noise Levels Exceed Maximum Acceptable Ambient Conditions, Project Vehicular-Source Noise Increases of 1.5 dBA or Greater Would be Considered Substantial and Potentially Significant. Similarly, when ambient noise conditions are at or above the City's normally acceptable standards for vehicular sources (65 dBA CNEL), Project vehicular-source increases of 1.5 dBA or greater in ambient conditions would contribute to existing deficiencies, and could result in increased community annoyance, citizen complaints, and potential litigation. For the purposes of this analysis then, when ambient conditions equal or exceed maximum acceptable standards for vehicular sources, Project vehicular-source noise increase of 1.5 dBA more in ambient conditions would therefore be considered substantial and therefore potentially significant.

Summary

A substantial temporary or permanent increase in ambient noise conditions would occur if Project-source noise would:

- Result in a perceptible increase in noise levels (3.0 dBA or greater) that would cause the maximum acceptable ambient condition (shown on Table 4-1 for stationary/area-sources; 65 dBA CNEL for vehicular-sources) to be exceeded; or

- Result in an increase of 1.5 dBA in ambient conditions when the noise environment at receiver land uses already exceeds the maximum acceptable ambient noise condition (shown on Table 4-1 for stationary/area-sources; 65 dBA CNEL for vehicular sources).

Threshold Consideration: *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels*.

Threshold Consideration: *For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.*

Aircraft-Source Noise Exceeding the Standards at Land Uses Within the Project Would be Considered Potentially Significant. The Ontario International Airport Land Use Compatibility Plan (ONT ALUCP), Table 2-3, *Noise Criteria* establishes parameters for aircraft-source noise within the airport influence area and noise contour boundaries. The ONT ALUCP acts to ensure that interior noise levels at land uses affected by aircraft-source noise do not exceed specific standards based on their proximity to the airport, and that mitigation is provided to ensure interior noise levels are maintained for future land uses. For the purposes of this analysis, the affected Project Planning Areas (PA) located within the ONT ALUCP noise contours include the Industrial (PA 1) and Commercial (PA 2 and 3) land uses within the 60 to 65 dBA CNEL noise contour boundaries. The ONT ALUCP identifies interior areas of Industrial and Commercial land uses within the 60 to 65 dBA CNEL contour boundaries as *normally compatible* with an interior noise level of 50 dBA CNEL interior areas such as: offices and office areas, eating and drinking establishments, and retail centers and stores.(10) Aircraft-source noise that would cause or result in interior noise levels exceeding 50 dBA CNEL would potentially expose people residing or working in the Project area to excessive noise levels established in the ONT ALUCP, and would therefore be potentially significant.

Summary

The potential for the people residing or working in the Project area to be exposed to excessive aircraft-source noise levels in excess of the standards established in the ONT ALUCP would occur if:

- Aircraft-source noise would exceed the City of Ontario ALUCP standards of 50 dBA CNEL for interior noise levels at the indoor areas within Project land uses.

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, fourteen long-term noise level measurements were taken at receiver locations in the Project study area. The noise level measurement locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. The noise level measurements were recorded by Urban Crossroads, Inc. on Thursday, March 13th, Monday, March 17th, and Tuesday, September 23rd, 2014. 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 meets American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-1983 (R2006)/ANSI S1.4a-1985 (R2006).(17)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned at the nearest noise sensitive receiver locations to assess the existing ambient hourly noise levels surrounding the Project site. 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. In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. While receivers represent a location of noise sensitive areas, they also represent noise modeling locations 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.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

5.3 NOISE MEASUREMENT RESULTS

The results of the noise level measurements are presented in Table 5-1. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the off-site unmitigated exterior noise levels near the northwest corner of the Project site at existing residential homes on Rosewood Court. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 60.5 to 70.1 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 65.4 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 55.6 to 66.1 dBA Leq producing an energy (logarithmic) average nighttime noise level of 61.6 dBA Leq. The 24-hour noise level calculated at this location is 69.1 dBA CNEL.
- Location L2 represents the existing multi-family residential land uses near 1110-C E. 4th Street, north of the Project site. The hourly noise levels measured at location L2 ranged from 67.7 to 73.6 dBA Leq during the daytime hours and from 61.0 to 71.1 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 70.3 dBA Leq with an average nighttime noise level of 66.7 dBA Leq. A review of the 24-hour CNEL at this location indicates that the overall unmitigated exterior noise level is 74.2 dBA CNEL.
- Location L3 represents the area between the Lamplighter Mobile Home Park and a commercial plaza north of E. 4th Street across from the Project site. The background ambient noise levels ranged from 65.3 to 70.4 dBA Leq during the daytime hours, to levels of 58.1 to 68.5 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 68.3 dBA Leq with an average nighttime noise level of 64.6 dBA Leq. A review of the 24-hour CNEL indicates that the overall unmitigated exterior noise level is 72.1 dBA CNEL.
- Location L4 represents the Vineyard Park residential homes at the intersection of Smiderle Loop and E. 4th Street. The hourly noise levels measured at this location ranged from 53.6 to 59.4 dBA Leq during the daytime hours and from 51.5 to 61.1 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 56.8 dBA Leq with an average nighttime noise level of 57.7 dBA Leq. A review of the 24-hour CNEL at this location indicates that the overall unmitigated exterior noise level is 64.2 dBA CNEL.
- To represent the existing ambient noise levels near the existing single-family residential homes northeast of the Project site along Archibald Avenue, noise level measurement location L5 was placed in the flood control facility south of the homes. At this location, the 24-hour noise level was calculated at 65.5 dBA CNEL. The existing daytime hourly noise levels were measured at 57.3 to 61.4 dBA Leq with the nighttime hours ranging from 54.2 to 61.9 dBA Leq. The energy (logarithmic) average daytime noise level was calculated at 58.7 dBA Leq with an average nighttime noise level of 58.8 dBA Leq.
- Located within Planning Area 5 of the Project site, location L6 represents the on-site noise levels at the existing commercial plaza at the northwest corner of the intersection of Archibald Avenue and Inland Empire Boulevard. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 59.1 to 66.4 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 62.3 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 56.3 to 62.6 dBA Leq producing an energy

(logarithmic) average nighttime noise level of 60.7 dBA Leq. A review of the 24-hour CNEL indicates that the overall unmitigated exterior noise level is 67.7 dBA CNEL.

- Location L7 represents the unmitigated exterior noise levels on the south side of Inland Empire Boulevard across from the proposed Urban Residential land use of Planning Area 4 within the Project site. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 62.3 to 67.2 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 65.2 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 60.0 to 67.8 dBA Leq producing an energy (logarithmic) average nighttime noise level of 64.5 dBA Leq. The 24-hour noise level calculated at this location is 71.3 dBA CNEL.
- Location L8 represents the unmitigated exterior noise levels on Inland Empire Boulevard near an existing water channel within the proposed Project site boundaries. The background ambient noise levels at this location ranged from 60.2 to 65.9 dBA Leq during the daytime hours, to levels of 57.3 to 63.4 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 63.5 dBA Leq with an average nighttime noise level of 60.8 dBA Leq. A review of the 24-hour CNEL indicates that the overall unmitigated exterior noise level is 68.1 dBA CNEL.
- Location L9 represents the existing single-family residential land uses north of the I-10 freeway westbound on-ramp at Vineyard Avenue. The hourly noise levels measured at this location ranged from 63.6 to 65.7 dBA Leq during the daytime hours and from 57.7 to 65.5 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 64.8 dBA Leq with an average nighttime noise level of 62.2 dBA Leq. A review of the 24-hour CNEL at this location indicates that the overall unmitigated exterior noise level is 69.4 dBA CNEL.
- Location L10 represents the existing residential community west of the Project site along the west side of Vineyard Avenue. The hourly noise levels measured at this location ranged from 66.2 to 71.2 dBA Leq during the daytime hours and from 60.1 to 69.8 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 69.4 dBA Leq with an average nighttime noise level of 65.7 dBA Leq. A review of the 24-hour CNEL at this location indicates that the overall unmitigated exterior noise level is 73.2 dBA CNEL.
- To represent the existing ambient noise levels at the existing Bernt Elementary School within the Project site, noise level measurement location L11 was placed at the existing fence bordering the school boundary. At this location, the 24-hour noise level was calculated at 61.4 dBA CNEL. The existing daytime hourly noise levels were measured at 48.8 to 55.6 dBA Leq with the nighttime hours ranging from 49.9 to 58.4 dBA Leq. The energy (logarithmic) average daytime noise level was calculated at 58.7 dBA Leq with an average nighttime noise level of 58.8 dBA Leq.
- Location L12 represents the unmitigated exterior noise levels north of 4th Street at the existing wall surrounding homes northeast of the Project site. The background ambient noise levels at this location ranged from 62.0 to 66.6 dBA Leq during the daytime hours, to levels of 56.7 to 66.0 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 63.8 dBA Leq with an average nighttime noise level of 61.2 dBA Leq. A review of the 24-hour CNEL indicates that the overall unmitigated exterior noise level is 68.4 dBA CNEL.
- Location L13 represents the area between an existing commercial plaza and existing residential homes east of the Project site. The background ambient noise levels ranged from 56.3 to 62.0 dBA Leq during the daytime hours, to levels of 52.6 to 60.1 dBA Leq during the nighttime hours.

The energy (logarithmic) average daytime noise level was calculated at 58.7 dBA Leq with an average nighttime noise level of 56.9 dBA Leq. A review of the 24-hour CNEL indicates that the overall unmitigated exterior noise level is 64.0 dBA CNEL.

- Location L14 represents the unmitigated exterior noise levels south of the I-10 Freeway behind an existing noise barrier at the Residence Inn on Convention Center Way. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 60.3 to 68.4 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 63.9 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 58.0 to 63.1 dBA Leq producing an energy (logarithmic) average nighttime noise level of 61.0 dBA Leq. The 24-hour noise level calculated at this location is 68.2 dBA CNEL.

TABLE 5-1: LONG-TERM AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Date	Distance from Project Site (Feet)	Description	Adjacent Land Use[2]	Hourly Noise Level (Leq dBA)[3]		CNEL
					Daytime	Nighttime	
L1	3/13/2014	102'	Located near the northwest corner of the Project site at existing residential homes on Rosewood Court.	Medium Density Residential	65.4	61.6	69.1
L2	3/13/2014	83'	Located near existing multi-family residential land uses near 1110-C E. 4th Street, north of the Project site.	Medium Density Residential	70.3	66.7	74.2
L3	3/17/2014	78'	Located between the Lamplighter Mobile Home Park and a commercial plaza north of E. 4th Street across from the Project site.	Low-Medium Residential	68.3	64.6	72.1
L4	3/13/2014	895'	Located near the Vineyard Park residential homes at the intersection of Smiderle Loop and E. 4th Street.	Low-Medium Residential	56.8	57.7	64.2
L5	3/17/2014	1,225'	Located near existing single-family residential homes northeast of the Project site on Archibald Avenue.	Medium Density Residential	58.7	58.8	65.5
L6	3/13/2014	0'	Located near a gasoline station and drive-through restaurants within the southeast portion of the Project site.	Urban Residential	62.3	60.7	67.7
L7	3/17/2014	0'	Located on the south side of Inland Empire Boulevard across from the proposed Urban Residential land use of the Project site.	Urban Commercial	65.2	64.5	71.3
L8	3/17/2014	0'	Located on Inland Empire Boulevard near an existing waterway within the proposed Project site boundaries.	Urban Residential	63.5	60.8	68.1
L9	3/17/2014	141'	Located just north of the I-10 freeway westbound on-ramp at Vineyard Avenue.	Low Density Residential	64.8	62.2	69.4

Location[1]	Date	Distance from Project Site (Feet)	Description	Adjacent Land Use[2]	Hourly Noise Level (Leq dBA)[3]		CNEL
					Daytime	Nighttime	
L10	9/23/2014	51'	Located along the west side of Vineyard Avenue at an existing residential dwelling west of the Project site.	Medium Density Residential	69.4	65.7	73.2
L11	9/23/2014	0'	Located at the southwest corner of the existing Bernt Elementary School along the northern Project site boundary.	Public School	52.6	55.1	61.4
L12	9/23/2014	180'	Located north of 4th Street at the existing wall surrounding residential dwellings, northeast of the Project site.	Low-Medium Residential	63.8	61.2	68.4
L13	9/23/2014	335'	Located between an existing commercial plaza and existing residential dwellings east of the Project site.	Mixed Use	58.7	56.9	64.0
L14	9/23/2014	235'	Located south of the I-10 Freeway behind an existing noise barrier at the Residence Inn on Convention Center Way.	Hospitality	63.9	61.0	68.2

[1] See Exhibit 5-A for the location of the noise level measurement locations.
[2] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[3] Energy (logarithmic) average hourly levels. The long-term measurements printouts are included in Appendix 5.2.
"Daytime" = Between the hours of 7:00 a.m. to 10:00 p.m.; "Nighttime" = Between the hours of 10:00 p.m. to 7:00 a.m.

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6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The 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.(18) 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.(19) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 23 study area roadway segments, the functional roadway classifications according to the General Plan Circulation Element, the number of lanes and the vehicle speeds. For the purpose of this analysis, soft site conditions were used to analyze the 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.

The Existing, Year 2017, Year 2020, and Year 2035 average daily traffic volumes used for this study are presented in Table 6-2 and were provided by the *Meredith International Centre Traffic Impact Analysis* prepared by Linscott Law and Greenspan, Inc. (20) Table 6-3 presents the time of day (daytime, evening, and nighttime) vehicle splits.

In order to describe the off-site truck traffic impacts, if was first necessary to deconstruct the p.m. peak hour traffic volumes provided in the *Meredith International Centre Traffic Impact Analysis*. This was done to accurately account for the affect of individual truck trips on the study area roadway segments as opposed to using the volumes in the traffic study that are expressed as Passenger Car Equivalent (PCE) trips. The actual Project auto and truck trips in combination with Project trip distributions by Planning Area, are reflected in the average daily traffic volumes used to support the off-site traffic noise analysis as shown on Table 6-2. The off-site traffic noise prediction volume development worksheets are included in Appendix 6.1.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix. These trucks were assigned to the 23 individual off-site study area roadway segments based on the estimated Project truck trip distribution percentages for each Planning Area. Using the Project truck trips in combination with the Project trip distribution, it is possible to calculate the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Tables 6-4 to 6-7 describe the distribution of traffic flow by vehicle type (vehicle mix) by roadway segment for each of the off-site Project traffic conditions.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (MPH)
1	Baker Av.	n/o 6th St.	Low Density Residential	44'	40
2	Vineyard Av.	n/o 8th St.	General Industrial	33'	45
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	44'	50
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	59'	50
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	59'	45
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	59'	45
7	Hellman Av.	n/o 4th St.	Business Park	33'	40
8	Archibald Av.	s/o Arrow Rte.	General Commercial	50'	45
9	Archibald Av.	n/o 6th St.	Low Density Residential	50'	45
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	50'	45
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	59'	50
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	59'	50
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	84'	45
14	4th St.	w/o Baker Av.	High Density Residential	59'	45
15	4th St.	e/o Baker Av.	High Density Residential	59'	55
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	59'	55
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	59'	55
18	4th St.	e/o Archibald Av.	Open Space - Parkland	59'	55
19	4th St.	w/o Haven Av.	Medium Density Res.	59'	55
20	4th St.	e/o Haven Av.	Mixed Use	59'	55
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	44'	55
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	44'	55
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	59'	55

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic[1]						
			Existing	Year 2017		Year 2020		Year 2035	
			No Project	No Project	With Project	No Project	With Project	No Project	With Project
1	Baker Av.	n/o 6th St.	4,790	5,080	5,344	5,360	5,873	6,303	6,816
2	Vineyard Av.	n/o 8th St.	18,670	20,270	21,009	21,380	23,638	23,841	26,099
3	Vineyard Av.	s/o 8th St.	18,540	21,960	22,736	23,060	25,424	25,368	27,733
4	Vineyard Av.	n/o 4th St.	26,110	29,990	32,250	31,560	38,680	33,259	40,378
5	Vineyard Av.	s/o 4th St.	28,240	32,280	35,161	33,980	43,305	40,477	49,802
6	Vineyard Av.	s/o Inland Empire Bl.	29,540	33,470	37,631	35,220	43,915	38,990	47,685
7	Hellman Av.	n/o 4th St.	4,320	4,570	5,065	4,840	6,407	5,324	6,891
8	Archibald Av.	s/o Arrow Rte.	22,080	24,590	25,667	25,900	28,371	28,490	30,961
9	Archibald Av.	n/o 6th St.	22,480	26,450	27,890	27,800	32,316	30,861	35,377
10	Archibald Av.	s/o 6th St.	22,800	26,940	28,696	28,310	33,809	31,106	36,605
11	Archibald Av.	n/o Inland Empire Bl.	28,860	34,690	36,703	36,420	44,485	40,210	48,275
12	Archibald Av.	s/o Inland Empire Bl.	35,650	42,700	44,228	44,850	52,687	50,290	58,127
13	Haven Av.	n/o Inland Empire Bl.	51,730	57,230	57,428	60,340	60,978	64,675	65,312
14	4th St.	w/o Baker Av.	18,340	21,100	21,522	22,200	23,590	18,318	19,708
15	4th St.	e/o Baker Av.	13,550	16,030	16,452	16,830	18,220	13,322	14,712
16	4th St.	w/o Hellman Av.	15,310	17,690	18,284	18,610	21,350	22,749	25,489
17	4th St.	e/o Hellman Av.	14,630	16,960	17,323	17,850	19,632	21,913	23,695
18	4th St.	e/o Archibald Av.	16,800	19,280	19,603	20,300	21,291	23,032	24,024
19	4th St.	w/o Haven Av.	17,200	21,390	21,713	22,400	23,391	24,046	25,038
20	4th St.	e/o Haven Av.	21,780	24,820	25,143	26,110	27,101	28,127	29,119
21	Inland Empire Bl.	e/o Archibald Av.	10,920	13,090	13,486	13,750	15,025	16,203	17,478
22	Inland Empire Bl.	w/o Haven Av.	12,720	13,490	13,820	14,240	14,941	16,546	17,247
23	Inland Empire Bl.	e/o Haven Av.	12,480	13,220	13,418	13,970	14,608	15,492	16,129

[1] Source: Meredith International Centre Traffic Impact Analysis, Linscott Law & Greenspan, October 2014.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Time Period	Vehicle Type		
	Autos	Medium Trucks	Heavy Trucks
Daytime (7am-7pm)	77.50%	84.80%	86.50%
Evening (7pm-10pm)	12.90%	4.90%	2.70%
Nighttime (10pm-7am)	9.60%	10.30%	10.80%
Total:	100.0%	100.0%	100.0%

TABLE 6-4: EXISTING CONDITIONS TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

ID	Roadway	Segment	No Project			
			Autos	Medium Trucks	Heavy Trucks	Total
1	Baker Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%
2	Vineyard Av.	n/o 8th St.	91.19%	7.75%	1.06%	100.00%
3	Vineyard Av.	s/o 8th St.	91.19%	7.75%	1.06%	100.00%
4	Vineyard Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%
5	Vineyard Av.	s/o 4th St.	91.19%	7.75%	1.06%	100.00%
6	Vineyard Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%
7	Hellman Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%
8	Archibald Av.	s/o Arrow Rte.	91.19%	7.75%	1.06%	100.00%
9	Archibald Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%
10	Archibald Av.	s/o 6th St.	91.19%	7.75%	1.06%	100.00%
11	Archibald Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%
12	Archibald Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%
13	Haven Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%
14	4th St.	w/o Baker Av.	91.19%	7.75%	1.06%	100.00%
15	4th St.	e/o Baker Av.	91.19%	7.75%	1.06%	100.00%
16	4th St.	w/o Hellman Av.	91.19%	7.75%	1.06%	100.00%
17	4th St.	e/o Hellman Av.	91.19%	7.75%	1.06%	100.00%
18	4th St.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%
19	4th St.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%
20	4th St.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%
21	Inland Empire Bl.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%
22	Inland Empire Bl.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%
23	Inland Empire Bl.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%

Source: Meredith International Centre Traffic Impact Analysis, Linscott Law & Greenspan, October 2014.

TABLE 6-5: YEAR 2017 CONDITIONS TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

ID	Roadway	Segment	No Project				With Project			
			Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total
1	Baker Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.63%	7.37%	1.00%	100.00%
2	Vineyard Av.	n/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.18%	7.65%	1.17%	100.00%
3	Vineyard Av.	s/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.04%	7.70%	1.26%	100.00%
4	Vineyard Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.35%	7.48%	1.17%	100.00%
5	Vineyard Av.	s/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.30%	7.49%	1.21%	100.00%
6	Vineyard Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	88.86%	7.91%	3.23%	100.00%
7	Hellman Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.76%	7.25%	0.99%	100.00%
8	Archibald Av.	s/o Arrow Rte.	91.19%	7.75%	1.06%	100.00%	91.27%	7.58%	1.16%	100.00%
9	Archibald Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.30%	7.55%	1.14%	100.00%
10	Archibald Av.	s/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.30%	7.53%	1.17%	100.00%
11	Archibald Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.26%	7.55%	1.19%	100.00%
12	Archibald Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	90.57%	7.79%	1.65%	100.00%
13	Haven Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.21%	7.73%	1.05%	100.00%
14	4th St.	w/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.19%	7.69%	1.13%	100.00%
15	4th St.	e/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.18%	7.67%	1.15%	100.00%
16	4th St.	w/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.32%	7.64%	1.04%	100.00%
17	4th St.	e/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.29%	7.66%	1.05%	100.00%
18	4th St.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.16%	7.71%	1.14%	100.00%
19	4th St.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.16%	7.71%	1.13%	100.00%
20	4th St.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.16%	7.72%	1.12%	100.00%
21	Inland Empire Bl.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.36%	7.60%	1.04%	100.00%
22	Inland Empire Bl.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.36%	7.60%	1.04%	100.00%
23	Inland Empire Bl.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.28%	7.68%	1.05%	100.00%

Source: Meredith International Centre Traffic Impact Analysis, Linscott Law & Greenspan, October 2014.

TABLE 6-6: YEAR 2020 CONDITIONS TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

ID	Roadway	Segment	No Project				With Project			
			Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total
1	Baker Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.38%	7.58%	1.03%	100.00%
2	Vineyard Av.	n/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.27%	7.68%	1.05%	100.00%
3	Vineyard Av.	s/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.27%	7.68%	1.05%	100.00%
4	Vineyard Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.35%	7.61%	1.04%	100.00%
5	Vineyard Av.	s/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.33%	7.62%	1.05%	100.00%
6	Vineyard Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	90.11%	7.71%	2.18%	100.00%
7	Hellman Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.41%	7.56%	1.03%	100.00%
8	Archibald Av.	s/o Arrow Rte.	91.19%	7.75%	1.06%	100.00%	91.31%	7.65%	1.04%	100.00%
9	Archibald Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.31%	7.64%	1.04%	100.00%
10	Archibald Av.	s/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.33%	7.63%	1.04%	100.00%
11	Archibald Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.30%	7.64%	1.06%	100.00%
12	Archibald Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	90.92%	7.73%	1.34%	100.00%
13	Haven Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.20%	7.74%	1.06%	100.00%
14	4th St.	w/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.21%	7.71%	1.08%	100.00%
15	4th St.	e/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.21%	7.70%	1.09%	100.00%
16	4th St.	w/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.24%	7.71%	1.05%	100.00%
17	4th St.	e/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.23%	7.71%	1.05%	100.00%
18	4th St.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.20%	7.72%	1.08%	100.00%
19	4th St.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.20%	7.72%	1.08%	100.00%
20	4th St.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.19%	7.73%	1.08%	100.00%
21	Inland Empire Bl.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.27%	7.69%	1.05%	100.00%
22	Inland Empire Bl.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.27%	7.69%	1.05%	100.00%
23	Inland Empire Bl.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.23%	7.72%	1.05%	100.00%

Source: Meredith International Centre Traffic Impact Analysis, Linscott Law & Greenspan, October 2014.

TABLE 6-7: YEAR 2035 CONDITIONS TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

ID	Roadway	Segment	No Project				With Project			
			Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total
1	Baker Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.36%	7.61%	1.04%	100.00%
2	Vineyard Av.	n/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.27%	7.69%	1.05%	100.00%
3	Vineyard Av.	s/o 8th St.	91.19%	7.75%	1.06%	100.00%	91.26%	7.69%	1.05%	100.00%
4	Vineyard Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.34%	7.62%	1.04%	100.00%
5	Vineyard Av.	s/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.31%	7.63%	1.05%	100.00%
6	Vineyard Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	90.20%	7.71%	2.09%	100.00%
7	Hellman Av.	n/o 4th St.	91.19%	7.75%	1.06%	100.00%	91.39%	7.57%	1.03%	100.00%
8	Archibald Av.	s/o Arrow Rte.	91.19%	7.75%	1.06%	100.00%	91.30%	7.66%	1.04%	100.00%
9	Archibald Av.	n/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.30%	7.65%	1.04%	100.00%
10	Archibald Av.	s/o 6th St.	91.19%	7.75%	1.06%	100.00%	91.32%	7.64%	1.04%	100.00%
11	Archibald Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.29%	7.65%	1.06%	100.00%
12	Archibald Av.	s/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	90.95%	7.73%	1.32%	100.00%
13	Haven Av.	n/o Inland Empire Bl.	91.19%	7.75%	1.06%	100.00%	91.20%	7.74%	1.06%	100.00%
14	4th St.	w/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.21%	7.71%	1.08%	100.00%
15	4th St.	e/o Baker Av.	91.19%	7.75%	1.06%	100.00%	91.22%	7.69%	1.09%	100.00%
16	4th St.	w/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.24%	7.71%	1.05%	100.00%
17	4th St.	e/o Hellman Av.	91.19%	7.75%	1.06%	100.00%	91.23%	7.72%	1.05%	100.00%
18	4th St.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.19%	7.72%	1.08%	100.00%
19	4th St.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.19%	7.73%	1.08%	100.00%
20	4th St.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.19%	7.73%	1.08%	100.00%
21	Inland Empire Bl.	e/o Archibald Av.	91.19%	7.75%	1.06%	100.00%	91.26%	7.70%	1.05%	100.00%
22	Inland Empire Bl.	w/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.26%	7.69%	1.05%	100.00%
23	Inland Empire Bl.	e/o Haven Av.	91.19%	7.75%	1.06%	100.00%	91.23%	7.72%	1.05%	100.00%

Source: Meredith International Centre Traffic Impact Analysis, Linscott Law & Greenspan, October 2014.

6.3 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-8 and are based on the City of Ontario Policy Plan Environmental Impact Report (EIR), Table 5.16-1.(21) Based on the City of Ontario Policy Plan Functional Roadway Classification Plan, Figure M-2, Archibald Avenue is classified as a 6-lane Other Principal Arterial, and Inland Empire Boulevard is classified as a 6-lane Minor Arterial. The I-10 Freeway volumes were obtained using a ten-percent growth factor above the existing conditions provided by the Caltrans Traffic Data Branch *2012 Annual Average Daily Truck Traffic on the California Highway System.*(22) The traffic volumes shown on Table 6-8 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures that address the worst-case future traffic noise conditions. For the purposes of this analysis, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area.

TABLE 6-8: ON-SITE ROADWAY PARAMETERS

Roadway	Lanes	Classification[1]	Traffic Volume[2]	Speed (MPH)[3]	Site Conditions
Archibald Av.	6	Other Principal Arterial	49,000	50	Soft
Inland Empire Blvd.	6	Minor Arterial	33,000	50	Soft
I-10 Freeway	10	Freeway	269,830	65	Soft

[1] Road classifications based upon the Ontario Plan Functional Roadway Classification Plan, Figure M-2.
[2] Source: The Ontario Plan Environmental Impact Report (EIR), April 2009, Table 5.16-1. Future traffic volumes on the I-10 Freeway were calculated using an assumed 10% growth above the existing conditions provided by the Caltrans Traffic Data Branch Annual Average Daily Truck Traffic on the California Highways System, 2012.
[3] Posted speed limits on Archibald Avenue, Inland Empire Boulevard, and the I-10 Freeway.

Table 6-3 presents the time of day vehicle splits by vehicle type, and Table 6-9 presents the total traffic flow distributions (vehicle mixes) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model based on roadway types. The vehicle mix for the I-10 Freeway was obtained using the *2012 Annual Average Daily Truck Traffic on the California Highway System*, published by Caltrans.(22)

TABLE 6-9: ON-SITE DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Roadway	Classification[1]	Total % Traffic Flow			Total
		Autos	Medium Trucks	Heavy Trucks	
Archibald Av.	Other Principal Arterial	97.42%	1.84%	0.74%	100%
Inland Empire Blvd.	Minor Arterial	97.42%	1.84%	0.74%	100%
I-10 Freeway[2]	Freeway	93.31%	1.95%	4.74%	100%

[1] Road classifications based upon the Ontario Plan Functional Roadway Classification Plan, Figure M-2.
[2] Source: Caltrans Traffic Data Branch Annual Average Daily Truck Traffic on the California Highways System, 2012.

The precise location of the multi-family residential buildings was not available at the time of this analysis. The on-site traffic noise analysis locations represent the future outdoor patio areas on the first floor, at an assumed minimum setback distance of 5 feet from the property line based on the City of Ontario Development Code, Article 14, Section 9-1410 Development Standards for multi-family residential development.(23)

6.4 VIBRATION ASSESSMENT

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

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-10. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 6-10: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

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7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Meredith International Centre Traffic Impact Analysis*.(20) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- <u>Existing Without Project</u>: This scenario refers to the existing present-day noise conditions without the Project.
- <u>Year (2017) Without / With Project</u>: This scenario refers to the background noise conditions at future Year 2017 with and without the proposed Project. The Project development for this scenario is based on Table 1-1 of the Traffic Impact Analysis and includes PA 1 Option B with 86,000 square feet of Shopping Center land uses in PA 2.(20)
- <u>Year (2020) Without / With Project</u>: This scenario refers to the background noise conditions at future Year 2020 with and without the proposed Project. The Project development for this scenario is based on Table 1-1 of the Traffic Impact Analysis and includes PA Option B, PA 2, 3, 4, and 5..(20)
- <u>Year (2035) Without / With Project</u>: This scenario refers to the background noise conditions at future Year 2035 with and without the proposed Project. This scenario corresponds to 2035 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 OFF-SITE TRAFFIC NOISE SIGNIFICANCE CRITERIA

The following thresholds and significance criteria, discussed in Section 4.2, shall apply to the off-site traffic noise impacts from the Project:

<u>Threshold Consideration:</u> *Potential to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.* The potential for the Project to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would occur if:

- Project vehicular-source noise would exceed City of Ontario Noise Ordinance Standards or City of Rancho Cucamonga Development Code Noise Standards; or would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways.

<u>Threshold Consideration:</u> *Potential to result in or cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project; or*

<u>Threshold Consideration:</u> *Potential to result in or cause a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.* A substantial temporary or permanent increase in ambient noise conditions would occur if Project-source noise would:

- Result in a perceptible increase in noise levels (3.0 dBA or greater) that would cause the maximum acceptable ambient condition of 65 dBA CNEL for vehicular-sources to be exceeded; or
- Result in an increase of 1.5 dBA in ambient conditions when the noise environment at receiver land uses already exceeds the maximum acceptable ambient noise condition of 65 dBA CNEL for vehicular sources.

7.2 OFF-SITE TRAFFIC NOISE CONTOURS

To quantify the Project's traffic noise impacts on the surrounding areas, the changes in traffic noise levels on 23 roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. The noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic.

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect modeling of vehicular noise along area roadways, they appropriately do not reflect noise contribution from the surrounding commercial and industrial uses within the Project study area. Tables 7-1 through 7-7 presents a summary of the unmitigated exterior traffic noise levels for the 23 study area roadway segments analyzed from the Existing without Project condition, to the without and with Project conditions in each of three timeframes: Year 2017, Year 2020 and Year 2035 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the seven traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	65.3	RW	46	99
2	Vineyard Av.	n/o 8th St.	General Industrial	73.8	59	127	273
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	74.1	83	179	385
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.0	94	203	437
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	72.3	84	181	389
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	72.5	86	186	401
7	Hellman Av.	n/o 4th St.	Business Park	66.2	RW	40	85
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.1	81	175	376
9	Archibald Av.	n/o 6th St.	Low Density Residential	73.2	82	177	381
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	73.3	83	178	384
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	73.5	101	217	468
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	74.4	116	250	538
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.0	286	615	1326
14	4th St.	w/o Baker Av.	High Density Residential	70.4	63	135	292
15	4th St.	e/o Baker Av.	High Density Residential	71.2	71	153	330
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	71.7	77	166	358
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	71.5	75	161	347
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.1	82	177	380
19	4th St.	w/o Haven Av.	Medium Density Res.	72.2	83	179	386
20	4th St.	e/o Haven Av.	Mixed Use	73.3	97	210	452
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	72.8	68	147	316
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.5	75	162	350
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	70.9	67	145	312

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-2: YEAR 2017 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	65.5	RW	48	103
2	Vineyard Av.	n/o 8th St.	General Industrial	74.1	62	134	288
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	74.9	93	200	431
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.7	103	223	480
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	72.9	92	197	425
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.0	94	202	436
7	Hellman Av.	n/o 4th St.	Business Park	66.4	RW	41	89
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.6	87	188	404
9	Archibald Av.	n/o 6th St.	Low Density Residential	73.9	91	197	424
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.0	93	199	429
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.3	114	245	529
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.2	131	282	607
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.4	306	658	1418
14	4th St.	w/o Baker Av.	High Density Residential	71.0	69	149	320
15	4th St.	e/o Baker Av.	High Density Residential	71.9	79	171	369
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	72.4	85	183	394
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.2	82	178	383
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.7	90	194	417
19	4th St.	w/o Haven Av.	Medium Density Res.	73.2	96	207	447
20	4th St.	e/o Haven Av.	Mixed Use	73.8	106	229	494
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	73.6	77	165	357
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.8	78	169	364
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.1	70	151	324

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-3: YEAR 2017 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	65.6	RW	48	104
2	Vineyard Av.	n/o 8th St.	General Industrial	74.3	64	138	298
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.1	97	208	449
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	74.0	109	234	504
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	73.3	98	210	453
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	74.8	124	267	576
7	Hellman Av.	n/o 4th St.	Business Park	66.7	RW	43	92
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.8	90	194	418
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.2	95	205	441
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.3	97	209	450
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.6	119	256	552
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.7	141	305	656
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.4	306	659	1420
14	4th St.	w/o Baker Av.	High Density Residential	71.1	70	151	326
15	4th St.	e/o Baker Av.	High Density Residential	72.1	81	175	377
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	72.5	86	186	401
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.2	83	180	387
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.8	91	197	424
19	4th St.	w/o Haven Av.	Medium Density Res.	73.3	98	211	454
20	4th St.	e/o Haven Av.	Mixed Use	73.9	108	232	500
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	73.7	78	168	361
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.8	79	170	367
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.1	70	152	326

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-4: YEAR 2020 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	65.8	RW	49	106
2	Vineyard Av.	n/o 8th St.	General Industrial	74.4	64	139	299
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.1	96	207	446
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.9	107	230	496
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	73.1	95	204	440
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.2	97	209	451
7	Hellman Av.	n/o 4th St.	Business Park	66.7	RW	43	92
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.8	90	194	418
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.1	94	204	439
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.2	96	206	444
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.5	118	253	546
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.4	135	291	627
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.6	316	682	1469
14	4th St.	w/o Baker Av.	High Density Residential	71.2	71	154	331
15	4th St.	e/o Baker Av.	High Density Residential	72.1	82	177	381
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	72.6	88	189	407
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.4	85	184	396
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.0	93	200	432
19	4th St.	w/o Haven Av.	Medium Density Res.	73.4	99	214	461
20	4th St.	e/o Haven Av.	Mixed Use	74.1	110	237	511
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	73.8	79	171	368
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.0	81	175	377
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.3	72	156	336

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-5: YEAR 2020 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	66.1	RW	52	112
2	Vineyard Av.	n/o 8th St.	General Industrial	74.8	69	148	318
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.5	102	220	474
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	74.7	122	262	565
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	74.1	111	239	515
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	74.9	125	270	581
7	Hellman Av.	n/o 4th St.	Business Park	67.8	RW	51	110
8	Archibald Av.	s/o Arrow Rte.	General Commercial	74.2	95	205	442
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.8	104	224	482
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	75.0	107	231	497
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	75.3	134	289	622
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	76.3	154	333	717
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.7	319	686	1479
14	4th St.	w/o Baker Av.	High Density Residential	71.5	74	160	345
15	4th St.	e/o Baker Av.	High Density Residential	72.5	87	187	402
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	73.2	96	207	445
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.8	91	196	421
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.2	96	207	446
19	4th St.	w/o Haven Av.	Medium Density Res.	73.6	102	220	475
20	4th St.	e/o Haven Av.	Mixed Use	74.2	113	243	524
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	74.2	84	181	390
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.2	84	180	388
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.5	75	161	346

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-6: YEAR 2035 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	66.5	RW	55	119
2	Vineyard Av.	n/o 8th St.	General Industrial	74.8	69	149	321
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.5	102	220	475
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	74.1	111	239	514
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	73.8	107	229	494
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.7	104	224	482
7	Hellman Av.	n/o 4th St.	Business Park	67.1	RW	46	98
8	Archibald Av.	s/o Arrow Rte.	General Commercial	74.3	96	207	446
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.6	101	218	470
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.6	102	219	473
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.9	126	271	583
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.9	146	314	677
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.9	331	714	1538
14	4th St.	w/o Baker Av.	High Density Residential	70.4	63	135	291
15	4th St.	e/o Baker Av.	High Density Residential	71.1	70	151	326
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	73.5	100	216	466
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	73.3	98	211	454
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.5	101	218	470
19	4th St.	w/o Haven Av.	Medium Density Res.	73.7	104	224	483
20	4th St.	e/o Haven Av.	Mixed Use	74.4	116	249	536
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	74.6	89	191	411
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.6	90	193	417
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.8	78	167	360

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-7: YEAR 2035 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Baker Av.	n/o 6th St.	Low Density Residential	66.7	RW	58	124
2	Vineyard Av.	n/o 8th St.	General Industrial	75.2	73	158	340
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.9	108	233	502
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	74.9	125	270	581
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	74.7	122	262	565
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	75.2	131	283	609
7	Hellman Av.	n/o 4th St.	Business Park	68.2	RW	54	115
8	Archibald Av.	s/o Arrow Rte.	General Commercial	74.6	101	218	469
9	Archibald Av.	n/o 6th St.	Low Density Residential	75.2	110	238	513
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	75.3	113	243	524
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	75.7	141	305	657
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	76.7	164	354	763
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	79.0	334	719	1548
14	4th St.	w/o Baker Av.	High Density Residential	70.7	66	142	306
15	4th St.	e/o Baker Av.	High Density Residential	71.6	75	162	349
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	73.9	108	233	502
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	73.6	103	222	478
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.7	104	224	483
19	4th St.	w/o Haven Av.	Medium Density Res.	73.9	107	231	497
20	4th St.	e/o Haven Av.	Mixed Use	74.5	118	255	550
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	74.9	93	200	431
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.8	92	198	427
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	72.0	80	172	370

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.

TABLE 7-8: YEAR 2017 OFF-SITE PROJECT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact?[2]
				No Project	With Project	Project Addition	
1	Baker Av.	n/o 6th St.	Low Density Residential	65.5	65.6	0.1	No
2	Vineyard Av.	n/o 8th St.	General Industrial	74.1	74.3	0.2	No
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	74.9	75.1	0.2	No
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.7	74.0	0.3	No
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	72.9	73.3	0.4	No
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.0	74.8	1.8	Yes
7	Hellman Av.	n/o 4th St.	Business Park	66.4	66.7	0.3	No
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.6	73.8	0.2	No
9	Archibald Av.	n/o 6th St.	Low Density Residential	73.9	74.2	0.3	No
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.0	74.3	0.3	No
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.3	74.6	0.3	No
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.2	75.7	0.5	No
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.4	78.4	0.0	No
14	4th St.	w/o Baker Av.	High Density Residential	71.0	71.1	0.1	No
15	4th St.	e/o Baker Av.	High Density Residential	71.9	72.1	0.2	No
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	72.4	72.5	0.1	No
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.2	72.2	0.0	No
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.7	72.8	0.1	No
19	4th St.	w/o Haven Av.	Medium Density Res.	73.2	73.3	0.1	No
20	4th St.	e/o Haven Av.	Mixed Use	73.8	73.9	0.1	No
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	73.6	73.7	0.1	No
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.8	73.8	0.0	No
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.1	71.1	0.0	No

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Significance of Cumulative Impacts (Table 4-1).

TABLE 7-9: YEAR 2020 OFF-SITE PROJECT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact?[2]
				No Project	With Project	Project Addition	
1	Baker Av.	n/o 6th St.	Low Density Residential	65.8	66.1	0.3	No
2	Vineyard Av.	n/o 8th St.	General Industrial	74.4	74.8	0.4	No
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.1	75.5	0.4	No
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.9	74.7	0.8	No
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	73.1	74.1	1.0	No
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.2	74.9	1.7	Yes
7	Hellman Av.	n/o 4th St.	Business Park	66.7	67.8	1.2	No
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.8	74.2	0.4	No
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.1	74.8	0.6	No
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.2	75.0	0.7	No
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.5	75.3	0.8	No
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.4	76.3	0.9	No
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.6	78.7	0.0	No
14	4th St.	w/o Baker Av.	High Density Residential	71.2	71.5	0.3	No
15	4th St.	e/o Baker Av.	High Density Residential	72.1	72.5	0.4	No
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	72.6	73.2	0.6	No
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	72.4	72.8	0.4	No
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.0	73.2	0.2	No
19	4th St.	w/o Haven Av.	Medium Density Res.	73.4	73.6	0.2	No
20	4th St.	e/o Haven Av.	Mixed Use	74.1	74.2	0.2	No
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	73.8	74.2	0.4	No
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.0	74.2	0.2	No
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.3	71.5	0.2	No

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Significance of Cumulative Impacts (Table 4-1).

TABLE 7-10: YEAR 2035 OFF-SITE PROJECT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact?[2]
				No Project	With Project	Project Addition	
1	Baker Av.	n/o 6th St.	Low Density Residential	66.5	66.7	0.3	No
2	Vineyard Av.	n/o 8th St.	General Industrial	74.8	75.2	0.4	No
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	75.5	75.9	0.4	No
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	74.1	74.9	0.8	No
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	73.8	74.7	0.9	No
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	73.7	75.2	1.5	Yes
7	Hellman Av.	n/o 4th St.	Business Park	67.1	68.2	1.1	No
8	Archibald Av.	s/o Arrow Rte.	General Commercial	74.3	74.6	0.3	No
9	Archibald Av.	n/o 6th St.	Low Density Residential	74.6	75.2	0.6	No
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	74.6	75.3	0.7	No
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	74.9	75.7	0.8	No
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	75.9	76.7	0.8	No
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.9	79.0	0.0	No
14	4th St.	w/o Baker Av.	High Density Residential	70.4	70.7	0.3	No
15	4th St.	e/o Baker Av.	High Density Residential	71.1	71.6	0.4	No
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	73.5	73.9	0.5	No
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	73.3	73.6	0.3	No
18	4th St.	e/o Archibald Av.	Open Space - Parkland	73.5	73.7	0.2	No
19	4th St.	w/o Haven Av.	Medium Density Res.	73.7	73.9	0.2	No
20	4th St.	e/o Haven Av.	Mixed Use	74.4	74.5	0.2	No
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	74.6	74.9	0.3	No
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	74.6	74.8	0.2	No
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	71.8	72.0	0.2	No

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Significance of Cumulative Impacts (Table 4-1).

TABLE 7-11: YEAR 2035 OFF-SITE CUMULATIVE TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)			Potential Significant Cumulative Impact?[2]
				Existing	Year 2035	Increase	
1	Baker Av.	n/o 6th St.	Low Density Residential	65.3	66.7	1.4	No
2	Vineyard Av.	n/o 8th St.	General Industrial	73.8	75.2	1.4	No
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	74.1	75.9	1.8	Yes
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.0	74.9	1.9	Yes
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	72.3	74.7	2.4	Yes
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	72.5	75.2	2.7	Yes
7	Hellman Av.	n/o 4th St.	Business Park	66.2	68.2	2.0	Yes
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.1	74.6	1.5	No
9	Archibald Av.	n/o 6th St.	Low Density Residential	73.2	75.2	2.0	Yes
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	73.3	75.3	2.0	Yes
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	73.5	75.7	2.2	Yes
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	74.4	76.7	2.3	Yes
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.0	79.0	1.0	No
14	4th St.	w/o Baker Av.	High Density Residential	70.4	70.7	0.3	No
15	4th St.	e/o Baker Av.	High Density Residential	71.2	71.6	0.4	No
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	71.7	73.9	2.2	Yes
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	71.5	73.6	2.1	Yes
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.1	73.7	1.6	Yes
19	4th St.	w/o Haven Av.	Medium Density Res.	72.2	73.9	1.7	Yes
20	4th St.	e/o Haven Av.	Mixed Use	73.3	74.5	1.2	No
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	72.8	74.9	2.1	Yes
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.5	74.8	1.3	No
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	70.9	72.0	1.1	No

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Significance of Cumulative Impacts (Table 4-1).

7.3 EXISTING PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the existing without Project conditions CNEL noise levels. From this we can see that the unmitigated exterior noise levels are expected to range from 65.3 to 78.0 dBA CNEL. This shows that the existing without Project noise levels on off-site study area roadway segments already exceed the *normally acceptible* 65 dBA CNEL City of Ontario noise compatibility criteria for noise-sensitive residential land use.

7.4 YEAR 2017 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-8 presents a comparison of the Year 2017 without and with Project conditions CNEL noise levels. Table 7-2 shows that the unmitigated exterior noise levels are expected to range from 65.5 to 78.4 dBA CNEL. Table 7-3 presents the Year 2017 with Project conditions noise level contours that are expected to range from 65.6 to 78.4 dBA CNEL at the adjacent land uses. As shown on Table 7-8 the Project is expected to generate an unmitigated exterior noise level increase of up to 1.8 dBA CNEL. Based on the significance criteria discussed in Section 4.2, when the without Project noise levels already exceed the acceptable ambient noise level of 65 dBA CNEL, a Project noise level increase of 1.5 dBA CNEL or greater is considered a significant impact if nearby noise-sensitive receivers are affected. Since the land use adjacent to the affected roadway, Vineyard Avenue south of Inland Empire Boulevard, is noise sensitive Medium Density Residential, the Project impact of 1.8 dBA CNEL is considered significant for one out of the 23 study area roadway segments for Year 2017 conditions.

7.5 YEAR 2020 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-9 presents a comparison of the Year 2020 without and with Project conditions CNEL noise levels. Table 7-4 shows that the unmitigated exterior noise levels are expected to range from 65.8 to 78.6 dBA CNEL. Table 7-5 presents the Year 2020 with Project conditions noise level contours that are expected to range from 66.1 to 78.7 dBA CNEL at the adjacent land uses. As shown on Table 7-9 the Project is expected to generate an unmitigated exterior noise level increase of up to 1.7 dBA CNEL. Based on the significance criteria discussed in Section 4.2, when the without Project noise levels already exceed the acceptable ambient noise level of 65 dBA CNEL, a Project noise level increase of 1.5 dBA CNEL or greater is considered a significant impact if nearby noise-sensitive receivers are affected. Since the land use adjacent to the affected roadway, Vineyard Avenue south of Inland Empire Boulevard, is noise sensitive Medium Density Residential, the Project impact of 1.7 dBA CNEL is considered significant, for one out of the 23 study area roadway segments for Year 2020 conditions.

7.6 YEAR 2035 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-10 presents a comparison of the Year 2035 without and with Project conditions CNEL noise levels. Table 7-6 shows that the unmitigated exterior noise levels are expected to range from 66.5 to 78.9 dBA CNEL. Table 7-7 presents the Year 2035 with Project conditions noise level contours that are expected to range from 66.7 to 79.0 dBA CNEL at the adjacent land uses. As shown on Table 7-10 the Project is expected to generate an unmitigated exterior noise level increase of up to 1.5 dBA CNEL. Based on the significance criteria discussed in Section 4.2, when the without Project noise levels already exceed the acceptable ambient noise level of 65 dBA CNEL, a Project noise level increase of 1.5 dBA CNEL or greater is considered a significant impact if nearby noise-sensitive receivers are affected. Since the land use adjacent to the affected roadway, Vineyard Avenue south of Inland Empire Boulevard, is noise sensitive Medium Density Residential, the Project impact of 1.5 dBA CNEL is considered significant, for one out of the 23 study area roadway segments for Year 2035 conditions.

7.7 CUMULATIVE TRAFFIC NOISE IMPACTS

According to the U.S. Environmental Protection Agency (EPA), cumulative impacts represent the combined incremental effects of human activities that accumulate over time. (24) While the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. The level of significance attributed to a cumulative Project noise impact is based on a comparison of the existing without Project noise levels with the future Year 2035 with Project noise levels. A significant impact occurs when the existing noise levels at nearby noise-sensitive receivers are: below 65 dBA CNEL and the Project contribution is 3 dBA or more; or above 65 dBA CNEL and the Project contribution is 1.5 dBA or more, as discussed in Section 4.2.

Table 7-11 describes the Meredith International Centre future Year 2035 off-site cumulative traffic noise increase. For Year 2035 cumulative conditions, 14 of the 23 roadway segments are expected to experience significant impacts approaching 2.7 dBA CNEL at the adjacent noise-sensitive land uses.

TABLE 7-11: OFF-SITE CUMULATIVE TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)			Potential Significant Cumulative Impact?[2]
				Existing	Year 2035	Increase	
1	Baker Av.	n/o 6th St.	Low Density Residential	65.3	70.9	5.6	Yes
2	Vineyard Av.	n/o 8th St.	General Industrial	73.8	79.3	5.5	Yes
3	Vineyard Av.	s/o 8th St.	Medium Density Res.	74.1	80.0	5.9	Yes
4	Vineyard Av.	n/o 4th St.	Neighborhood Comm.	73.0	79.0	6.0	Yes
5	Vineyard Av.	s/o 4th St.	Medium Density Res.	72.3	78.8	6.5	Yes
6	Vineyard Av.	s/o Inland Empire Bl.	Medium Density Res.	72.5	79.2	6.7	Yes
7	Hellman Av.	n/o 4th St.	Business Park	66.2	72.3	6.1	Yes
8	Archibald Av.	s/o Arrow Rte.	General Commercial	73.1	78.7	5.6	Yes
9	Archibald Av.	n/o 6th St.	Low Density Residential	73.2	79.3	6.1	Yes
10	Archibald Av.	s/o 6th St.	Low Medium Density Res.	73.3	79.4	6.1	Yes
11	Archibald Av.	n/o Inland Empire Bl.	Medium Density Res.	73.5	79.8	6.3	Yes
12	Archibald Av.	s/o Inland Empire Bl.	Mixed Use	74.4	80.7	6.3	Yes
13	Haven Av.	n/o Inland Empire Bl.	Mixed Use	78.0	83.1	5.1	Yes
14	4th St.	w/o Baker Av.	High Density Residential	70.4	74.8	4.4	Yes
15	4th St.	e/o Baker Av.	High Density Residential	71.2	75.6	4.4	Yes
16	4th St.	w/o Hellman Av.	Low-Medium Density Res.	71.7	78.0	6.3	Yes
17	4th St.	e/o Hellman Av.	Low-Medium Density Res.	71.5	77.7	6.2	Yes
18	4th St.	e/o Archibald Av.	Open Space - Parkland	72.1	77.8	5.7	Yes
19	4th St.	w/o Haven Av.	Medium Density Res.	72.2	77.9	5.7	Yes
20	4th St.	e/o Haven Av.	Mixed Use	73.3	78.6	5.3	Yes
21	Inland Empire Bl.	e/o Archibald Av.	Mixed Use	72.8	78.9	6.1	Yes
22	Inland Empire Bl.	w/o Haven Av.	Medium Density Res.	73.5	78.9	5.4	Yes
23	Inland Empire Bl.	e/o Haven Av.	Mixed Use	70.9	76.0	5.1	Yes

[1] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[2] Significance of Cumulative Impacts (Section 4.2).

8 ON-SITE TRANSPORTATION NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the transportation noise exposure and to identify potential noise abatement measures for the proposed Meredith International Centre. It is expected that the primary source of noise impacts to the Project site will be traffic noise from Archibald Avenue, Inland Empire Boulevard, and the I-10 Freeway. The Project will also experience some background traffic noise impacts from the Project's internal streets, however, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a significant contribution to the noise environment. Further potential impacts to the Project site include aircraft noise from the ONT Airport on the office and interior areas of future buildings within Planning Areas 1, 2, and 3.

An extension of a light rail transit (LRT) line to the ONT Airport is tentatively envisioned to traverse along the east side of the Cucamonga Creek Channel immediately west of Planning Areas 3 and 4. The potential noise impacts associated with LRT were not considered as part of this on-site transportation noise impact analysis. The noise impacts associated with any proposed alignment of the LRT will be assessed as part of the environmental document prepared by the Gold Line Foothill Construction Authority.

8.1 ON-SITE TRAFFIC SIGNIFICANCE CRITERIA

The following thresholds and significance criteria, discussed in Section 4.2, shall apply to the on-site traffic noise impacts to the Project site:

Threshold Consideration: *Potential to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.* The potential for the Project to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would occur if:

- Project Multi-Family Residential land uses would experience noise levels which would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways.

Threshold Consideration: *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels*.

Threshold Consideration: *For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.* The potential for the people residing or working in the Project area to be exposed to excessive aircraft-source noise levels in excess of the standards established in the ONT ALUCP would occur if:

- Aircraft-source noise would exceed the City of Ontario ALUCP standards of 50 dBA CNEL for interior noise levels at the indoor areas within Project land uses.

8.2 ON-SITE EXTERIOR TRANSPORTATION NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-3, 6-8, and 6-9, the expected future exterior noise levels for Planning Area 4 were calculated. Table 8-1 presents a summary of future exterior noise level impacts at the first floor patio areas. The on-site traffic noise level impacts indicate that patios facing Archibald Avenue, Inland Empire Boulevard and the I-10 Freeway will experience unmitigated exterior noise levels ranging from 51.7 to 71.7 dBA CNEL. The on-site traffic noise analysis calculations are provided in Appendix 8.1.

To satisfy the City of Ontario *normally acceptable* 65 dBA CNEL exterior noise level criteria for multi-family residential development, the construction of 6-foot high noise barriers for the first floor patio areas adjacent to Inland Empire Boulevard in Planning Area 4 is required. With the recommended noise barriers, the mitigated future exterior noise levels will range from 51.7 to 65.0 dBA CNEL. This noise analysis shows that the recommended noise barriers will satisfy the City of Ontario 65 dBA CNEL exterior noise level standards. Therefore, the Project Multi-Family Residential land uses would not experience noise levels which would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways, and will be less than significant.

TABLE 8-1: EXTERIOR NOISE LEVELS (CNEL)

Location[1]	Roadway	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Barrier Height (Feet)	Top Of Barrier Elevation (Feet)
Northeast Residential	Archibald Av.	56.6	–[2]	–[2]	–[2]
Southeast Residential	Archibald Av.	51.7	–[2]	–[2]	–[2]
South Residential	Inland Empire Blvd.	71.7	65.0	6.0	991.0
	I-10 Freeway				

[1] The precise location of the multi-family residential buildings was not available at the time of this analysis. The locations represent the future outdoor patio areas on the first floor, at an assumed minimum setback distance of 5 feet from the property line based on the City of Ontario Development Code, Article 14, Section 9-1410 Development Standards for multi-family residential development.
[2] Exterior noise levels at the first floor patio meet the City of Ontario 65 dBA CNEL criteria.

8.3 ON-SITE INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of Ontario 45 dBA CNEL interior noise standards, future noise levels were calculated at the first and second floor building facades of the multi-family residential land use planned in Planning Area 4. Interior noise levels in the office and indoor areas of Planning Areas 1, 2, and 3 are discussed in relation to the ONT Airport 50 dBA CNEL interior noise level standard.

8.3.1 NOISE LEVEL REDUCTION METHODOLOGY

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

8.3.2 INTERIOR NOISE LEVEL ASSESSMENT

To provide the necessary interior noise level reduction, Tables 8-2 and 8-3 indicate that buildings facing Archibald Avenue, Inland Empire Boulevard, and the I-10 Freeway will require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning). Table 8-2 shows that the future noise levels at the first floor building façade are expected to range from 51.7 to 65.0 dBA CNEL. The first floor interior noise level analysis shows that the City of Ontario 45 dBA CNEL interior noise level standards can be satisfied using standard windows with a minimum STC rating of 27. Table 8-3 shows that the future noise levels at the second floor building façade are expected to range from 60.9 to 71.0 dBA CNEL, and windows with a minimum STC rating of 27 are expected to satisfy the City of Ontario’s 45 dBA CNEL interior noise level standards for all windows except those facing Inland Empire Boulevard. All windows facing Inland Empire Boulevard will require upgraded windows with a minimum STC rating of 29.

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

Location	Noise Level at Façade[1]	Required Interior Noise Reduction[2]	Estimated Interior Noise Reduction[3]	Upgraded Windows[4]	Interior Noise Level[5]
Northeast Residential	56.6	11.6	25	No	31.6
Southeast Residential	51.7	6.7	25	No	26.7
South Residential	65.0	20.0	25	No	40.0

[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] A minimum of 25 dBA noise reduction is assumed with standard building construction. An estimated interior noise reduction of 27 dBA is assumed with upgraded windows (STC 29).
[4] Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.

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

Location	Noise Level at Façade[1]	Required Interior Noise Reduction[2]	Estimated Interior Noise Reduction[3]	Upgraded Windows[4]	Interior Noise Level[5]
Northeast Residential	66.5	21.5	25	No	41.5
Southeast Residential	60.9	15.9	25	No	35.9
South Residential	71.0	26.0	27	Yes	44.0

[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] A minimum of 25 dBA noise reduction is assumed with standard building construction. An estimated interior noise reduction of 27 dBA is assumed with upgraded windows (STC 29).
[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 and upgraded windows for those buildings facing Inland Empire Boulevard.

8.4 ON-SITE AIRCRAFT NOISE ANALYSIS

The ONT Airport Land Use Compatibility Plan (ONT ALUCP), Table 2-3, *Noise Criteria* establishes parameters for aircraft-source noise within the airport influence area and noise contour boundaries. For the purposes of this analysis, the affected Project Planning Areas (PA) located within the ONT ALUCP noise contours include the Industrial (PA 1) and Commercial (PA 2 and 3) land uses within the 60 to 65 dBA CNEL noise contour boundaries.

As discussed in Section 3.3.2, the commercial land uses in PA 2 and 3 will be located within the 60 to 65 dBA CNEL noise contours, and are considered *normally compatible land use* when interior noise levels in office, retail, and other noise-sensitive indoor spaces are below 50 dBA CNEL. Outdoor dining or gathering places are considered *incompatible* with noise levels above 70 dBA CNEL. The majority of the proposed Industrial land use at the Project site (PA 1) is located north of the airport noise contours, as shown on Exhibit 3-C, however, its southern boundary is overlapped by the 60 dBA CNEL noise contour. Based on a review of the site plans for PA 1, previously shown on Exhibits 1-D and 1-E, the portion of PA 1 potentially within the 60 dBA CNEL noise contour contains water quality basins and the southern part of Building 6.

Since areas within the Project site fall between the 60 and 65 dBA CNEL noise contours of the ONT airport, the ALUCP requires the interior areas of Industrial and Commercial land uses within the 60 to 65 dBA CNEL contour to meet an interior noise level standard of 50 dBA CNEL. At the time of this analysis, the future locations of buildings within PA 2 and 3 were unknown, however, future interior areas would include offices and office areas, eating and drinking establishments, and retail centers and stores.

To satisfy the ONT ALUCP interior noise level standard of 50 dBA CNEL, future office and commercial buildings with interior areas are recommended to incorporate the State of California Green Building Standards Code, previously described in Section 3.2, which requires new developments which fall within an airport or freeway 65 dBA CNEL noise contour have a combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies of at least 50. With aircraft noise levels ranging from 60 to 65 dBA CNEL, the STC rating of 50 would satisfy the ONT ALUCP *normally compatible* standard of 50 dBA CNEL for interior noise levels, and therefore, the on-site aircraft noise impacts would be less than significant.

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9 NOISE-SENSITIVE RECEIVERS

To assess the long-term operational and short-term construction noise impacts, the following thirteen sensitive receiver locations as shown on Exhibit 9-A were identified. 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 which are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers in the vicinity of the Project site include the existing residential dwellings located at receiver locations R1 to R8, and R11 to R12; the existing hotel use at receiver location R10; and the existing Bernt Elementary School at receiver location R13. Receiver location R13 represents the Project conditions under Option B which would include the existing school in the Project site. Receiver location R9 represents the future location of Urban Residential land use in Planning Area 4 of the Project site.

R1: Located approximately 102 feet west of the Project site, R1 represents the existing single-family residential dwellings along Vineyard Avenue. Long-term noise measurement location L1 is used to describe the existing ambient noise environment at this location.

R2: Location R2 represents the existing multi-family residential dwellings along 4th Street located roughly 83 feet north of the Project Site. A long-term noise level measurement was taken at this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing mobile home park situated approximately 78 feet north of the Project site. A long-term noise level measurement was taken at this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing single-family residential dwellings located approximately 180 feet northeast of the Project site. Long-term noise level measurement L12 is used to describe the existing ambient noise conditions at this location.

R5: At a distance of approximately 895 feet east of the Project site, location R5 represents existing single-family residential dwellings south of 4th Street. Long-term noise level measurement L4 is used to describe the existing ambient noise conditions at this location.

R6: At a distance of 959 feet east of the Project site, R6 describes the existing single-family residential dwellings across the San Bernardino flood control facilities.

R7: Location R7 represents the single-family residential dwellings located approximately 1353 feet north of the Project site along Archibald Avenue. Long-term measurement location L5 is used to describe the existing ambient noise conditions at this location.

R8: Located approximately 335 feet east of the Project site, R8 represents the commercial plaza adjacent to existing single family residential homes north of Inland Empire Boulevard. A long-term noise level measurement, L13, is used to represent the existing ambient noise levels at this location.

R9: Location R9 represents the future location of multi-family residential dwellings within the Urban Residential land use in Planning Area 4 of the Project site. Long-term measurement location L8 is used to describe the existing ambient noise conditions at this location.

R10: Located approximately 235 feet south of the Project site across the I-10 Freeway, R10 represents the existing Residence Inn hotel. A long-term noise level measurement, L14, is used to represent the existing ambient noise levels at this location.

R11: Location R11 represents the existing single family residential homes west of Vineyard Avenue and north of the I-10 Freeway westbound on-ramp, located approximately 141 feet west of the Project site. Long-term measurement location L9 is used to describe the existing ambient noise conditions at this location.

R12 Located approximately 51 feet west of the Project site, R12 represents the existing single family residential homes west of Vineyard Avenue. A long-term noise level measurement, L10, is used to represent the existing ambient noise levels at this location.

R13 Located within the Project site, R13 represents the existing Bernt Elementary School on 4th Street. A long-term noise level measurement, L11, is used to represent the existing ambient noise levels at this location.

EXHIBIT 9-A: NOISE RECEIVER LOCATIONS

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10 OPERATIONAL NOISE IMPACTS

This section analyzes the potential operational noise impacts resulting from the development of the proposed Meredith International Centre the Option A (without school) and Option B (with school) scenarios. Using a stationary-source noise prediction model, calculations of the Project operational noise level impacts were completed.

10.1 OPERATIONAL NOISE STANDARDS

The Project operational (stationary/area source) noise impacts are governed by the City of Ontario Municipal Code, Title 5, Chapter 29. Section 5-29.04(a) identifies acceptable daytime and nighttime ambient exterior noise standards based on land use type. For the Manufacturing and Industrial land uses (Noise Zone V) within the Project site, ambient exterior noise levels may not exceed 70 dBA Leq. For the Project Commercial land uses (Noise Zone III), ambient exterior noise levels may not exceed 65 dBA Leq during the daytime hours (7:00 a.m. to 10:00 p.m.), and may not exceed 60 dBA Leq during nighttime hours (10:00 p.m. to 7:00 a.m.). For the Project Multi-Family residential uses (Noise Zone II), ambient exterior noise levels may not exceed 65 dBA Leq during the daytime hours (7:00 a.m. to 10:00 p.m.), and may not exceed 50 dBA Leq during the nighttime hours (10:00 p.m. to 7:00 a.m.).(11)

Operation of the Project has the potential to impact vicinity off-site land uses. Project-source stationary/area-source noise levels received at off-site City of Ontario residential land uses are conservatively evaluated based on the 65 dBA Leq daytime and 45 dBA Leq nighttime noise level standards for Single-Family Residential (Noise Zone I) land uses. Since nearby noise-sensitive receivers are also located in the City of Rancho Cucamonga, this report includes the relevant noise regulations of the City of Rancho Cucamonga.

10.2 OPERATIONAL NOISE SIGNIFICANCE CRITERIA

The following thresholds and significance criteria, discussed in Section 4.2, shall apply to the operational (stationary-source) noise impacts from the Project:

Threshold Consideration: *Potential to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.* The potential for the Project to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would occur if:

- Project stationary/area-source noise would exceed City of Ontario Noise Ordinance Standards or City of Rancho Cucamonga Development Code Noise Standards.

Threshold Consideration: *Potential to result in or cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project; or*

Threshold Consideration: *Potential to result in or cause a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.* A substantial temporary or permanent increase in ambient noise conditions would occur if Project-source noise would:

- Result in a perceptible increase in noise levels (3.0 dBA or greater) that would cause the maximum acceptable ambient condition (shown on Table 4-1 for stationary/area-sources) to be exceeded; or
- Result in an increase of 1.5 dBA in ambient conditions when the noise environment at receiver land uses already exceeds the maximum acceptable ambient noise condition (shown on Table 4-1 for stationary/area-sources).

10.3 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the drive-through speakerphones, parking lot activities, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods all operating simultaneously. In reality, these noise level impacts will vary throughout the day.

TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Distance From Source (Feet)	Noise Source Height (Feet)	Hourly Activity (Minutes)[3]	Hourly (Leq dBA)
Drive-Thru Speakerphones[1]	0:16:56	6'	4'	60	62.1
Parking Lot Activities[1]	0:29:00	10'	5'	60	61.8
Distribution/Warehouse Noise[2]	24:00:00	25'	8'	60	69.1

[1] As measured by Urban Crossroads, Inc. on 11/19/2013 at the Redlands McDonald's fast food restaurant.
[2] The reference hourly noise level measurements represent the noise levels associated with idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods. Reference noise level measurements were collected from the existing 24-hour operations of Veg Fresh Farms and FedEx distribution facility located at 500 East Orangethorpe Avenue in the City of Anaheim. The reference noise level measurements were collected on Tuesday, January 22, 2013.
[3] Duration (minutes within the hour) of noise activity during peak hourly conditions.

10.3.1 Drive-Through Speakerphones

To describe the potential noise level impacts associated with the Project's existing and potential drive-through speakerphones, a reference noise level measurement was collected on Tuesday, November 19th, 2013 at a McDonald's fast food restaurant located at 612 East Redlands Boulevard in the City of Redlands. The reference noise levels collected at the McDonald's restaurant are expected to reflect the drive-through speakerphone noise level activities at the Project site, since the reference noise level measurement includes double drive-through speakerphone activity noise. The noise sources included in the reference noise level measurement consist of voices of the McDonald's employees over the speakerphones and the customers ordering food, as well as vehicle noise from customer cars idling and driving in the drive-through lane. As shown on Table 9-1, at a distance of six feet from the speakerphone, a reference noise level of 62.1 dBA Leq was measured. The drive-through speakerphone activities are estimated to operate for 60 minutes during the peak hour conditions.

10.3.2 Parking Lot Activities

To determine the noise level impacts associated with parking lot activity noise, Urban Crossroads also collected reference noise level measurements on Tuesday, November 19th, 2013 at the same McDonald's fast food restaurant located at 612 East Redlands Boulevard in the City of Redlands. The twenty-nine minute noise level measurement indicates that the parking lot activity generates a noise level of 61.8 dBA Leq at a distance of ten feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces and the opening and closing of car doors. Noise associated with parking lot activity is expected during the typical daytime, evening, and nighttime conditions for the entire hour (60 minutes).

10.3.3 Distribution Warehouse Facilities

Since the future tenants of the proposed Project are unknown, the Project noise levels were estimated based on reference noise level measurements of a similar logistics warehouse building. The reference noise levels are intended to describe the expected operational noise sources that may include idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods.

To estimate the Project off-site operational noise impacts associated with the Meredith International Centre, reference noise level measurements were collected from an existing logistics warehouse operation containing similar operational noise sources. On Tuesday, January 22, 2013, Urban Crossroads, Inc. collected long-term 24-hour operational noise level measurements at the at Veg Fresh Farms and FedEx distribution facility located at 500 East Orangethorpe Avenue in the City of Anaheim. Reference noise source photos are included in Appendix 9.1. The Veg Fresh Farms and FedEx distribution center noise level measurements represent the typical weekday logistics warehouse operation consisting of over 150 loading bays (docks). Since the reference noise level measurements include the use of refrigerated containers or reefers that may not reflect the actual tenant operations at the Meredith International Centre, the analysis may conservatively overstate the Project operational noise levels.

At a distance of 25 feet from the reference loading bay (docks) noise source and with an estimated noise source height of 8 feet, the 24-hour measurements produced an exterior reference noise level of 69.1 dBA Leq. While the specific noise levels at the Project site will depend on the actual tenant, the intensity and the daytime / nighttime hours of operation, a reference noise level of 69.1 dBA Leq is used in this analysis to describe the Meredith International Centre operational noise level impacts. The reference noise levels are intended to describe noise level impacts associated with the expected typical warehouse and distribution storage operations at the Project site and do not account for any special noise generators.

10.4 PROJECT OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary/area source noise levels at each of the thirteen noise receiver locations for Option A and B conditions. The noise sources and receiver locations for Option A and Option B are shown on Exhibits 10-A and 10-B, respectively. Using the reference noise levels to represent the proposed logistics warehouse operations and commercial uses that include drive-thru speakerphones, parking lot activities, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods, it is possible to estimate the Project operational source noise levels at the Project site (direct project impacts) at each of the thirteen noise receiver locations and estimate the Project contribution (cumulative project impacts).

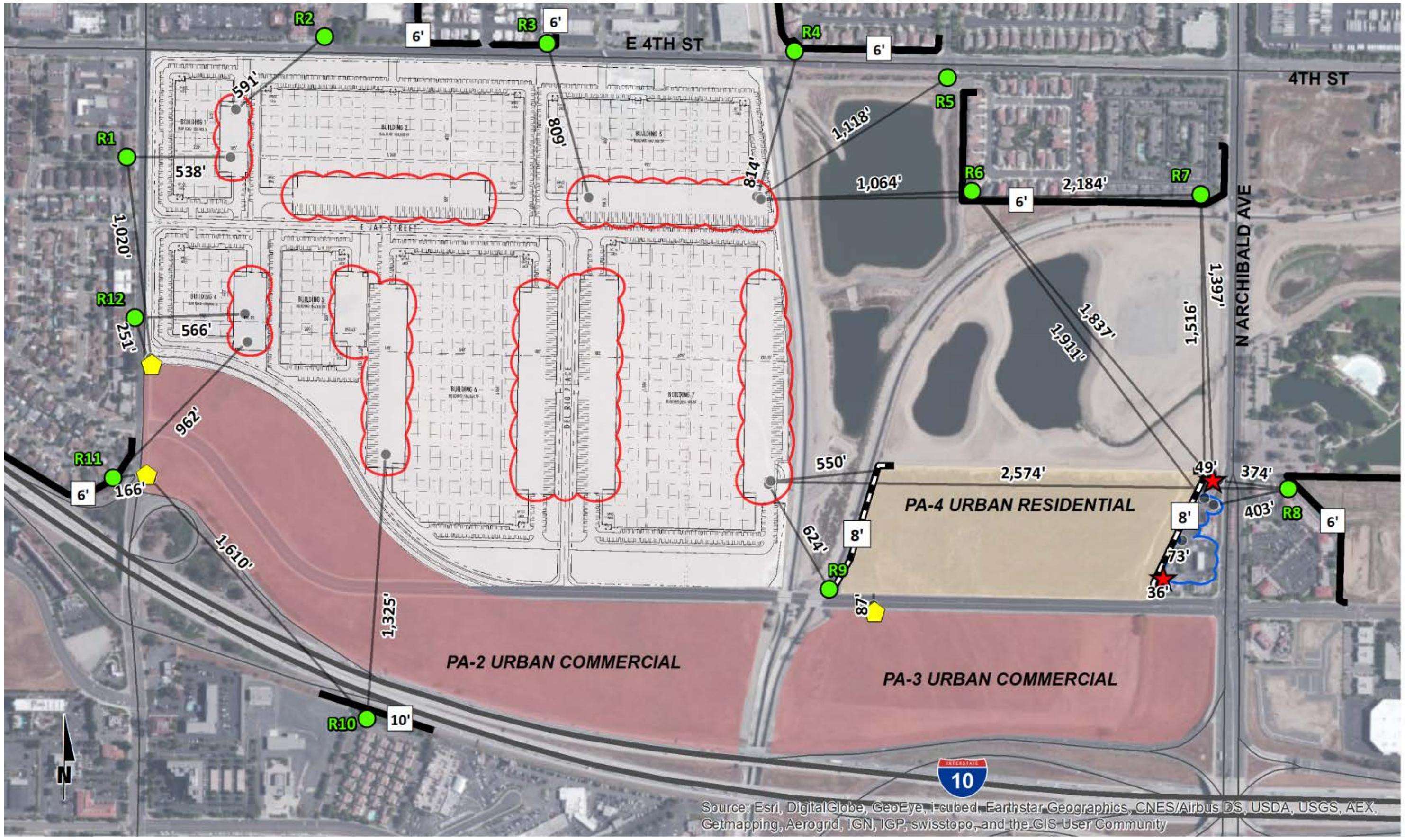
The operational noise level calculations shown on Tables 10-2 and 10-6, and provided in Appendix 9.2, include the distance from the reference noise source to the noise receivers, the distance attenuation, the noise barrier attenuation, and the estimated Project related hourly noise levels. The Project only operational noise level projections for Options A and B, 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. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source (drive-through and distribution/warehouse noise) and 4.5 dB for each doubling of distance from a line source (parking lot). The stationary source operational noise calculations for Options A and B are included in Appendix 10.1.

10.4.1 OPTION A PROJECT OPERATIONAL NOISE ANALYSIS

The Option A operational noise level projections for each receiver near the Project site are identified in Table 10-2. Table 10-3 shows a comparison of the Project operational noise level projections with the City of Ontario and City of Rancho Cucamonga noise standards for residential land uses. The off-site operational noise level calculations, shown on Tables 10-4 and 10-5, identify the cumulative Project impacts to daytime and nighttime noise levels.

The Option A direct Project operational noise levels, shown on Tables 10-2 and 10-3, will range from 25.0 to 44.6 dBA Leq and will not exceed the City of Ontario or the City of Rancho Cucamonga noise level standards at the residential land uses adjacent to the Project site, and therefore, the Project will create a less than significant direct Project noise level impact on the adjacent land uses.

EXHIBIT 10-A: OPTION A OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

- 10' Noise Barrier Height (in feet)
- Existing Noise Barrier Location
- Recommended Noise Barrier Location
- Noise Receiver Locations (Option A)
- Distance from noise receiver to center of noise source (in feet)
- Distribution/Warehouse Noise Source Locations (Option A)
- Existing Parking Lot Activity Noise Location
- Estimated Drive-Thru Speakerphone and Parking Lot Activity Locations
- Existing Drive-Thru Speakerphone Locations
- PA-2 Urban Commercial
- PA-3 Urban Commercial
- PA-4 Urban Residential

TABLE 10-2: OPTION A OPERATIONAL NOISE LEVEL PROJECTIONS (LEQ DBA)

Noise Source	Noise Levels at Receiver Locations (dBA Leq)[1]														
	R1	R2	R3	R4	R5	R6	R7	R8	R9 (Planning Area 4)[2]				R10	R11	R12
									West		East				
Drive-Thru Speakerphone	17.5	N/A	N/A	N/A	N/A	6.8	9.2	26.2	0.0	38.9	38.1	39.0	2.9	27.6	29.7
Parking Lot Activities	31.7	N/A	N/A	N/A	N/A	22.0	23.5	37.7	0.0	0.0	0.0	41.3	18.2	37.9	40.8
Distribution/ Warehouse Noise	42.4	41.6	33.4	33.1	36.1	30.9	24.8	28.8	33.4	34.3	0.0	0.0	24.0	31.9	42.0
Combined Noise Levels	**42.8**	**41.6**	**33.4**	**33.1**	**36.1**	**31.4**	**27.3**	**38.5**	**41.0**		**44.5**		**25.0**	**39.2**	**44.6**

[1] See Exhibits 10-A and 10-B for the sensitive receiver locations and Appendix 10.1 for the stationary source noise analysis worksheets.
[2] Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4. At the time of this analysis, the locations of potential noise sources, such as drive-thru speakerphones at potential fast food restaurants, within Planning Area 3 were unknown. The noise level projections represent the worst case operational noise levels assuming a drive-thru speakerphone is located at the northern boundary of Planning Area 3, in addition to the existing drive-thru speakerphone to the east of Planning Area 4.
"N/A" = Noise source will not impact the receiver location.

TABLE 10-3: OPTION A OPERATIONAL NOISE LEVEL COMPLIANCE (LEQ DBA)

Receiver Location[1]	Adjacent Land Use[2]	Noise Standards (dBA Leq)[3]				Project Operational Noise Levels[4]	Compliance[5]			
		Ontario		Rancho Cucamonga			Ontario		Rancho Cucamonga	
		Daytime	Nighttime	Daytime	Nighttime		Daytime	Nighttime	Daytime	Nighttime
R1	Medium Density Res.	65.0	45.0	N/A	N/A	42.8	Yes	Yes	N/A	N/A
R2	Medium Density Res.	65.0	45.0	N/A	N/A	41.6	Yes	Yes	N/A	N/A
R3	Low-Medium Density Res.	65.0	45.0	N/A	N/A	33.4	Yes	Yes	N/A	N/A
R4	Low-Medium Density Res.	N/A	N/A	65.0	60.0	33.1	N/A	N/A	Yes	Yes
R5	Low-Medium Density Res.	65.0	45.0	N/A	N/A	36.1	Yes	Yes	N/A	N/A
R6	Low-Medium Density Res.	65.0	45.0	N/A	N/A	31.4	Yes	Yes	N/A	N/A
R7	Medium Density Res.	65.0	45.0	N/A	N/A	27.3	Yes	Yes	N/A	N/A
R8	Mixed Use	65.0	45.0	N/A	N/A	38.5	Yes	Yes	N/A	N/A
R9 West	Urban Residential	65.0	45.0	N/A	N/A	41.0	Yes	Yes	N/A	N/A
R9 East	Urban Residential	65.0	45.0	N/A	N/A	44.5	Yes	Yes	N/A	N/A
R10	Hospitality	65.0	45.0	N/A	N/A	25.0	Yes	Yes	N/A	N/A
R11	Low Density Res.	65.0	45.0	N/A	N/A	39.2	Yes	Yes	N/A	N/A
R12	Medium Density Res.	65.0	45.0	N/A	N/A	44.6	Yes	Yes	N/A	N/A

[1] See Exhibit 10-A for the noise receiver and noise source locations.
[2] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[3] Sources: Section5-29.04 of the City of Ontario Municipal Code, and Section17.66.050 of the City of Rancho Cucamonga Development Code.
[4] Estimated Project stationary source noise levels as shown on Table 10-2.
[5] Do the estimated Project stationary source noise levels meet the City of Ontario and City of Rancho Cucamonga noise standards on the affected land uses?
"Daytime" = Between the hours of 7:00 a.m. to 10:00 p.m.; "Nighttime" = Between the hours of 10:00 p.m. to 7:00 a.m.

To describe the Option A Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at area receivers when Project-source noise is added to ambient daytime and nighttime conditions are presented on Tables 10-4 and 10-5, respectively.

TABLE 10-4: DAYTIME (8:00 A.M. TO 10:00 P.M.) OPERATIONAL NOISE LEVELS

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Cumulative Significant Impact[7]
R1	42.8	L1	65.4	65.4	0.0	No
R2	41.6	L2	70.3	70.3	0.0	No
R3	33.4	L3	68.3	68.3	0.0	No
R4	33.1	L12	63.8	63.8	0.0	No
R5	36.1	L4	56.8	56.8	0.0	No
R6	31.4	L4	56.8	56.8	0.0	No
R7	27.3	L5	58.7	58.7	0.0	No
R8	38.5	L13	58.7	58.7	0.0	No
R9 West	41.0	L8	63.5	63.5	0.0	No
R9 East	44.5	L8	63.5	63.6	0.1	No
R10	25.0	L14	63.9	63.9	0.0	No
R11	39.2	L9	64.8	64.8	0.0	No
R12	44.6	L10	69.4	69.4	0.0	No

[1] See Exhibit 10-A for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 10-2 including the noise attenuation provided by the recommended noise barriers.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Cumulative Significant Impacts as defined in Section 4.2.

TABLE 10-5: NIGHTTIME (10:01 P.M. TO 7:59 A.M.) OPERATION NOISE LEVELS

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Cumulative Significant Impact[7]
R1	42.8	L1	61.6	61.7	0.1	No
R2	41.6	L2	66.7	66.7	0.0	No
R3	33.4	L3	64.6	64.6	0.0	No
R4	33.1	L12	61.2	61.2	0.0	No
R5	36.1	L4	57.7	57.7	0.0	No
R6	31.4	L4	57.7	57.7	0.0	No
R7	27.3	L5	58.8	58.8	0.0	No
R8	38.5	L13	56.9	57.0	0.1	No
R9 West	41.0	L8	60.8	60.8	0.0	No
R9 East	44.5	L8	60.8	60.9	0.1	No
R10	25.0	L14	61.0	61.0	0.0	No
R11	39.2	L9	62.2	62.2	0.0	No
R12	44.6	L10	65.7	65.7	0.0	No

[1] See Exhibit 10-A for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 10-2 including the noise attenuation provided by the recommended noise barriers.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Cumulative Significant Impacts as defined in Section 4.2.

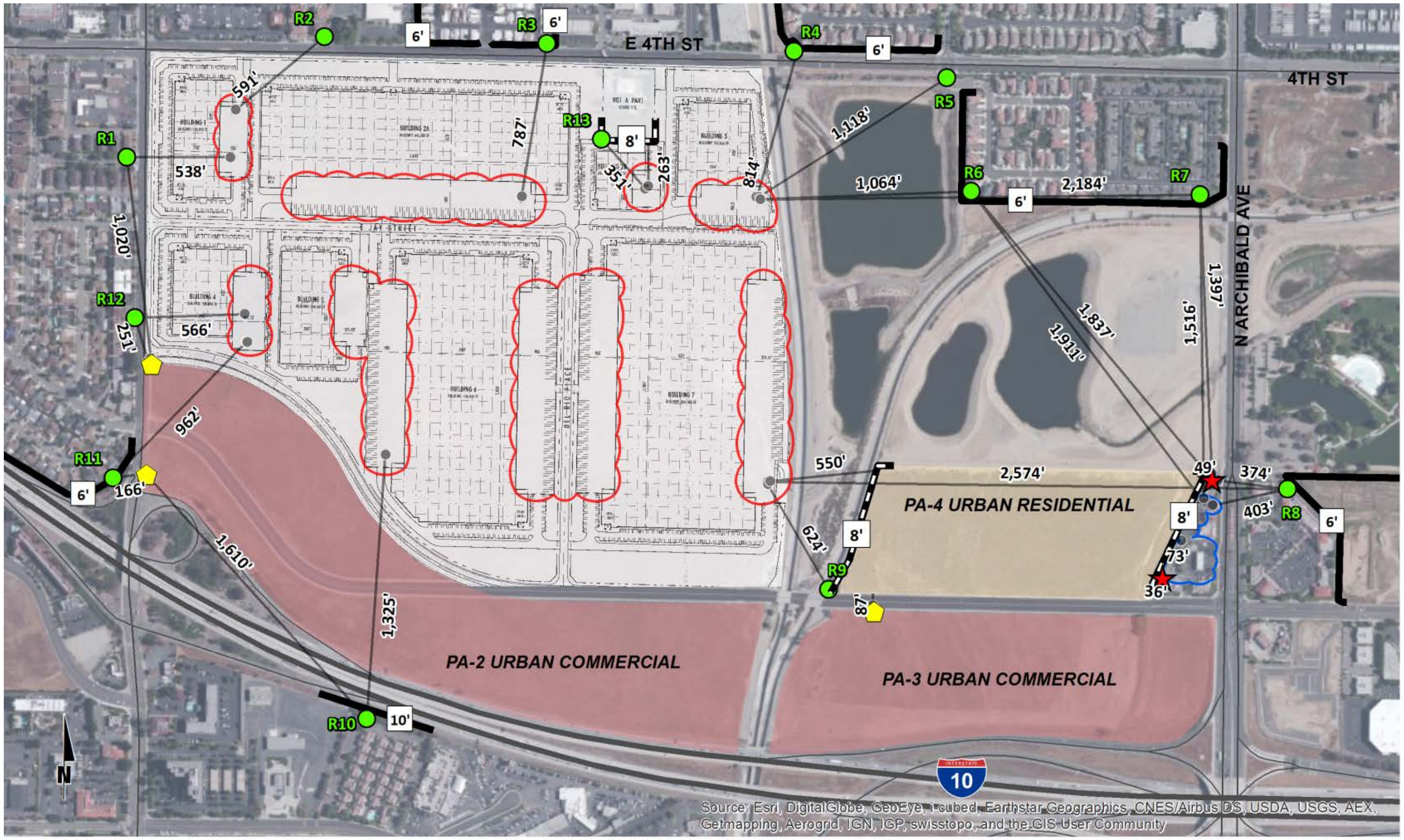
As indicated in Tables 10-4 and 10-5, the Option A Project would contribute operational stationary/area-source noise levels of up to 0.1 dBA Leq (daytime) and 0.1 dBA Leq (nighttime) at nearby receiver locations. However, in no instance would Project operational stationary area-source noise cause or result in an exceedance of the maximum acceptable ambient condition (65 dBA daytime/45 dBA nighttime). Nor would the Project operational stationary/area-source noise result in an increase of 1.5 dBA or greater in instances where noise levels without the Project already exceed the maximum acceptable ambient condition. On this basis, Project operational stationary/area-source noise under the Option A scenario would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts are less-than-significant.

10.4.2 Option B Project Operational Noise Analysis

The Option B operational noise level projections for each receiver near the Project site are identified in Table 10-6. The Option B scenario includes the existing school within the Project site at receiver location R13. Table 10-7 shows a comparison of the Project operational noise level projections with the City of Ontario and City of Rancho Cucamonga noise standards for residential land uses. The off-site operational noise level calculations, shown on Tables 10-8 and 10-9, identify the cumulative Project impacts to daytime and nighttime noise levels.

The Option B direct Project operational noise levels, shown on Tables 10-6 and 10-7, will range from 25.0 to 44.6 dBA Leq and will not exceed the City of Ontario or the City of Rancho Cucamonga noise level standards at the residential land uses adjacent to the Project site, and therefore, the Project will create a less than significant direct Project noise level impact on the adjacent land uses.

EXHIBIT 10-B: OPTION B OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

- 10' Noise Barrier Height (in feet)
- Existing Noise Barrier Location
- Recommended Noise Barrier Location
- Noise Receiver Locations (Option B)
- Distance from noise receiver to center of noise source (in feet)
- Distribution/Warehouse Noise Source Locations (Option B)
- Existing Parking Lot Activity Noise Location
- Estimated Drive-Thru Speakerphone and Parking Lot Activity Locations
- Existing Drive-Thru Speakerphone Locations
- PA-2 Urban Commercial
- PA-3 Urban Commercial
- PA-4 Urban Residential

TABLE 10-6: OPTION B OPERATIONAL NOISE LEVEL PROJECTIONS (LEQ DBA)

Noise Source	Noise Levels at Receiver Locations (dBA Leq)[1]																
	R1	R2	R3	R4	R5	R6	R7	R8	R9 (Planning Area 4)[2]				R10	R11	R12	R13: Public School	
									West		East						
Drive-Thru Speakerphone	17.5	N/A	N/A	N/A	N/A	6.8	9.2	26.2	0.0	38.9	38.1	39.0	2.9	27.6	29.7	N/A	N/A
Parking Lot Activities	31.7	N/A	N/A	N/A	N/A	22.0	23.5	37.7	0.0	0.0	0.0	41.3	18.2	37.9	40.8	N/A	N/A
Distribution/ Warehouse Noise	42.4	41.6	33.6	33.1	36.1	30.9	24.8	28.8	33.4	34.3	0.0	0.0	24.0	31.9	42.0	38.0	40.5
Combined Noise Levels	**42.8**	**41.6**	**33.6**	**33.1**	**36.1**	**31.4**	**27.3**	**38.5**	**41.0**		**44.5**		**25.0**	**39.2**	**44.6**	**42.4**	

[1] See Exhibits 10-A and 10-B for the sensitive receiver locations and Appendix 10.2 for the stationary source noise analysis worksheets.
[2] Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4. At the time of this analysis, the locations of potential noise sources, such as drive-thru speakerphones at potential fast food restaurants, within Planning Area 3 were unknown. The noise level projections represent the worst case operational noise levels assuming a drive-thru speakerphone is located at the northern boundary of Planning Area 3, in addition to the existing drive-thru speakerphone to the east of Planning Area 4.
"N/A" = Noise source will not impact the receiver location.

TABLE 10-7: OPTION B OPERATIONAL NOISE LEVEL COMPLIANCE (LEQ DBA)

Receiver Location[1]	Adjacent Land Use[2]	Noise Standards (dBA Leq)[3]				Project Operational Noise Levels[4]	Compliance[5]			
		Ontario		Rancho Cucamonga			Ontario		Rancho Cucamonga	
		Daytime	Nighttime	Daytime	Nighttime		Daytime	Nighttime	Daytime	Nighttime
R1	Medium Density Res.	65.0	45.0	N/A	N/A	42.8	Yes	Yes	N/A	N/A
R2	Medium Density Res.	65.0	45.0	N/A	N/A	41.6	Yes	Yes	N/A	N/A
R3	Low-Medium Density Res.	65.0	45.0	N/A	N/A	33.6	Yes	Yes	N/A	N/A
R4	Low-Medium Density Res.	N/A	N/A	65.0	60.0	33.1	N/A	N/A	Yes	Yes
R5	Low-Medium Density Res.	65.0	45.0	N/A	N/A	36.1	Yes	Yes	N/A	N/A
R6	Low-Medium Density Res.	65.0	45.0	N/A	N/A	31.4	Yes	Yes	N/A	N/A
R7	Medium Density Res.	65.0	45.0	N/A	N/A	27.3	Yes	Yes	N/A	N/A
R8	Mixed Use	65.0	45.0	N/A	N/A	38.5	Yes	Yes	N/A	N/A
R9 West	Urban Residential	65.0	45.0	N/A	N/A	41.0	Yes	Yes	N/A	N/A
R9 East	Urban Residential	65.0	45.0	N/A	N/A	44.5	Yes	Yes	N/A	N/A
R10	Hospitality	65.0	45.0	N/A	N/A	25.0	Yes	Yes	N/A	N/A
R11	Low Density Res.	65.0	45.0	N/A	N/A	39.2	Yes	Yes	N/A	N/A
R12	Medium Density Res.	65.0	45.0	N/A	N/A	44.6	Yes	Yes	N/A	N/A
R13	Public School	65.0	45.0	N/A	N/A	42.4	Yes	Yes	N/A	N/A

[1] See Exhibit 10-B for the noise receiver and noise source locations.
[2] Sources: City of Ontario Policy Plan Land Use Plan, Exhibit LU-01, and the City of Rancho Cucamonga General Plan Land Use Plan, Figure LU-2.
[3] Sources: Section5-29.04 of the City of Ontario Municipal Code, and Section17.66.050 of the City of Rancho Cucamonga Development Code.
[4] Estimated Project stationary source noise levels as shown on Table 10-6.
[5] Do the estimated Project stationary source noise levels meet the City of Ontario and City of Rancho Cucamonga noise standards on the affected land uses?
"Daytime" = Between the hours of 7:00 a.m. to 10:00 p.m.; "Nighttime" = Between the hours of 10:00 p.m. to 7:00 a.m.

To describe the Option B Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at area receivers when Project-source noise is added to ambient daytime and nighttime conditions are presented on Tables 10-8 and 10-9, respectively.

TABLE 10-8: DAYTIME (8:00 A.M. TO 10:00 P.M.) OPERATIONAL NOISE LEVELS

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Cumulative Significant Impact[7]
R1	42.8	L1	65.4	65.4	0.0	No
R2	41.6	L2	70.3	70.3	0.0	No
R3	33.6	L3	68.3	68.3	0.0	No
R4	33.1	L12	63.8	63.8	0.0	No
R5	36.1	L4	56.8	56.8	0.0	No
R6	31.4	L4	56.8	56.8	0.0	No
R7	27.3	L5	58.7	58.7	0.0	No
R8	38.5	L13	58.7	58.7	0.0	No
R9 West	41.0	L8	63.5	63.5	0.0	No
R9 East	44.5	L8	63.5	63.6	0.1	No
R10	25.0	L14	63.9	63.9	0.0	No
R11	39.2	L9	64.8	64.8	0.0	No
R12	44.6	L10	69.4	69.4	0.0	No
R13	42.4	L11	52.6	53.0	0.4	No

[1] See Exhibit 10-B for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 10-6 including the noise attenuation provided by the recommended noise barriers.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Cumulative Significant Impacts as defined in Section 4.2.

TABLE 10-9: NIGHTTIME (10:01 P.M. TO 7:59 A.M.) OPERATION NOISE LEVELS

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]	Cumulative Significant Impact[7]
R1	42.8	L1	61.6	61.7	0.1	No
R2	41.6	L2	66.7	66.7	0.0	No
R3	33.6	L3	64.6	64.6	0.0	No
R4	33.1	L12	61.2	61.2	0.0	No
R5	36.1	L4	57.7	57.7	0.0	No
R6	31.4	L4	57.7	57.7	0.0	No
R7	27.3	L5	58.8	58.8	0.0	No
R8	38.5	L13	56.9	57.0	0.1	No
R9 West	41.0	L8	60.8	60.8	0.0	No
R9 East	44.5	L8	60.8	60.9	0.1	No
R10	25.0	L14	61.0	61.0	0.0	No
R11	39.2	L9	62.2	62.2	0.0	No
R12	44.6	L10	65.7	65.7	0.0	No
R13	42.4	L11	55.1	55.3	0.2	No

[1] See Exhibit 10-B for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 10-6 including the noise attenuation provided by the recommended noise barriers.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Cumulative Significant Impacts as defined in Section 4.2.

As indicated in Tables 10-8 and 10-9, the Option B Project would contribute operational stationary/area-source noise levels of up to 0.4 dBA Leq (daytime) and 0.1 dBA Leq (nighttime) at nearby receiver locations. However, in no instance would Project operational stationary area-source noise cause or result in exceedance of the maximum acceptable ambient condition (65 dBA daytime/45 dBA nighttime). Nor would the Project operational stationary/area-source noise result in an increase of 1.5 dBA or greater in instances where noise levels without the Project already exceed the maximum acceptable ambient condition. On this basis, Project operational stationary/area-source noise under the Option B scenario would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts are less-than-significant.

10.5 OPERATIONAL NOISE MITIGATION

The normal operational activities that are anticipated to include drive-thru speakerphones, parking lot activities, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods are expected to result in less than significant Project impacts. To further reduce potential operational noise levels received at adjacent residential land uses, it is recommended that the Lead Agency require the following as Project Conditions of Approval:

- If the Project is developed under the Option A scenario:
  - Construct the recommended 8-foot high noise barriers at the western and eastern boundaries of Planning Area 4, as shown on Exhibit 10-A.
- If the Project is developed under the Option B scenario:
  - Construct the recommended 8-foot high noise barriers at the western and eastern boundaries of Planning Area 4, as shown on Exhibit 10-B.
  - Construct the recommended 8-foot high noise barrier at the southern property boundary at the existing school, as shown on Exhibit 10-B.
- All trucks, tractors, and forklifts shall be operated with proper operating and well maintained mufflers.
- Maintain quality pavement conditions that are free of bumps to minimize truck noise.
- The truck access gates and loading docks within the truck court on the project site shall be posted with signs which state:
  - Truck drivers shall turn off engines when not in use;
  - Diesel trucks servicing the Project shall not idle for more than five (5) minutes; and
  - Post telephone numbers of the building facilities manager to report violations.

10.6 OPERATIONAL VIBRATION IMPACTS

Although the human threshold of perception for vibration is around 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB. Truck vibration levels are dependent on vehicle characteristics, load, speed and pavement condition. Typical vibration levels for heavy trucks on normal traffic speeds do not exceed 65 VdB. Truck deliveries transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts nearby homes will be less than significant. Commercial developments typically do not operate machinery that can create significant long-term vibration impacts.

11 CONSTRUCTION NOISE IMPACTS

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

11.1 CITY OF ONTARIO CONSTRUCTION NOISE STANDARDS

The City of Ontario has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 5-29.09 of the Municipal Code states: *No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.*(11) While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receivers. To allow for a quantified determination of what the Noise Control Ordinance constitutes as a *detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City* due to construction activity, relevant quantified construction noise standards established in other cities within the County of San Bernardino were used in this analysis to assess the Project construction noise levels.

Within the County of San Bernardino, construction noise level limits of 65 dBA Leq are identified in the following cities: Rancho Cucamonga (Development Code, Section 17.66.050(D)(4)(a) Noise Standards); Adelanto (Code of Ordinances, Section 17.90.020(d) Construction Practices); and Chino (Municipal Code, Section 9.40.060(D) Special Provisions). While not enforceable regulations within the City of Ontario, the construction noise limits identified by other cities in the County of San Bernardino provide an acceptable threshold for determining the relative significance of Project construction noise levels.

11.2 CONSTRUCTION NOISE SIGNIFICANCE CRITERIA

The following thresholds and significance criteria, discusses in Section 4.2, shall apply to the short-term construction noise impacts from the Project:

Threshold Consideration: *Potential to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.* The potential for the Project to expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would occur if:

- Project stationary/area-source noise would exceed City of Ontario Noise Ordinance Standards or City of Rancho Cucamonga Development Code Noise Standards; or
- Project stationary/area-source vibration would exceed City of Ontario Vibration Standards or City of Rancho Cucamonga Development Code Vibration Standards.

11.3 CONSTRUCTION NOISE LEVELS

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, power tools, concrete mixers and portable generators can reach high levels. Project construction is expected to occur in the same four stages for each Planning Area (1 through 4), but the number and type of equipment used in the construction phases will vary. Planning Area 1 will require more equipment than Planning Areas 2, 3, and 4, and therefore, the noise impacts due to Project construction are analyzed as follows:

- Planning Area 1:
  - Grading
  - Building Construction
  - Architectural Coating
  - Paving
- Planning Areas 2, 3, and 4:
  - Grading
  - Building Construction
  - Architectural Coating
  - Paving

The Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM) that includes a national database of construction equipment reference noise emission levels.(25) The RCNM equipment database, as shown in Appendix 11.1, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. The usage factor is a key input variable of the RCNM noise prediction model that is used to calculate the average Leq noise levels using the Lmax noise levels measured at a distance of 50 feet.

Noise levels generated by heavy construction equipment can range from approximately 70 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 78 dBA measured at 50 feet from the noise source to the receiver would be reduced to 72 dBA at 100 feet from the source to the receiver, and would be further reduced to 66 dBA at 200 feet from the source to the receiver. The construction noise levels including the number and mix of construction equipment by construction phase are consistent with the data used to support the construction emissions in the *Meredith International Centre Air Quality Impact Analysis* prepared by Urban Crossroads Inc. in October 2014. (26)

11.4 CONSTRUCTION NOISE ANALYSIS

Using the stationary-source RCNM noise prediction model, calculations of the Project construction noise level impacts at the thirteen noise receiver locations were completed. The short-term construction noise levels for each stage of construction at the thirteen receiver locations are presented in Tables 11-1 to 11-4 for Planning Area (PA) 1, and Tables 11-5 to 11-8 for Planning Areas (PA) 2, 3, and 4. It is important to note that the construction analyses for Planning Area 1 and Planning Areas 2, 3, and 4 include receiver location R13 to represent the existing school, which is analyzed to show the potential impacts should the Project be developed under Option B. The analysis shows that the highest construction noise level impacts will likely occur during the grading phase of construction. As shown on Tables 11-9 and 11-11, the unmitigated peak construction noise levels are expected to range from 43.8 to 92.6 dBA Leq for Planning Area 1, and 33.9 to 72.1 for Planning Areas 2, 3, and 4. The noise levels at each receiver location include the additional attenuation provided by the existing barriers within the Project study area.

TABLE 11-1: PA 1 GRADING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Excavator	2	40%	3.2	81.0	80.0
Grader	8	40%	3.2	85.0	90.1
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Rubber Tired Dozer	2	40%	3.2	79.0	78.0
Scraper	5	40%	3.2	84.0	87.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					92.6

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	102'	-6.2	0.0	86.4
R2	83'	-4.4	0.0	88.2
R3	78'	-3.9	-5.6	83.1
R4	180'	-11.1	-6.6	74.9
R5	895'	-25.1	0.0	67.5
R6	959'	-25.7	-5.7	61.2
R7	2,073'	-32.4	-5.6	54.6
R8	2,444'	-33.8	0.0	58.8
R9	N/A	N/A	N/A	N/A
R10	892'	-25.0	-10.7	56.9
R11	669'	-22.5	-5.7	64.4
R12	51'	-0.2	0.0	92.4
R13	50'	0.0	0.0	92.6

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-2: PA 1 BUILDING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Cranes	3	16%	1.3	81.0	77.8
Forklift	5	20%	1.6	75.0	75.0
Generator Set	2	50%	4.0	81.0	81.0
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Welder	2	40%	3.2	74.0	73.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					85.6

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	102'	-6.2	0.0	79.4
R2	83'	-4.4	0.0	81.2
R3	78'	-3.9	-5.6	76.1
R4	180'	-11.1	-6.6	67.9
R5	895'	-25.1	0.0	60.5
R6	959'	-25.7	-5.7	54.2
R7	2,073'	-32.4	-5.6	47.6
R8	2,444'	-33.8	0.0	51.8
R9	N/A	N/A	N/A	N/A
R10	892'	-25.0	-10.7	49.9
R11	669'	-22.5	-5.7	57.4
R12	51'	-0.2	0.0	85.4
R13	50'	0.0	0.0	85.6

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-3: PA 1 ARCHITECTURAL COATING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Air Compressor	6	40%	3.2	78.0	81.8
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					81.8

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	102'	-6.2	0.0	75.6
R2	83'	-4.4	0.0	77.4
R3	78'	-3.9	-5.6	72.3
R4	180'	-11.1	-6.6	64.1
R5	895'	-25.1	0.0	56.7
R6	959'	-25.7	-5.7	50.4
R7	2,073'	-32.4	-5.6	43.8
R8	2,444'	-33.8	0.0	48.0
R9	N/A	N/A	N/A	N/A
R10	892'	-25.0	-10.7	46.1
R11	669'	-22.5	-5.7	53.6
R12	51'	-0.2	0.0	81.6
R13	50'	0.0	0.0	81.8

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-4: PA 1 PAVING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Pavers	4	50%	4.0	77.0	80.0
Paving Equipment	4	40%	3.2	76.0	78.0
Rollers	4	20%	1.6	80.0	79.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					83.9

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	102'	-6.2	0.0	77.7
R2	83'	-4.4	0.0	79.5
R3	78'	-3.9	-5.6	74.4
R4	180'	-11.1	-6.6	66.2
R5	895'	-25.1	0.0	58.8
R6	959'	-25.7	-5.7	52.5
R7	2,073'	-32.4	-5.6	45.9
R8	2,444'	-33.8	0.0	50.1
R9	N/A	N/A	N/A	N/A
R10	892'	-25.0	-10.7	48.2
R11	669'	-22.5	-5.7	55.7
R12	51'	-0.2	0.0	83.7
R13	50'	0.0	0.0	83.9

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-5: PA 2, 3, AND 4 GRADING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Grader	1	40%	3.2	85.0	81.0
Pickup Truck	1	40%	3.2	75.0	71.0
Rubber Tired Dozer	1	40%	3.2	79.0	75.0
Scraper	1	40%	3.2	84.0	80.0
Tractor/Loader/Backhoe	2	40%	3.2	78.0	77.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					85.1

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	1,008'	-26.1	0.0	59.0
R2	1,714'	-30.7	0.0	54.4
R3	2,185'	-32.8	-5.6	46.7
R4	2,076'	-32.4	-5.7	47.0
R5	1,901'	-31.6	0.0	53.5
R6	1,347'	-28.6	-5.7	50.8
R7	1,353'	-28.6	-5.7	50.8
R8	420'	-18.5	0.0	66.6
R9	N/A	N/A	N/A	N/A
R10	235'	-13.4	-11.0	60.7
R11	141'	-9.0	-6.4	69.7
R12	224'	-13.0	0.0	72.1
R13	1,999'	-32.0	0.0	53.1

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-6: PA 2, 3, AND 4 BUILDING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Cranes	1	16%	1.3	81.0	73.0
Forklift	1	20%	1.6	75.0	68.0
Generator Set	1	50%	4.0	81.0	78.0
Tractor/Loader/Backhoe	1	40%	3.2	78.0	74.0
Welder	2	40%	3.2	74.0	73.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					81.3

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	1,008'	-26.1	0.0	55.2
R2	1,714'	-30.7	0.0	50.6
R3	2,185'	-32.8	-5.6	42.9
R4	2,076'	-32.4	-5.7	43.2
R5	1,901'	-31.6	0.0	49.7
R6	1,347'	-28.6	-5.7	47.0
R7	1,353'	-28.6	-5.7	47.0
R8	420'	-18.5	0.0	62.8
R9	N/A	N/A	N/A	N/A
R10	235'	-13.4	-11.0	56.9
R11	141'	-9.0	-6.4	65.9
R12	224'	-13.0	0.0	68.3
R13	1,999'	-32.0	0.0	49.3

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-7: PA 2, 3, AND 4 ARCHITECTURAL COATING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Air Compressor	1	40%	3.2	78.0	74.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					74.0

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	1,008'	-26.1	0.0	47.9
R2	1,714'	-30.7	0.0	43.3
R3	2,185'	-32.8	-5.6	33.9
R4	2,076'	-32.4	-5.7	35.9
R5	1,901'	-31.6	0.0	42.4
R6	1,347'	-28.6	-5.7	39.7
R7	1,353'	-28.6	-5.7	39.7
R8	420'	-18.5	0.0	55.5
R9	N/A	N/A	N/A	N/A
R10	235'	-13.4	-11.0	49.6
R11	141'	-9.0	-6.4	58.6
R12	224'	-13.0	0.0	61.0
R13	1,999'	-32.0	0.0	42.0

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

TABLE 11-8: PA 2, 3, AND 4 PAVING CONSTRUCTION NOISE LEVELS

Equipment Type[1]	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 50 Feet (Leq dBA)
Pavers	2	50%	4.0	77.0	77.0
Paving Equipment	2	40%	3.2	76.0	75.0
Rollers	2	20%	1.6	80.0	76.0
Cumulative Hourly Noise Levels 50 Feet (Leq dBA)					80.9

Construction Noise Reference Distance	Distance To Property Line (In Feet)[4]	Distance Attenuation (Leq dBA)[5]	Estimated Noise Barrier Attenuation (Leq dBA)	Construction Noise Level (Leq dBA)
R1	1,008'	-26.1	0.0	54.8
R2	1,714'	-30.7	0.0	50.2
R3	2,185'	-32.8	-5.6	42.5
R4	2,076'	-32.4	-5.7	42.8
R5	1,901'	-31.6	0.0	49.3
R6	1,347'	-28.6	-5.7	46.6
R7	1,353'	-28.6	-5.7	46.6
R8	420'	-18.5	0.0	62.4
R9	N/A	N/A	N/A	N/A
R10	235'	-13.4	-11.0	56.5
R11	141'	-9.0	-6.4	65.5
R12	224'	-13.0	0.0	67.9
R13	1,999'	-32.0	0.0	48.9

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.
[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.
[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.
[4] Distance from the nearest point of construction activity to the nearest receiver.
[5] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

11.5 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

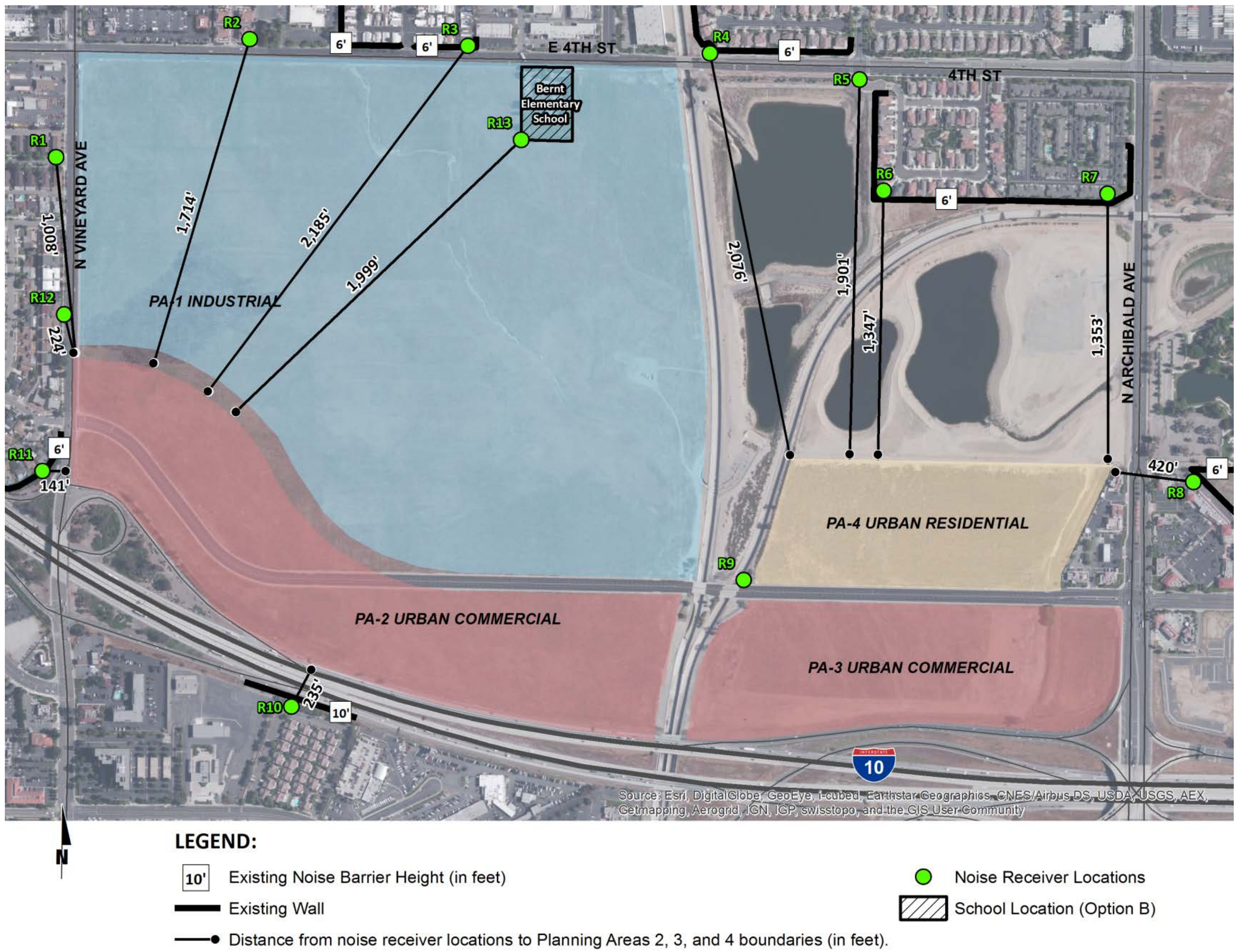
The construction noise analysis shows that the highest construction noise levels will occur during grading construction activities at the edge of the Project site for the construction of Planning Area 1, and Planning Areas 2, 3, and 4. Exhibits 11-A and 11-B show the sensitive receiver locations and their distances to the Project site boundary for Planning Area 1 and Planning Areas 2, 3, and 4, respectively. To control noise impacts associated with the construction of the proposed Project, the City of Ontario has established limits to the hours of operation. The City's Municipal Code indicates that construction activities are limited to: *any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.*(11)

EXHIBIT 11-A: PLANNING AREA 1 CONSTRUCTION NOISE RECEIVER LOCATIONS

LEGEND:

- 10' Existing Noise Barrier Height (in feet)
- Existing Wall
- Distance from noise receiver locations to Planning Area 1 boundary (in feet).
- Noise Receiver Locations
- School Location (Option B)

EXHIBIT 11-B: PLANNING AREA 2, 3, AND 4 CONSTRUCTION NOISE RECEIVER LOCATIONS



11.5.1 PLANNING AREA 1 CONSTRUCTION NOISE LEVELS

As shown on Table 11-9, the unmitigated peak construction noise levels for Planning Area 1 are expected to range from 43.8 to 92.6 dBA Leq. Based on the construction noise standards described in Section 3.4.2, the potential short-term unmitigated construction noise level impacts are expected to exceed the acceptable construction noise level threshold of 65 dBA Leq at nearby sensitive receiver locations during peak activity near the property line. Therefore, temporary noise abatement is needed to reduce the potential construction noise impacts. With the installation of temporary exterior noise control barriers providing a minimum attenuation of 10 dBA, construction noise levels at the nearby residential receivers would be reduced.

TABLE 11-9: UNMITIGATED PA 1 CONSTRUCTION EQUIPMENT NOISE LEVELS

Noise Receiver[1]	Distance To Property Line (In Feet)	Construction Phase Hourly Noise Level (dBA Leq)					Potential Significant Impact?[3]
		Grading	Building Const.	Arch. Coating	Paving	Peak[2]	
R1	102'	86.4	79.4	75.6	77.7	86.4	Yes
R2	83'	88.2	81.2	77.4	79.5	88.2	Yes
R3	78'	83.1	76.1	72.3	74.4	83.1	Yes
R4	180'	74.9	67.9	64.1	66.2	74.9	Yes
R5	895'	67.5	60.5	56.7	58.8	67.5	Yes
R6	959'	61.2	54.2	50.4	52.5	61.2	No
R7	2,073'	54.6	47.6	43.8	45.9	54.6	No
R8	2,444'	58.8	51.8	48.0	50.1	58.8	No
R9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R10	892'	56.9	49.9	46.1	48.2	56.9	No
R11	669'	64.4	57.4	53.6	55.7	64.4	No
R12	51'	92.4	85.4	81.6	83.7	92.4	Yes
R13	0'	92.6	85.6	81.8	83.9	92.6	Yes

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Estimated construction noise levels during peak operating conditions.
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

Table 11-10 shows the peak construction noise levels are expected to range from 54.6 to 82.6 dBA Leq with the attenuation provided by the temporary construction noise barriers. With the temporary noise control barriers providing a minimum attenuation of 10 dBA, the construction noise levels will still likely exceed the 65 dBA Leq construction noise level threshold due to the Project's close proximity to noise-sensitive receivers. Therefore, the construction of the Project will result in a temporary significant and unavoidable noise impact for Planning Area 1.

TABLE 11-10: MITIGATED PA 1 CONSTRUCTION EQUIPMENT NOISE LEVELS

Noise Receiver[1]	Unmitigated Peak Construction Noise Levels (dBA Leq)[2]	Temporary Noise Barrier Attenuation	Construction Noise Levels with Temporary Barriers (dBA Leq)[3]	Potential Significant Impact?[4]
R1	86.4	-10.0	76.4	Yes
R2	88.2	-10.0	78.2	Yes
R3	83.1	-10.0	73.1	Yes
R4	74.9	-10.0	64.9	No
R5	67.5	-10.0	57.5	No
R6	61.2	0.0	61.2	No
R7	54.6	0.0	54.6	No
R8	58.8	0.0	58.8	No
R9	N/A	N/A	N/A	N/A
R10	56.9	0.0	56.9	No
R11	64.4	0.0	64.4	No
R12	92.4	-10.0	82.4	Yes
R13	92.6	-10.0	82.6	Yes

[1] See Exhibit 11-A for the noise receiver locations.
[2] Estimated construction noise levels during peak operating conditions as shown on Table 11-9.
[3] Peak construction noise levels with the recommended temporary noise barrier attenuation when operating adjacent to nearby sensitive receivers.
[4] Does the peak construction noise level exceed the acceptable construction noise threshold of 65 dBA Leq?
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

11.5.2 PLANNING AREAS 2, 3, AND 4 CONSTRUCTION NOISE LEVELS

As shown on Table 11-11, the unmitigated peak construction noise levels for Planning Areas 2, 3, and 4 are expected to range from 33.9 to 72.1 dBA Leq. Based on the construction noise standards described in Section 3.4.2, the potential short-term unmitigated construction noise level impacts are expected to exceed the acceptable construction noise level threshold of 65 dBA Leq at nearby sensitive receiver locations during peak activity near the property line. Therefore, temporary noise abatement is needed to reduce the potential construction noise impacts to a level of less than significant. With the installation of temporary exterior noise control barriers providing a minimum attenuation of 10 dBA, construction noise levels at the nearby residential receivers would be reduced.

TABLE 11-11: UNMITIGATED PA 2, 3, AND 4 CONSTRUCTION EQUIPMENT NOISE LEVELS

Noise Receiver[1]	Distance To Property Line (In Feet)	Construction Phase Hourly Noise Level (dBA Leq)					Potential Significant Impact?[3]
		Grading	Building Const.	Arch. Coating	Paving	Peak[2]	
R1	1,008'	59.0	55.2	47.9	54.8	59.0	No
R2	1,714'	54.4	50.6	43.3	50.2	54.4	No
R3	2,185'	46.7	42.9	33.9	42.5	46.7	No
R4	2,076'	47.0	43.2	35.9	42.8	47.0	No
R5	1,901'	53.5	49.7	42.4	49.3	53.5	No
R6	1,347'	50.8	47.0	39.7	46.6	50.8	No
R7	1,353'	50.8	47.0	39.7	46.6	50.8	No
R8	420'	66.6	62.8	55.5	62.4	66.6	Yes
R9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R10	235'	60.7	56.9	49.6	56.5	60.7	No
R11	141'	69.7	65.9	58.6	65.5	69.7	Yes
R12	224'	72.1	68.3	61.0	67.9	72.1	Yes
R13	1,999'	53.1	49.3	42.0	48.9	53.1	No

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Estimated construction noise levels during peak operating conditions.
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

Table 11-12 shows the peak construction noise levels are expected to range from 46.7 to 59.0 dBA Leq with the attenuation provided by the temporary construction noise barriers. With the temporary noise control barrier providing a minimum attenuation of 10 dBA, the construction noise levels will not exceed the 65 dBA Leq construction noise level threshold due to the Project's close proximity to noise-sensitive receivers. Therefore, the construction of the Project will result in a less than significant noise impact for Planning Areas 2, 3, and 4.

TABLE 11-12: MITIGATED PA 2, 3, AND 4 CONSTRUCTION EQUIPMENT NOISE LEVELS

Noise Receiver[1]	Unmitigated Peak Construction Noise Levels (dBA Leq)[2]	Temporary Noise Barrier Attenuation	Construction Noise Levels with Temporary Barriers (dBA Leq)[3]	Potential Significant Impact?[4]
R1	59.0	0.0	59.0	No
R2	54.4	0.0	54.4	No
R3	46.7	0.0	46.7	No
R4	47.0	0.0	47.0	No
R5	53.5	0.0	53.5	No
R6	50.8	0.0	50.8	No
R7	50.8	0.0	50.8	No
R8	66.6	-10.0	56.6	No
R9	N/A	N/A	N/A	N/A
R10	60.7	0.0	60.7	No
R11	69.7	-10.0	59.7	No
R12	72.1	-10.0	62.1	No
R13	53.1	0.0	53.1	No

[1] See Exhibit 11-B for the noise receiver locations.
[2] Estimated construction noise levels during peak operating conditions as shown on Table 11-11.
[3] Peak construction noise levels with the recommended temporary noise barrier attenuation when operating adjacent to nearby sensitive receivers.
[4] Does the peak construction noise level exceed the acceptable construction noise threshold of 65 dBA Leq?
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

11.6 CONSTRUCTION NOISE ABATEMENT MEASURES

Based on the four stages of construction, the noise impacts associated with the proposed Project are expected to create temporary high-level noise impacts at receiver locations surrounding the Project site when certain activities occur near the Project property line. Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise sensitive residential land uses.

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall occur between the permitted hours of 7:00 a.m. and 6:00 p.m. on weekdays, or Saturdays, and between 9:00 am. and 6:00 p.m. on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- Install temporary noise control barriers that provide a minimum noise level attenuation of 10.0 dBA when Project construction occurs near existing noise-sensitive structures. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be high enough and long enough to block the view of the noise source. Unnecessary openings shall not be made.
    - The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
    - The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise sensitive receivers nearest the Project site (i.e., to the south) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, or Saturdays, and between 9:00 am. and 6:00 p.m. on Sundays). The Project Applicant shall prepare a haul route exhibit for review and approval by the City of Ontario Planning Division prior to commencement of construction activities. The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

11.7 CONSTRUCTION VIBRATION IMPACTS

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

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would occur within the Project site are expected to include grading, which would have the potential to generate low levels of ground-borne vibration. Using the vibration source level of construction equipment provided on Table 6-10 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Tables 11-13 and 11-14 presents the expected Project related vibration levels at each of the thirteen sensitive receiver locations for the construction of Planning Area 1, and Planning Areas 2, 3, and 4.

TABLE 11-13: PA 1 CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Noise Receiver[1]	Distance To Property Line (In Feet)	Receiver PPV Levels (in/sec)[2]					Potential Significant Impact?[3]
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Peak Vibration	
R1	102'	0.0004	0.0042	0.0092	0.0108	0.0108	No
R2	83'	0.0005	0.0058	0.0126	0.0147	0.0147	No
R3	78'	0.0005	0.0064	0.0138	0.0161	0.0161	No
R4	180'	0.0002	0.0018	0.0039	0.0046	0.0046	Yes
R5	895'	0.0000	0.0002	0.0004	0.0004	0.0004	No
R6	959'	0.0000	0.0001	0.0003	0.0004	0.0004	No
R7	2,073'	0.0000	0.0000	0.0001	0.0001	0.0001	No
R8	2,444'	0.0000	0.0000	0.0001	0.0001	0.0001	No
R9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R10	892'	0.0000	0.0002	0.0004	0.0004	0.0004	No
R11	669'	0.0000	0.0003	0.0005	0.0006	0.0006	No
R12	51'	0.0010	0.0120	0.0261	0.0305	0.0305	No
R13	25'	0.0030	0.0350	0.0760	0.0890	0.0890	No

[1] Noise receiver locations are shown on Exhibit 11-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-10.
[3] Does the Peak Vibration exceed the City of Ontario or City of Rancho Cucamonga maximum acceptable vibration standards? The vibration standards are converted to PPV on Tables 3-2 and 3-3 for this analysis.
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference level of 0.089 in/sec at a distance of 25 feet. At distances ranging from 25 to 2,444 feet from the Project site, Planning Area 1 construction vibration levels are expected to range from 0.000 to 0.089 in/sec, as shown on Table 11-13. Using the construction vibration assessment methods provided by the Federal Transit Administration (FTA) the proposed Project site may include or require equipment, facilities, or activities that would result in a perceptible human response (annoyance). Receiver location R4, located in the City of Rancho Cucamonga, is expected to experience peak vibration levels exceeding the City of Rancho Cucamonga vibration standards with levels approaching 0.0046 in/sec.

TABLE 11-14: PA 2, 3, AND 4 CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Noise Receiver[1]	Distance To Property Line (In Feet)	Receiver PPV Levels (in/sec)[2]					Potential Significant Impact?[3]
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Peak Vibration	
R1	1,008'	0.0000	0.0001	0.0003	0.0003	0.0003	No
R2	1,714'	0.0000	0.0001	0.0001	0.0002	0.0002	No
R3	2,185'	0.0000	0.0000	0.0001	0.0001	0.0001	No
R4	2,076'	0.0000	0.0000	0.0001	0.0001	0.0001	No
R5	1,901'	0.0000	0.0001	0.0001	0.0001	0.0001	No
R6	1,347'	0.0000	0.0001	0.0002	0.0002	0.0002	No
R7	1,353'	0.0000	0.0001	0.0002	0.0002	0.0002	No
R8	420'	0.0000	0.0005	0.0011	0.0013	0.0013	No
R9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R10	235'	0.0001	0.0012	0.0026	0.0031	0.0031	No
R11	141'	0.0002	0.0026	0.0057	0.0066	0.0066	No
R12	224'	0.0001	0.0013	0.0028	0.0033	0.0033	No
R13	1,999'	0.0000	0.0000	0.0001	0.0001	0.0001	No

[1] Noise receiver locations are shown on Exhibit 11-B.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-10.
[3] Does the Peak Vibration exceed the City of Ontario or City of Rancho Cucamonga maximum acceptable vibration standards? The vibration standards are converted to PPV on Tables 3-2 and 3-3 for this analysis.
"N/A" = Receiver location R9 represents the future urban residential land use included in Project construction located within Planning Area 4.

At distances ranging from 141 to 2,185 feet from the Project site, Planning Areas 2, 3, and 4 construction vibration levels are expected to range from 0.000 to 0.0066 in/sec, as shown on Table 11-14. Using the construction vibration assessment methods provided by the Federal Transit Administration (FTA) the proposed Project site will not include or require equipment, facilities, or activities that would result in a perceptible human response (annoyance).

Project construction is expected to generate vibration levels which will exceed the City of Rancho Cucamonga vibration standards at one receiver location, R4, during Planning Area 1 construction. To reduce the impacts at receiver location R4, the operation of heavy equipment near the Project site boundary near receiver location R4 should be avoided whenever feasible.

However, this impact will be temporary as the construction of Planning Areas 2, 3, and 4 is not expected to create vibration impacts at any of the noise-sensitive receiver locations. Further, impacts at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating proximate to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impact during the sensitive nighttime hours. On this basis the potential for the Project to result in exposure of persons to, or generation of, excessive ground-borne vibration is determined to less than significant.

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12 FINDINGS AND CONCLUSIONS

This report evaluated the potential noise impacts associated with the development of the proposed Project including Project related traffic noise, stationary noise impacts and temporary construction noise impacts. This section summarizes the significance criteria and Project noise impacts.

12.1 OFF-SITE TRAFFIC NOISE IMPACTS

This report evaluated potential Project off-site traffic-related noise impacts to the study area. The off-site traffic noise analysis shows that the existing without Project noise levels already exceed the acceptable exterior noise level threshold of 65 dBA CNEL. Generally, the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic will increase as Planning Area 1 is developed in Year 2017, and Planning Areas 2, 3, and 4 are developed in Year 2020. One of the 23 roadway segments for Year 2017, Year 2020, and Year 2035 with Project conditions will experience a significant impact along Vineyard Avenue south of Inland Empire Boulevard at the adjacent noise-sensitive Medium Density Residential land use. For Year 2035 cumulative conditions, 14 of the 23 study area roadway segments are expected to experience significant impacts approaching 2.7 dBA CNEL at the adjacent noise-sensitive land uses. This analysis shows that the Project will create a substantial permanent increase in traffic-related noise levels or expose persons to noise levels in excess of the exterior noise level standards.

12.2 ON-SITE TRAFFIC NOISE IMPACTS

To satisfy the City of Ontario *normally acceptable* 65 dBA CNEL exterior noise level criteria for multi-family residential development, the construction of 6-foot high noise barriers for the first floor patio areas adjacent to Inland Empire Boulevard in Planning Area 4 is required. With the recommended noise barriers, the mitigated future exterior noise levels will range from 51.7 to 65.0 dBA CNEL. This noise analysis shows that the recommended noise barriers will satisfy the City of Ontario 65 dBA CNEL exterior noise level standards. Therefore, the Project Multi-Family Residential land uses would not experience noise levels which would conflict with City of Ontario Policy Plan Policies addressing vehicular-source noise along City roadways, and will be less than significant.

Since areas within the Project site fall between the 60 and 65 dBA CNEL noise contours of the ONT airport, the ALUCP requires the interior areas of Industrial and Commercial land uses within the 60 to 65 dBA CNEL contour to meet an interior noise level standard of 50 dBA CNEL. At the time of this analysis, the future locations of buildings within PA 2 and 3 were unknown, however, future interior areas would include offices and office areas, eating and drinking establishments, and retail centers and stores. To satisfy the ONT ALUCP interior noise level standard of 50 dBA CNEL, future office and commercial buildings with interior areas are recommended to incorporate the State of California Green Building Standards Code which requires new developments which fall within an airport or freeway 65 dBA CNEL noise contour have a combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies of at least 50. With aircraft noise levels ranging from 60 to 65 dBA CNEL, the STC rating of 50 would satisfy the ONT ALUCP *normally compatible* standard of 50 dBA CNEL for interior noise levels, and therefore, the on-site aircraft noise impacts would be less than significant.

12.3 OPERATIONAL IMPACTS

The operational noise impacts associated with the proposed Project are expected to include drive-thru speakerphones, parking lot activities, idling trucks, delivery truck activities, parking, backup alarms, refrigerated containers or reefers, as well as loading and unloading of goods. The analysis shows that the Project only operational noise levels will range from 25.0 to 44.6 dBA Leq both the Option A and Option B scenarios. The Project operational noise levels associated with the proposed Meredith International Centre will not exceed the daytime and nighttime exterior noise level standards for residential uses of 65 dBA Leq and 45 dBA Leq, respectively at all receiver locations and, therefore, will be less than significant.

The noise analysis shows that the Project would contribute operational stationary/area-source noise levels of up to 0.4 dBA Leq (daytime) and 0.1 dBA Leq (nighttime) at nearby receiver locations. However, in no instance would Project operational stationary area-source noise cause or result in an exceedance of the maximum acceptable ambient condition (65 dBA daytime/45 dBA nighttime). Nor would the Project operational stationary/area-source noise result in an increase of 1.5 dBA or greater in instances where noise levels without the Project already exceed the maximum acceptable ambient condition. On this basis, Project operational stationary/area-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts are less-than-significant.

To further reduce the potential operational noise received at proximate residential land uses, it is recommended that the Lead Agency impose the following project Conditions of Approval:

- If the Project is developed under the Option A scenario:
  - Construct the recommended 8-foot high noise barriers at the western and eastern boundaries of Planning Area 4, as shown on Exhibit 10-A.
- If the Project is developed under the Option B scenario:
  - Construct the recommended 8-foot high noise barriers at the western and eastern boundaries of Planning Area 4, as shown on Exhibit 10-B.
  - Construct the recommended 8-foot high noise barrier at the southern property boundary at the existing school, as shown on Exhibit 10-B.
- All trucks, tractors, and forklifts shall be operated with proper operating and well maintained mufflers.
- Maintain quality pavement conditions that are free of bumps to minimize truck noise.
- The truck access gates and loading docks within the truck court on the project site shall be posted with signs which state:
  - Truck drivers shall turn off engines when not in use;
  - Diesel trucks servicing the Project shall not idle for more than five (5) minutes; and

- o Post telephone numbers of the building facilities manager to report violations.

12.4 CONSTRUCTION NOISE IMPACTS

The construction noise analysis shows that the highest construction noise levels will occur during grading construction activities at the edge of the Project site for the construction of Planning Area 1, and Planning Areas 2, 3, and 4. The unmitigated peak construction noise levels for Planning Area 1 are expected to range from 43.8 to 92.6 dBA Leq. Based on the construction noise standards described in Section 3.4.2, the potential short-term unmitigated construction noise level impacts are expected to exceed the acceptable construction noise level threshold of 65 dBA Leq at nearby sensitive receiver locations for construction of Planning Area 1 during peak activity near the property line. With temporary noise control barriers providing a minimum attenuation of 10 dBA the peak construction noise levels are expected to range from 54.6 to 82.6 dBA Leq, however, the construction noise levels will still exceed the 65 dBA Leq construction noise level threshold due to the Project's close proximity to noise-sensitive receivers. Therefore, the construction of the Project will result in a temporary significant and unavoidable noise impact for Planning Area 1.

The unmitigated peak construction noise levels for Planning Areas 2, 3, and 4 are expected to range from 33.9 to 72.1 dBA Leq. The peak construction noise levels are expected to range from 46.7 to 59.0 dBA Leq with the attenuation provided by the temporary construction noise barriers. With the temporary noise control barriers providing a minimum attenuation of 10 dBA, the construction noise levels will not exceed the 65 dBA Leq construction noise level threshold due to the Project's close proximity to noise-sensitive receivers. Therefore, the construction of the Project will result in a less than significant noise impact for Planning Areas 2, 3, and 4.

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

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall occur between the permitted hours of 7:00 a.m. and 6:00 p.m. on weekdays, or Saturdays, and between 9:00 am. and 6:00 p.m. on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- Install temporary noise control barriers that provide a minimum noise level attenuation of 10.0 dBA when Project construction occurs near existing noise-sensitive structures. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be high enough and long enough to block the view of the noise source. Unnecessary openings shall not be made.
    - o The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.

  - The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise sensitive receivers nearest the Project site (i.e., to the south) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, or Saturdays, and between 9:00 am. and 6:00 p.m. on Sundays). The Project Applicant shall prepare a haul route exhibit for review and approval by the City of Ontario Planning Division prior to commencement of construction activities. The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

12.5 VIBRATION IMPACTS

Project construction is expected to generate vibration levels which will exceed the City of Rancho Cucamonga vibration standards at receiver location, R4, during Planning Area 1 construction. To reduce the impacts at receiver location R4, the operation of heavy equipment near the Project site boundary near receiver location R4 should be avoided whenever feasible.

However, this impact will be temporary as the construction of Planning Areas 2, 3, and 4 is not expected to create vibration impacts at any of the noise-sensitive receiver locations. Further, impacts at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating proximate to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impact during the sensitive nighttime hours. On this basis the potential for the Project to result in exposure of persons to, or generation of, excessive ground-borne vibration is determined to less than significant.

13 REFERENCES

1. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
2. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requiste to Protect Public Health and Welfare with an Adequate Margin of Safety.* March, 1974. EPA/ONAC 550/9/74-004.
3. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* June, 1995.
4. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
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9. **City of Ontario.** *The Ontario Plan Safety Section, S4, Noise Hazards.* March 2014.
10. —. *Ontario International Airport Land Use Compatibility Plan.* April 2011.
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14. **City of Rancho Cucamonga.** *Development Code, Performance Standards, Section 17.66.050 - Noise Standards.*
15. —. *Development Code, Performance Standards, Section 17.66.070 - Vibration Standards.*
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18. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
19. **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.
20. **Linscott Law & Greenspan.** *Meredith International Centre Traffic Impact Analysis.* October 2014.
21. **City of Ontario.** *The Ontario Plan Environmental Impact Report.* April 2009.
22. **California Department of Transportation.** *Annual Average Daily Truck Traffic on the California Highways System.* 2012.

23. **City of Ontario.** *Development Code, Article 14, Section 9-1410.*

24. **U.S. Environmental Protection Agency, Office of Federal Activities.** *Consideration of Cumultive Impacts.* May 1999. EPA 315-R-99-002.

25. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

26. **Urban Crossroads, Inc.** *Meredith International Centre Air Quality Impact Analysis.* October 2014.

14 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Meredith International Centre Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994 ext. 203.

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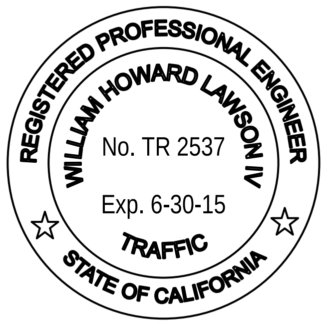

EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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

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APPENDIX 3.1:

CITY OF ONTARIO POLICY PLAN SAFETY SECTION (NOISE HAZARDS)

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S4 Noise Hazards

Only areas w ith a w hite background are considered part of the General Plan.

This is a view from Mission Boulevard of several of the major noise generator.

Physical health, psychological well being, social cohesion, property values and economic productivity can all be affected by excessive amounts of noise. Ontario has many mobile and stationary sources of noise, impacts from them must be considered in development decisions.

Goal

S4 An environment where noise does not adversely affect the public's health, safety, and welfare.

Policies

S4-1 *Noise Mitigation*. We utilize the City's Noise Ordinance, building codes and subdivision and development codes to mitigate noise impacts.

S4-2 *Coordination with Transportation Authorities*. We collaborate with airport owners, FAA, Caltrans, SANBAG, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans to minimize noise impacts and provide appropriate mitigation measures.

S4-3 *Airport Noise Mitigation*. We aggressively pursue funding and utilize programs to reduce effects of aircraft noise in impacted areas of our community. (Link to Land Use Element and Quiet Home Program)

S4-4 *Truck Traffic.* We manage truck traffic to minimize noise impacts on sensitive land uses. (Link to Mobility Element)

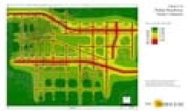
S4-5 *Roadway Design*. We design streets and highways to minimize noise impacts.

S4-6 *Airport Noise Compatibility*. We utilize information from Airport Land Use Compatibility Plans to prevent the construction of new noise sensitive land uses within airport noise impact zones.

NOISE HAZARDS IMPLEMENTATION

EXHIBITS

All Exhibits are part of the Policy Plan



S-3a Future Roadway Noise Contour Map

S-3b Future Rail Noise Contour Map

S-3c Map 2-3 Compatibility Policy Map: Noise Impact Zones of ALUCP for ONT
LU-07 Noise Level Exposure and Land Use Compatibility Guidelines

REFERENCE MATERIALS

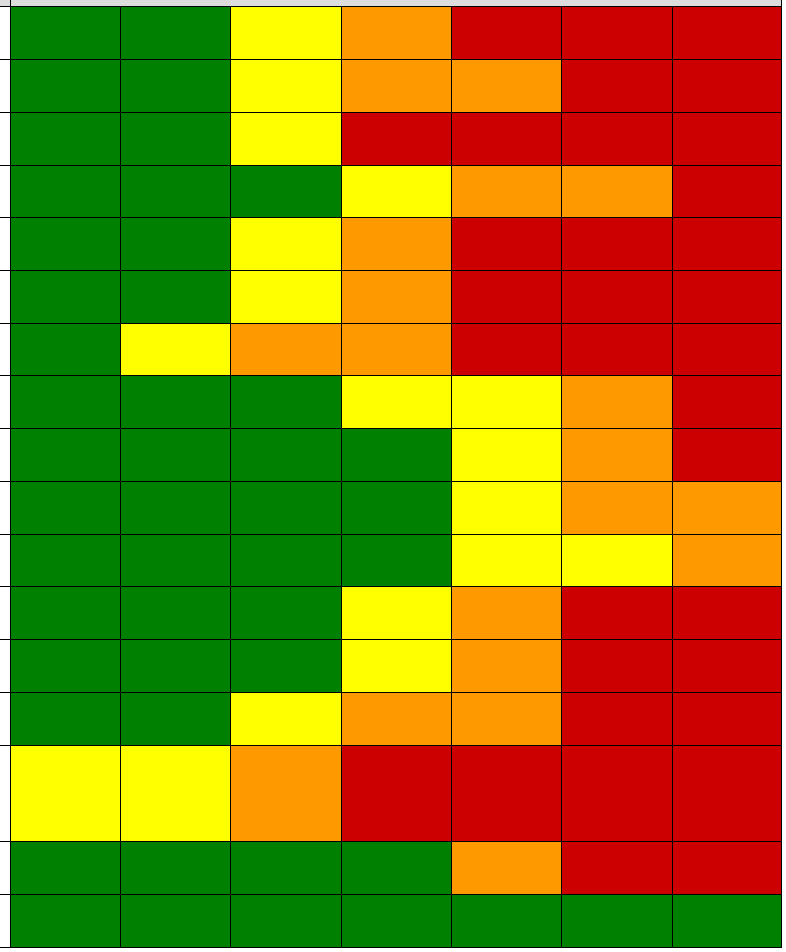
Reference Materials are not part of the Policy Plan

1. Existing Noise Levels in Ontario from Surface Transportation (Figure 5.12-1 of EIR)
2. Existing 65 dBA CNEL Train Noise Contours (Figure 5.12-2 of EIR)
3. ALUCP for Ontario International Airport

NOISE LEVEL EXPOSURE AND LAND USE COMPATIBILITY GUIDELINES

Table LU-7

LAND USE CATEGORIES		COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)
Category	**Land Use**	55 60 65 70 75 80
Residential/ Lodging	Single Family / Duplex	
	Multi-Family	
	Mobile Homes	
	Hotel/Motels	
Public/Institutional	Schools/Hospitals	
	Churches/ Libraries	
	Auditoriums/Concert Halls	
Commercial	Offices	
	Retail	
Industrial	Manufacturing	
	Warehousing	
Recreational/ Open Space	Parks/Playgrounds	
	Golf Courses/ Riding Stables	
	Outdoor Spectator Sports	
	Outdoor Music Shells/ Amphitheaters	
	Livestock/Wildlife Preserves	
	Crop Agriculture	



LEGEND

Clearly Acceptable:	No special noise insulation required, assuming buildings of normal conventional construction.
Normally Acceptable:	Acoustical reports will be required for major new residential construction. Conventional construction with closed windows and fresh air supply systems of air conditioning will normally suffice.
Normally Unacceptable:	New construction should be discouraged. Noise/aviation easements required for all new construction. If new construction does proceed, a detailed analysis of noise reduction requirements must be made and necessary noise insulation features included.
Clearly Unacceptable:	No new construction should be permitted.

Note: For noise compatibility criteria and contours for Ontario International Airport refer to the adopted ALUCP for ONT.

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APPENDIX 3.2:

LA/ONTARIO INTERNATIONAL AIRPORT LAND USE COMPATIBILITY PLAN

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S4b **Hazardous Materials Storage:** Materials that are flammable, explosive, corrosive, or toxic constitute special safety compatibility concerns to the extent that an aircraft accident could cause release of the materials and thereby pose dangers to people and property in the vicinity. Facilities in this category include:

- Facilities such as oil refineries and chemical plants that manufacture, process, and/or store bulk quantities (tank capacities greater than 6,000 gallons) of hazardous materials generally for shipment elsewhere.
- Facilities associated with otherwise compatible land uses where hazardous materials are stored in smaller quantities primarily for on-site use (tank capacities greater than 6,000 gallons).

S4c **Critical Community Infrastructure:** The damage or destruction of public infrastructure facilities which would cause significant adverse effects to public health and welfare well beyond the immediate vicinity of the facility. Among these facilities are:

- Emergency services facilities such as police and fire stations.
- Emergency communications facilities, power plants, and other utilities.

S5 **Overlay Safety Zone 1A:** New development proposed within Overlay Safety Zone 1A is encouraged to locate buildings outside the overlay zone, when feasible, otherwise utilize the intensity limits of the underlying Safety Zone.

S6 **Avigation Easements:** The City of Ontario shall require dedication of an avigation easement as a condition for approval of all proposed development situated off-airport within Safety Zones 1 through 5 in accordance with **Policy SP1** (see Section 6.5). The Safety Zones and this policy affect only the City of Ontario.

6.2 Noise

6.2.1 **Policy Objective:** The purpose of noise compatibility policies is to avoid the establishment of noise-sensitive land uses in the portions of the ONT AIA that are exposed to significant levels of aircraft noise.

6.2.2 **Noise Affected Agencies:** The noise impact zones for ONT affect lands within the Cities of Chino, Fontana, Montclair, and Ontario and unincorporated areas of the Counties of San Bernardino and Riverside. The noise compatibility policies and criteria of this section apply only to the jurisdictions and special entities (e.g., school districts) in San Bernardino County.

6.2.3 **Factors Considered in Establishing Noise Impact Zones:** The factors considered in setting the policies within each noise impact zone are:

(a) **Measures of Noise Exposure:** The magnitude of the airport-related noise to which properties near ONT are exposed must be measured in terms of Community Noise Equivalent Level (CNEL).

(b) **Noise Contours:** In accordance with state law, the planning time frame utilized in this *Compatibility Plan* extends at least 20 years into the future. The noise contours depicted herein represent the greatest annualized noise impact, measured in terms of CNEL, anticipated to be generated by the airport over the planning time frame.

6.2.4 **Factors Considered in Setting Noise Policies:** The factors considered in setting the noise policies for this section and the criteria in **Table 2-3: Noise Criteria** are described below. These factors must also be considered when conducting compatibility assessments of individual development projects.

(a) **Noise Regulations:** State regulations and guidelines, including noise compatibility recommendations in the *California Airport Land Use Planning Handbook* (2002) provide the foundation for the noise policies.

(b) **Ambient Noise levels:** Ambient noise levels influence the potential intrusiveness of aircraft noise upon land uses within a community. Ontario is characterized as an urban community with higher ambient noise levels than that of a suburban community. Highway and rail noise contribute significantly to the ambient noise levels in the community.

(c) **Noise-Sensitive Uses:** The extent to which noise would intrude upon and interrupt the activity associated with a particular use affects whether the use is compatible with a particular noise exposure.

(d) **Noise-Generating Uses:** Land uses with operating conditions that generate noise are typically more compatible with high external noise exposure than uses that are internally quiet.

(e) **Outdoor Uses:** The extent of outdoor activities associated with a particular land use, especially activities for which quiet is important, is a key determinant of noise exposure compatibility because the sound attenuation that a structure would provide does not exist. Outdoor activities are particularly susceptible to aircraft overflight noise in that sound walls and other devices that can serve as shields from highway, railroad, and other ground-level noises are not practical.

(f) **Sound Attenuation:** Indoor uses associated with a particular land use that would otherwise be incompatible may be made consistent with this *Compatibility Plan* with the application of sound attenuation standards in accordance with **Policy N4**.

(g) **Single-event noise levels:** Single-event noise levels are taken into account in **Table 2-3: Noise Criteria** with respect to the acceptability of highly noise-sensitive land uses. Single-event noise levels are considered when assessing the compatibility of highly noise-sensitive land uses such as residences, schools, libraries, and outdoor theaters. Susceptibility to speech interference and sleep disturbance are among the factors that make certain land uses noise sensitive. Single-event noise levels are especially important in areas that are regularly overflown by aircraft, but that do not produce significant CNEL contours (helicopter overflight areas are a particular example). Flight patterns for ONT must be considered in the review process. Acoustical studies or on-site noise measurements could also be required to assist in determining the compatibility of sensitive uses.

6.2.5 **Noise Impact Zones for ONT:** The noise impact zones depicted in **Map 2-3** were prepared for ONT in conjunction with the master planning efforts conducted by Los

Angeles World Airports (LAWA) in the mid 2000s. The noise exposure contours represent a composite of two sets of projected noise contours reflecting two forecast scenarios. The "No Project" scenario reflects the existing runway configuration and a 2030 forecast of 343,000 annual operations. The "Proposed Project" scenario reflects the ultimate runway configuration and a 2030 forecast of 465,000 annual operations. Aircraft activity data upon which the contours are based are summarized in Chapter 1 of this *Compatibility Plan*. The City of Ontario, as the agency responsible for this *Compatibility Plan*, should periodically review the projected CNEL contours and, in conjunction with LAWA, update them as necessary to ensure that they continue to have a future time horizon of at least 20 years.

6.2.6 **Noise Standards for New Development:** To minimize noise-sensitive development in noisy areas around ONT, new development should be evaluated in accordance with the policies set forth in this section, including the criteria listed in **Table 2-3: Noise Criteria** and the noise impact zones depicted on **Map 2-3: Noise Impact Zones**.

NOISE POLICIES

N1 **Residential Development:** New residential development is incompatible within the projected CNEL 65 dB contour of ONT except as described in Policy N2 and SP3e.

N2 **Residential Development Exceptions:** The following types of residential developments are allowed within the CNEL 65 dB contour, if the structure is capable of attenuating exterior noise from all noise sources to an indoor CNEL of 45 dB or less.

N2a **Multi-Family Residential:** Multi-family residential is allowed within the CNEL 65 dB contour if the development can achieve a density that is greater than 8 dwelling units per acre and incorporate interior common space and recreational facilities.

N2b **Caretaker's Unit:** A caretakers unit that is ancillary to a primary use located within the projected CNEL 65 dB contour should be deemed compatible with this *Compatibility Plan* provided that there is no more than 1 dwelling unit.

N2c **Existing Residential Lots:** Exceptions are provided for existing residential lots (see **Policy SP2** with regard to development by right).

N2d **Composite Industrial/Residential Use:** A single-family residential use combined with an industrial land use should be deemed compatible within the projected CNEL 65 dB contour due to the high ambient noise levels generated by the industrial use. However, new structures developed for residential purposes should achieve noise attenuating standards consistent with the California Building Code.

N3 **Non-residential Development:** New nonresidential development is incompatible in locations where the airport-related noise exposure would be highly disruptive to the specific land use. The applicable criteria are indicated in **Table 2-3: Noise Criteria**.

N4 <u>**Maximum Interior Noise Level:**</u> To the extent that the criteria in **Table 2-3: Noise Criteria** and other policies herein permit the development, land uses with interior activities that may be easily disrupted by aircraft noise should be required to incorporate exterior-to-interior noise level reduction (NLR) design features for all new structures. The land uses listed in **Policies N4a** and **N4b** are considered acceptable if proper sound attenuation standards are applied and the maximum interior noise level indicated in **Policies N4a** and **N4b** are not exceeded.

N4a CNEL 45 dB Interior Noise Level

- Any habitable room of single- or multi-family residences.
- Hotels, motels, and other lodging.
- Hospitals, nursing homes, and related uses where patients remain overnight.
- Places of worship, meeting halls, theaters, and mortuaries.
- Schools, libraries, and museums.

N4b CNEL 50 dB Interior Noise Level

- Offices and office areas of industrial facilities.
- Eating and drinking establishments.
- Retail centers and stores.
- Miscellaneous other uses as listed in **Table 2-3: Noise Criteria**.

N4c Noise Attenuation Criteria: Where **Table 2-3: Noise Criteria** indicates that buildings associated with a particular land use must be capable of attenuating exterior noise to the specified maximum interior noise level, acoustical data documenting that the structure will be designed to comply with the criteria should be provided. The noise impact zones depicted in **Map 2-3** should be used in calculating compliance with these criteria. The calculations should assume that windows are closed.

N4d Noise Attenuation Exceptions: Exceptions to the interior noise level criteria set in **Policy N4a** may be allowed if evidence is provided that the indoor noise generated by the use itself exceeds the listed criteria.

N4e Parcels with Multiple Noise Contour Ranges: When a proposed building lies within multiple CNEL range zones (e.g., partly in 60-65 dB and partly in 65-70 dB), the higher range zone should apply for the purposes of determining sound attenuation requirements unless less than 25% of the building floor area is within the least restrictive zone. In such case, the lower range zone may be used. See **Exhibit 2F** for graphical example.

N5 <u>**Avigation Easements:**</u> The City of Ontario shall require dedication of an avigation easement in accordance with **Policy SP1** as a condition of approval for proposed noise-sensitive developments situated within the City of Ontario portion of the CNEL 65 dB. Affected Agencies that have authority over lands elsewhere within CNEL 65 dB contour are encouraged to establish a similar requirement for development within their jurisdictions.

Table 2-3

Noise Criteria

Legend: Land use compatibility
(A detailed explanation of each land use acceptability category is provided on pg. 2-50 of this table.)

Normally Compatible Land Use	Conditional Land Use (45/50)	Incompatible Land Use

- Cells that are conditionally compatible that have a number, indicate the interior noise level standard condition for use consistency.

Land Use Category [1] *Note: Multiple land use categories and compatibility criteria may apply to a project*	**Noise Impact Zones** Exterior Noise Exposure [2] (CNEL dB)					**Criteria for Conditional Uses** *Note: Interior noise level limits shown in yellow cells also apply (See **Policy N4)***
	≤ 60	60-65	65-70	70-75	≥ 75	
Outdoor Uses (limited or no activities in buildings)						
Natural Land Areas: desert, brush lands						Compatible at levels indicated, but noise disruption of natural quiet will occur
Water: flood plains, wetlands, lakes, reservoirs						
Agriculture (except residences and livestock): crops, orchards, vineyards, pasture, range land						
Livestock Uses: feed lots, stockyards, breeding, fish hatcheries, horse stables						Exercise caution with uses involving noise-sensitive animals
Outdoor Major Assembly Facilities: spectator-oriented outdoor stadiums, amphitheaters, fairgrounds, zoos [3]						Exercise caution if clear audibility by users is essential
Group Recreation (limited spectator stands): athletic fields, water recreation facilities, picnic areas						Exercise caution if clear audibility by users is essential
Small/Non-Group Recreation: golf courses, tennis courts, shooting ranges						Exercise caution if clear audibility by users is essential
Local Parks: children-oriented neighborhood parks, playgrounds						Exercise caution if clear audibility by users is essential
Camping: campgrounds, recreational vehicle/motor home parks						
Cemeteries (excluding chapels)						Compatible at levels indicated, but noise disruption of outdoor activities will occur
Residential and Lodging Uses						
Residential (<8 d.u./acre): individual dwellings, townhouses, mobile homes, bed & breakfast inns [4]		45				
Residential (≥8 d.u./acre) [4]		45	45			
Long-Term Lodging (>30 nights): extended-stay hotels, dormitories		45	45			
Short-Term Lodging (≤ 30 nights): hotels, motels, other transient lodging (except conference/assembly facilities)		45	45			

Table 2-3

Noise Criteria

Legend: Land use compatibility
(A detailed explanation of each land use acceptability category is provided on pg. 2-50 of this table.)

Normally Compatible Land Use	Conditional Land Use (45/50)	Incompatible Land Use

- Cells that are conditionally compatible that have a number, indicate the interior noise level standard condition for use consistency.

Land Use Category [1] *Note: Multiple land use categories and compatibility criteria may apply to a project*	Noise Impact Zones Exterior Noise Exposure [2] (CNEL dB)					**Criteria for Conditional Uses** *Note: Interior noise level limits shown in yellow cells also apply (See **Policy N4)***
	≤ 60	60-65	65-70	70-75	≥ 75	
Congregate Care: retirement homes, assisted living, nursing homes, intermediate care facilities		45	45			
Educational and Institutional Uses						
Family day care homes (≤14 children) [4]		45				
Children's Schools: K-12, day care centers (>14 children); school libraries		45				
Adult Education classroom space: adult schools, colleges, universities		45	45			Applies only to classrooms; offices, laboratory facilities, gymnasiums, outdoor athletic facilities, and other uses to be evaluated as indicated for those land use categories
Community Libraries		45				
Indoor Major Assembly Facilities: auditoriums, conference centers, concert halls, indoor arenas [3]		45	45			
Indoor Large Assembly Facilities: movie theaters, places of worship, cemetery chapels, mortuaries [3]		45	45			
Indoor Recreation: gymnasiums, club houses, athletic clubs, dance studios			50			
In-Patient Medical: hospitals, mental hospitals		45	45			
Out-Patient Medical: health care centers, clinics		45	45	45		
Penal Institutions: prisons, reformatories		45	45			
Public Safety Facilities: police, fire stations			50	50		
Commercial, Office, and Service Uses						
Major Retail: regional shopping centers, 'big box' retail			50	50		Outdoor dining or gathering places incompatible above CNEL 70 dB
Local Retail: community/neighborhood shopping centers, grocery stores			50	50		Outdoor dining or gathering places incompatible above CNEL 70 dB
Eating/Drinking Establishments: restaurants, fast-food dining, bars			50	50		Outdoor dining or gathering places incompatible above CNEL 70 dB
Limited Retail/Wholesale: furniture, automobiles, heavy equipment, lumber yards, nurseries			50	50		

Table 2-3
Noise Criteria

Legend: Land use compatibility
(A detailed explanation of each land use acceptability category is provided on pg. 2-50 of this table.)

Normally Compatible Land Use	Conditional Land Use (45/50)	Incompatible Land Use

- Cells that are conditionally compatible that have a number, indicate the interior noise level standard condition for use consistency.

Land Use Category [1] *Note: Multiple land use categories and compatibility criteria may apply to a project*	**Noise Impact Zones** Exterior Noise Exposure [2] (CNEL dB)					**Criteria for Conditional Uses** *Note: Interior noise level limits shown in yellow cells also apply (See **Policy N4)***
	≤ 60	60-65	65-70	70-75	≥ 75	
Offices: professional services, doctors, finance, civic; radio, television & recording studios, office space associated with other listed uses			50	50		
Personal & Miscellaneous Services: barbers, car washes, print shops			50	50		
Vehicle Fueling: gas stations, trucking & transportation terminals				50	50	
Industrial, Manufacturing, and Storage Uses						
Hazardous Materials Production: oil refineries, chemical plants (≥6,000 gallons)						
Heavy Industrial						
Light Industrial, High Intensity: food products preparation, electronic equipment				50	50	
Light Industrial, Low Intensity: machine shops, wood products, auto repair				50	50	
Research & Development			50	50		
Indoor Storage: wholesale sales, warehouses, mini/other indoor storage, barns, greenhouses						
Outdoor Storage: public works yards, automobile dismantling						
Mining & Extraction						
Transportation, Communication, and Utilities						
Rail & Bus Stations				50	50	
Transportation Routes: road & rail rights-of-way, bus stops						
Auto Parking: surface lots, structures						
Communications Facilities: emergency communications, broadcast & cell towers						
Power Plants						
Electrical Substations						
Wastewater Facilities: treatment, disposal						
Solid Waste Disposal Facilities: landfill, incineration						
Solid Waste Transfer Facilities, Recycle Centers						

Land Use Compatibility	Interpretation/Comments
Normally Compatible	*Indoor Uses:* Either the activities associated with the land use are inherently noisy or standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor community noise equivalent level (CNEL); for land use types that are compatible because of inherent noise levels, sound attenuation must be provided for associated office, retail, and other noise-sensitive indoor spaces sufficient to reduce exterior noise to an interior maximum of CNEL 50 dB *Outdoor Uses:* Except as noted in the table, activities associated with the land use may be carried out with minimal interference from aircraft noise
Conditional	*Indoor Uses:* Building structure must be capable of attenuating exterior noise from all noise sources to the indoor CNEL indicated by the number in the cell (either 45 or 50) *Outdoor Uses:* Caution should be exercised with regard to noise-sensitive outdoor uses; these uses are likely to be disrupted by aircraft noise events; acceptability is dependent upon characteristics of the specific use [5]
Incompatible	*Indoor Uses:* Unacceptable noise interference if windows are open; at exposures above CNEL 65 dB, extensive mitigation techniques required to make the indoor environment acceptable for performance of activities associated with the land use *Outdoor Uses:* Severe noise interference makes the outdoor environment unacceptable for performance of activities associated with the land use

Notes

[1] Land uses not specifically listed shall be evaluated using the criteria for similar uses.

[2] For the purposes of these criteria, the exterior noise exposure generated by aircraft activity at ONT is defined by the projected noise impact zones illustrated on **Map 2-3** of this *Compatibility Plan*.

[3] A *Major Assembly Facility* is defined as having a capacity of ≥1,000 people, while a *Large Assembly Facility* has a capacity of 300 to 999 people. Source: International Building Code.

[4] In accordance with **Policies S1, N2,** and **SP2**, construction of a single-family home, including a second dwelling unit as defined by state law, is allowed on a legal lot of record if such use is permitted by local land use regulations. A family day care home (serving ≤14 children) may be established in any dwelling.

[5] Noise-sensitive land uses are ones for which the associated primary activities, whether indoor or outdoor, are susceptible to disruption by loud noise events. The most common types of noise-sensitive land uses include, but are not limited to, the following: residential, hospitals, nursing facilities, intermediate care facilities, educational facilities, libraries, museums, places of worship, child-care facilities, and certain types of passive recreational parks and open space.

APPENDIX 3.3:

CITY OF ONTARIO MUNICIPAL CODE NOISE ORDINANCE

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CHAPTER 29: NOISE

Sec. 5-29.01. Declaration of findings and policy.

It is hereby found and declared that:

(a) The making and creation of excessive, unnecessary or unusually loud noises within the limits of the City is a condition that has existed for some time, however, the extent and volume of such noises is increasing;

(b) The making, creation or maintenance of such excessive, unnecessary, unnatural or unusually loud noises that are prolonged, unusual and unnatural in their time, place and use affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City; and

(c) The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted, is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the residents of the City.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.02. Definitions.

As used in this chapter, specific words and phrases are defined as follows:

(a) "Ambient noise level" shall mean the all-encompassing noise level associated with a given environment and is a composite of sounds from all sources, excluding the alleged offensive noise or excessive sound, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

(b) "Applicable (noise) zone" shall mean the noise zone category based on the actual use of the property, provided that the actual use is a legal use in the City.

(c) "A-weighted sound level" shall mean the sound pressure level in decibels (dBAs) as measured with a sound level meter using the A-weighted filter network (scale) at slow response and at a pressure of twenty (20) micropascals. The A-weighted filter de-emphasizes the very low and a very high frequency component of sound in a manner similar to the response of the human ear, and is a numerical method of rating human judgment of loudness.

(d) "Decibel (dBA)" shall mean a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of pressure of the sound measured to the reference pressure of twenty (20) micropascals.

(e) "Equivalent sound or noise level (Leq)" shall mean the International Electrotechnical Commission (IEC) 60804 Standard for measurement, or the most recent revision thereof, for the sound level corresponding to a steady state noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level or the energy average noise level during the sample period. The measurement period for the purposes of this chapter is fifteen (15) minutes.

(f) "Impulsive noise" shall mean a noise of short duration usually less than one (1) second and of high intensity, with an abrupt onset and rapid decay. Such objectionable noises may also be repetitive.

(g) "Intrusive noise" shall mean that noise that intrudes over and above the ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence and tonal information content, as well as the prevailing ambient noise level.

(h) "Maintenance" shall mean the upkeep, repair or preservation of existing property or structures.

(i) "Noise" shall mean any unwanted sound or sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing or is otherwise annoying.

(j) "Noise level (sound level)" shall mean the weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum. For purposes of this chapter, all noise levels (sound levels) shall be A-weighted sound pressure level.

(k) "Noise (sound) level meter" shall mean an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks for the measurement and determination of noise and sound levels. For the purposes of this chapter, the sound level meter must meet the International Electrotechnical Commission (IEC) 60651 and 60804 Standards, or the most recent revisions thereof, for Type 1 sound level meters or an instrument and the associated recording and analyzing equipment that will provide equivalent data.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.03. Designated noise zones.

The properties hereinafter described shall be assigned to the following noise zones:

Noise Zone I:	All single-family residential properties;
Noise Zone II:	All multi-family residential properties and mobile home parks;

Noise Zone III:	All commercial property;
Noise Zone IV:	The residential portion of mixed use properties;
Noise Zone V:	All manufacturing or industrial properties and all other uses.

The actual use of the property, and not necessarily its zoning designation, shall be the determining factor in establishing whether a property is in Noise Zone I, II, III, IV or V, provided that the actual use is a legal use within the applicable zone.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.04. Exterior noise standards.

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		***Allowed Equivalent Noise Level, Leq. (2)***	
Noise Zone	***Type of Land Use***	***7 a.m. to 10 p.m.***	***10 p.m. to 7 a.m.***
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period; and

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.05. Interior noise standards.

(a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Interior Noise Level (1)		**Allowed Equivalent Noise Level, Leq.** (2)	
Noise Zone	***Type of Land Use***	***7 a.m. to 10 p.m.***	***10 p.m. to 7 a.m.***
I	Single-Family Residential	45 dBA	40 dBA
II	Multi-Family Residential, Mobile Home Parks	45 dBA	40 dBA
IV	Residential Portion of Mixed Use	45 dBA	40 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period;

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.06. Exemptions.

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

(a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, cosponsored, permitted or allowed by the City or any school district within the City's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;

(b) Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

(c) Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within forty-five (45) minutes in any hour of its being activated;

(d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of § 5-29.09;

(e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys;

(f) All mechanical devices, apparatus or equipment associated with agriculture operations provided that:

(1) Operations do not take place between 8:00 p.m. and 7:00 a.m.;

(2) Such operations and equipment are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions; or

(3) Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture;

(g) Noise sources associated with the maintenance of real property. Such activities shall instead be subject to the provisions of § 5-29.08;

(h) Any activity to the extent regulation thereof has been preempted by state or federal law;

(i) Any noise sources associated with people and/or music associated with a party at a residential property. Such noise shall be subject to the provisions of OMC § 5-29.07;

(j) Any noise source emanating from an ice cream truck within the City. Such noise shall be subject to the provisions of OMC § 4-18.04;

(k) Any noise sources associated with barking dogs or other intermittent noises made by animals on any properly within the City. Such noise shall be subject to the provisions of OMC Chapter 1, Title 6;

(l) Noise sources related to uses approved by a permit or development agreement adopted prior to the date of adoption of this chapter and that contains acoustic or noise standard conditions of approval. This exemption shall only be applicable during the effective period of the City-approved permit or development agreement.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.07. Loud and disturbing noise.

(a) It is unlawful for any person or property owner within the City to make, cause or allow to be made any loud, excessive, impulsive or intrusive noise, disturbance or commotion that disturbs the peace or quiet of any area or that causes discomfort or annoyance to any reasonable person of normal sensitivities in the area, after a Police or Code Enforcement Officer has first requested that the person or property owner cease and desist from making such noise. The types of loud, disturbing, excessive, impulsive or intrusive noise may include, but shall not be limited to, yelling, shouting, hooting, whistling, singing, playing a musical instrument, or emitting or transmitting any loud music or noise from any mechanical or electrical sound making or sound-amplifying device.

(b) The factors, standards, and conditions that may be considered in determining whether a violation of the provisions of this section has been committed, included, but not limited to, the following:

(1) The level of the noise;

(2) The level and intensity of the background (ambient) noise, if any;

(3) The proximity of the noise to residential or commercial sleeping areas;

(4) The nature and zoning of the area within which the noise emanates;

(5) The density of inhabitation of the area within which the noise emanates;

(6) The time of day and night the noise occurs;

(7) The duration of the noise;

(8) Whether the noise is constant, recurrent or intermittent;

(9) Whether the noise is produced by a commercial or noncommercial activity; and

(10) Whether the use is lawful under the provisions of Title 5 of this Code and whether the noise is one that could reasonably be expected from the activity or allowed use.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.08. Real property maintenance noise regulations.

(a) No person, while engaged in maintenance of real property, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, except between the hours of 8:00 a.m. and 6:00 p.m.

(b) Trimming or pruning that requires the use of chainsaws or mulching machines shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(c) The use of electrical or gasoline powered blowers, such as commonly used by gardeners or other persons for cleaning lawns, yards, driveways, gutters and other property shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(d) No landowner, gardener, property maintenance service, contractor, subcontractor or employer shall permit or allow any person or persons working under his or her direction or control to operate any tool, equipment or machine in violation of the provisions of this section.

(e) Exceptions. The provisions of this section shall not apply to the following:

(1) Emergency property maintenance required by the building official;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or department head determines that the maintenance, repair or improvement is immediately necessary to maintain public service,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes maintenance during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any maintenance that complies with the noise limits specified in § 5-29.04.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

(1) The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.10. Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.11. Schools, day care centers, churches, libraries, museums, health care institutions; Special provisions.

It is unlawful for any person to create any noise that causes the outdoor noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in § 5-29.04 prescribed for the assigned Noise Zone I.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.12. Sound amplifying equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of § 5-29.13. Such sound amplifying equipment shall not be construed to include electronic devices, including but not limited to, radios, tape players, tape recorders, compact disc players, MP3 players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.13. Amplified sound.

(a) The City Council enacts the following legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare for its citizenry. While recognizing that the use of sound amplifying equipment may be entitled to certain protection by the constitutional rights of freedom of speech and assembly, the City Council finds that in order to protect the public safety and the correlative rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise, reasonable regulation of the time, place and manner of the use of amplifying equipment is necessary. In no event shall approval or authorization required herein be withheld by reason of the constitutionally protected content of any material proposed to be broadcast through amplifying equipment.

(b) It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate a loudspeaker or sound amplifying device in a fixed or movable position or mounted upon any vehicle within the City for the purpose of giving instructions, directions, talks, addresses or lectures to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without a permit to do so from the Police Chief or his or her designee. Notwithstanding any other provision of this chapter, the provisions of this section shall also apply to the use of sound amplifying equipment upon public or private property when used in connection with outdoor or indoor public or private events, whether or not admission is charged or food or beverages are sold, when such activity is to be attended by more than one hundred (100) persons and the noise emanating from the event will be audible at the property plane, or in the case of a street dance or concert on the nearest residential property. Those activities listed in § 5-29.06(a) are exempt from the requirements of this section.

(c) The Police Chief or his or her designee is authorized to approve and issue permits under this section.

(d) An application for a permit required by this section shall be filed with the Police Chief at least sixteen (16) days and no more than one hundred twenty (120) days prior to the date on which the sound amplifying equipment is intended to be used. Applications for events covered by the First Amendment of the United States Constitution are exempt from the time requirements of this section if it is shown that circumstances require a shorter filing period and the event will not constitute an unsafe condition. The application shall contain the following information:

(1) The name, address and telephone number of both the owner and the user of the sound amplifying equipment;

(2) The license number, if a sound truck is to be used;

(3) A general description of the sound amplifying equipment which is to be used;

(4) Whether sound amplifying equipment will be used for commercial or noncommercial purpose;

(5) The dates and times upon and within which, and the streets or property over or upon which, the equipment is proposed to be operated;

(6) The name or names of one (1) or more persons who will be present during the conduct of any activities for which registration is sought and who will have authority to reduce the volume of any sound amplifying equipment during the course of the activities if required pursuant to this chapter and, otherwise, to insure compliance with the provisions of this chapter;

(7) A statement by the applicant that he or she is willing and able to comply with the provisions of this chapter and the conditions of the permit; and

(8) A sketch of the area or facilities within which the activities are to be conducted, with approximate dimensions and illustration of the location and orientation of all sound-amplifying equipment.

(e) The Police Chief shall deny the permit application or revoke any permit if the chief finds any of the following:

(1) The application contains materially false or intentionally misleading information;

(2) The use of sound amplifying equipment at an event or activity proposed will be located in or upon a premises, building or structure that is hazardous to the health or safety of the employees or patrons of the premises, business, activity, or event, or the general public, under the standards established by the Uniform Building or Fire Codes, or other applicable codes, as set forth in OMC Titles 4 and 8;

(3) The use of sound amplifying equipment at an event or activity proposed in or upon a premises, building or structure that lacks adequate on-site parking for participants attending the proposed event or activity under the applicable standards set forth in OMC Title 9;

(4) The conditions of any motor vehicle movement are such that, in his or her opinion, the use of the equipment would constitute an unreasonable interference with traffic safety;

(5) The conditions of pedestrian movement are such that the use of the equipment would constitute a detriment to traffic safety;

(6) The application submitted by the applicant reveals that the applicant would violate the provisions of this section or any other

provision of federal, state and/or local law;

(7) The applicant is unwilling or unable to comply with the provisions of this chapter or any conditions imposed upon any permit issued;

(8) There had already been a permitted event at the intended location, or within a two hundred (200) yard radius of the intended location and the prior permitted event was located on residentially zoned property or on a street, alley, public parking lot or neighborhood park within three (3) months prior to the intended event. Community parks are exempt from this subsection (8); or

(9) The applicant or location has had previous violations within the past calendar year, and in the judgment of the Police Chief, issuance would be contrary to the intent of this section.

(f) In determining whether the use of the equipment would constitute an unreasonable interference with or detriment to traffic safety, the Police Chief shall consider, but shall not necessarily be limited to:

(1) The volumes, patterns and speed of vehicular and pedestrian traffic in the proposed area of use;

(2) The relationship of the proposed use of equipment and potential impacts upon traffic patterns;

(3) Availability of sufficient room for the operation of the equipment without significantly interfering with the traffic patterns;

(4) Proximity to schools, playgrounds and similar facilities where use of such equipment might attract children into traffic patterns; or

(5) Proximity to busy intersections or other potentially hazardous conditions where use of such equipment might constitute a hazard by reason of its tendency to distract drivers of vehicles or pedestrians.

(g) Issuance or denial.

(1) If the application is approved, the Police Chief shall return an approved copy of the application to the applicant and shall issue a permit. The permit shall constitute permission for the use of the sound amplifying equipment as requested.

(2) Any application filed shall be either approved or disapproved within five (5) days of the filing thereof.

(3) If the application is disapproved, the Police Chief shall return a disapproved copy forthwith to the applicant with a written statement on the reason for disapproval.

(i) Any person aggrieved by a decision of the Police Chief or his or her designee may file an appeal to the City Manager. A complete and proper appeal shall be filed with the City Clerk within ten (10) calendar days of the action that is the subject of the appeal. If the applicant fails to file an appeal within the ten (10) day filing period provided herein, denial shall take effect immediately upon expiration of such filing period. All appeals shall be in writing and shall contain the following information: (a) name(s) of the person filing the appeal, (b) a brief statement in ordinary and concise language of the relief sought, and (c) the signatures of all parties named as appellants and their mailing addresses. After receiving the appeal, the City Clerk shall immediately forward the matter to the City Manager for handling.

(ii) The City Manager shall, upon receipt of the appeal, set the matter for hearing before the City Manager or a hearing officer. Any hearing officer shall be a licensed attorney or recognized mediator designated by the City Manager. The hearing shall be set for not more than ten (10) calendar days after the receipt of the appeal unless a longer time is requested or consented to by the appellant. Notice of such hearing shall be given in writing and mailed at least five (5) calendar days prior to the date of the hearing, by U.S. mail, with a proof of service attached, addressed to the address listed on the permit application, or the written appeal if different from the permit application. The notice shall state the grounds of the complaint or reason for the denial and shall state the time and place where such hearing will be held.

(iii) The City Manager or hearing officer shall, within ten (10) calendar days following the conclusion of the hearing, make a written finding and decision, which shall be delivered to the City and the appellant by first class mail. Notwithstanding any provision in this Code, the decision of the City Manager or hearing officer shall be the final administrative decision of the City. Any party dissatisfied with the decision of the City Manager or hearing officer may seek review of such decision under the provisions of Code Civil Procedure, §§ 1094.5 and 1094.8, as amended from time to time.

(h) In addition to any other provisions of this Code, the use of sound-amplifying equipment and sound trucks in the City shall be subject to the following regulations:

(1) The only sounds permitted are music and human speech;

(2) Sound shall not be emitted within one hundred (100) yards of hospitals, churches, schools and City Hall;

(3) The volume of sound shall be controlled so that it will not be audible for a distance in excess of one hundred (100) feet from the sound amplifying equipment or sound truck, and so that the volume is not unreasonably loud, raucous, jarring, disturbing or a nuisance to persons within the range of allowed audibility; or

(4) The sound amplifying equipment or sound truck shall not be used between the hours of 8:00 p.m. and 8:00 a.m.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.14. Motor vehicles.

The use of any motor vehicle in such a condition as to create excessive, impulsive or intrusive noises is prohibited. The discharge into the open air of the exhaust of any internal combustion engine, stationary or mounted on wheels, motorboat or motor vehicle, including motor cycle, whether or not discharged through a muffler or other similar device, which discharge creates excessive, unusual, impulsive or intrusive noise is prohibited. Motor vehicles shall comply with the noise regulations of the California Vehicle Code.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.15. Noise level measurement.

(a) The location selected for measuring exterior noise levels in a residential area shall be at any part of a private yard, patio, deck or balcony normally used for human activity and identified by the owner or, if occupied by someone other than the owner, the occupant of the affected property as suspected of exceeding the noise level standard. This location may be the closest point in the private yard or patio, or on the deck or balcony, to the noise source, but should not be located in nonhuman activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck or balcony. The location selected for measuring exterior noise levels in a nonresidential area shall be at the closest point to the noise source. The measurement microphone height shall be five (5) feet above finish elevation or, in the case of a deck or balcony, the measurement microphone height shall be five (5) feet above the finished floor level.

(b) The location selected for measuring interior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four (4) feet from the wall, ceiling or floor, or within the frame of a window opening, nearest the noise source. The measurements shall be made with windows in an open position.

(c) Any decibel measurement made pursuant to the provisions of this chapter shall be measured in decibels (dBAs) as measured with a sound level meter using the A-weighted sound pressure level.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.16. Prima facie violation.

Any noise exceeding the noise level standard as specified in §§ 5-29.04 and 5-29.05, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.17. Penalty.

(a) Any person who negligently or knowingly violates any provision of this chapter shall be guilty of an infraction and upon conviction shall be punishable by a fine specified in OMC § 1-2.01. Each day a violation occurs shall constitute a separate offense and shall be punishable as such.

(b) Any person who negligently or knowingly violates any provision of this chapter may also be subject to fine(s) specified in the administrative citation schedule of fines set forth in OMC § 1-5.04. The manner of issuing administrative citations shall comply with all the procedures specified in OMC Chapter 5, Title 1.

(c) As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter, which operation or maintenance causes or creates sound levels exceeding the allowable standards as specified in this chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement by a restraining order or injunction issued by a court of competent jurisdiction.

(d) Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of enforcing this chapter is declared to be public nuisance and may be by resolution of the City Council declared to be a lien and special assessment against the property on which such nuisance is maintained, and any such charge shall also be a personal obligation of the property owner.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.18. Enforcement and administration.

(a) It shall be the responsibility of Police or Code Enforcement Officers to enforce the provisions of this chapter and to perform all other functions required by this chapter. Such duties shall include, but not be limited to investigating potential violations, issuing warning notices and citations, and providing evidence to the City prosecutor for legal action.

(b) For violations of § 5-29.07, Police or Code Enforcement Officers shall obtain a declaration under penalty of perjury from two (2) declarants living in separate households within a sixty (60) day period stating in detail all of the following:

(1) That the declarant is a resident of a residential neighborhood located within two hundred (200) yards of the noise source; and

(2) Within the past month declarant has heard noise for substantially long periods to the extreme annoyance of the declarant.

(3) Declarations from two (2) declarants are required to prove a violation of § 5-29.07, but are not required to prove that a person has violated any other provision of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.19. City Manager waiver.

The City Manager is authorized to grant a temporary waiver to the provisions of this chapter for a period of time necessary to correct the violations of this chapter, if such temporary waiver would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary waiver is sought. This time period may include a commitment to a program that includes placing necessary orders and entering into necessary contracts within thirty (30) days for repair or installation.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.20. Noise abatement program.

(a) In circumstances where adopted community-wide noise standards and policies prove impractical in controlling noise generated from a specific source, the City Council may establish a noise abatement program that recognizes the characteristics of the noise source and affected property and that incorporates specialized mitigation measures.

(b) Noise abatement programs shall set forth in detail the approved terms, conditions and requirements for achieving maximum compliance with noise standards and policies. Said terms, conditions and requirements may include, but shall not be limited to, limitations, restrictions, or prohibitions on operating hours, location of operations, and the types of equipment.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 9-1.3310. Vibration.

No vibration shall be detectable beyond the property line of the site from which the vibration is emanating. Within M Districts, vibration shall not exceed the standards set forth in Table 33-3.

Table 33-3 - Maximum Vibration in M Districts

Frequency (Cycles Per Second)	***Vibration Displacement (inches)***	
	Steady State	***Impact***
Under 10	.0055	.0010
10-19	.0044	.0008
20-29	.0033	.0006
30-39	.0002	.0004
40+	.0001	.0002

APPENDIX 3.4:

CITY OF RANCHO CUCAMONGA DEVELOPMENT CODE NOISE STANDARDS

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Chapter 17.66 Performance Standards

Sections:

Section 17.66.010 Purpose and Intent

The performance standards established in this Chapter are intended to ensure that uses and activities shall occur in a manner to protect the public health and safety and that do not produce adverse impacts on surrounding properties nor the community at large. The standards contained in this Chapter apply to all zoning districts. If necessary, the City will retain a professional expert or designated regulatory agency to assist in assessing possible impacts, and the applicant or business owner will pay any cost incurred.

Section 17.66.020 General Requirements

Land or buildings shall not be used or occupied in a manner creating any dangerous injurious, noxious, fire, explosive or other hazard; noise, vibration, smoke, dust, odor, or form of air pollution; heat, cold, dampness, electrical, or other disturbance; glare, refuse, or wastes; or other substances, conditions, or elements which would adversely affect the surrounding area. All uses shall conform to the regulations of this Chapter in addition to the regulations set forth for the district in which the use is situated.

Section 17.66.030 Points of Measurement

Measurements necessary for enforcement of performance standards set forth in this Chapter shall be taken at the property line of the establishment or use.

Section 17.66.040 Hazardous Materials

The following standards are intended to ensure that the use, handling, storage, and transportation of hazardous materials comply with all applicable state laws (including but not limited to Government Code §65850.2 and Health and Safety Code §25505, et seq.) and that appropriate information is reported to the Rancho Cucamonga Fire District as the regulatory authority.

A. **Reporting Requirements.** All businesses required by state law (Health and Safety Code §6.95) to prepare hazardous materials release response plans and Hazardous Materials Inventory Statements shall, upon request, submit copies of these plans, including any revisions, to the Fire District.

B. **Underground Storage.** Underground storage of hazardous materials shall comply with all applicable requirements of state law (including but not limited to Health and Safety Code §6.7). Businesses that use underground storage tanks shall comply with the following procedures:

1. Notify the Fire District of any unauthorized release of hazardous materials prescribed by City, county, state, and federal regulations.

2. Notify the Fire District and the County Health Department of any proposed abandoning, closing, or ceasing operation of an underground storage tank and actions to be taken to dispose of any hazardous materials.

3. Submit copies of the closure plan to the Fire District.

C. **Aboveground Storage.** Aboveground storage tanks for hazardous materials and flammable and combustible materials may be allowed subject to the approval of the Fire District.

D. **New Development.** Structures adjacent to a commercial supply bulk transfer delivery system with at least six inch (6”) pipes shall be designed to accommodate a setback of at least one hundred feet (100’) from that delivery system. The setback may be reduced if the Planning Director, with recommendation from the Fire District, can make one or more of the following findings:

1. The structure would be protected from the radiant heat of an explosion by berming or other physical barriers.

2. A one hundred foot (100’) setback would be impractical or unnecessary because of existing topography, streets, parcel lines, or easements.

3. A secondary containment system for petroleum pipelines and transition points shall be constructed. The design of the system shall be subject to the approval of the Fire District.

E. **Notification Required.** A subdivider of a development within five hundred feet (500’) of a pipeline shall notify a new/potential owner before the time of purchase and the close of escrow of the location, size, and type of pipeline.

Section 17.66.050 Noise Standards

A. **Purpose.** In order to control unnecessary, excessive, and annoying noise and vibration in the city, it is hereby declared to be the policy of the City to prohibit such noise generated from or by all sources as specified in this Section. The provisions apply within all jurisdictions within all zoning districts. Provisions apply based on the designated noise zones:

NOISE ZONE I: All single- and multiple-family residential properties

NOISE ZONE II: All commercial properties

B. **Decibel Measurement Criteria.** Any decibel measurement made pursuant to the provisions of this Section shall be based on a reference sound pressure of twenty (20) micropascals as measured with a sound level meter using the A-weighted network (scale) at slow response.

C. **Exterior Noise Standards.**

1. It shall be unlawful for any person at any location within the city to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:

   a. Basic Noise Level for a cumulative period of not more than fifteen (15) minutes in any one hour; or

   b. Basic Noise Level plus 5 dBA for a cumulative period of not more than ten (10) minutes in any one hour; or

   c. Basic Noise Level plus 14 dBA for a cumulative period of not more than five (5) minutes in any one hour; or

   d. Basic Noise level plus 15 dBA at any time.

2. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.

3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement's location, designated land use, and for the time of day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the Planning Director for the purpose of establishing the existing ambient noise level at the measurement location.

D. **Special Exclusions.** The following activities shall be exempted from the provisions of this Section:

1. City- or school-approved activities conducted on public parks, public playgrounds, and public or private school grounds including, but not limited to, athletic and school entertainment events between the hours of 7 a.m. and 10 p.m.

2. Occasional outdoor gatherings, dances, shows, and sporting and entertainment events, provided said events are conducted pursuant to the approval of a Temporary Use Permit issued by the City.

3. Any mechanical device, apparatus, or equipment used, related to, or connected with emergency machinery, vehicle, work, or warning alarm or bell,

provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within thirty (30) minutes in any hour of its being activated.

4. Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities:

   a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8 p.m. and 7 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.

   b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10 p.m. and 6 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line.

5. All devices, apparatus, or equipment associated with agricultural operations, provided:

   a. Operations do not take place between 8 p.m. and 7 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday.

   b. Such operations and equipment are utilized for protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions.

   c. Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by, or regulations enforced by, the California Department of Agriculture.

6. Noise sources associated with the maintenance of real property, provided said activities take place between the hours of 7 a.m. and 8 p.m. on any day.

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

E. **Schools, Churches, Libraries, Health Care Institutions.** It shall be unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church, or library while the same is in use, to exceed the noise standards specified in this Section and prescribed for the assigned noise zone in which the school, hospital, church, or library is located.

F. **Residential Noise Standards.**

1. Table 17.66.050-1 (Residential Noise Limits) includes the maximum noise limits in residential zones. These are the noise limits when measured at the adjacent residential property line (exterior) or within a neighboring home (interior).

TABLE 17.66.050-1 RESIDENTIAL NOISE LIMITS

Location of Measurement	Maximum Allowable	
	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.
Exterior	60 dBA	65dBA
Interior	45 dBA	50dBA

Additional:
(A) It shall be unlawful for any person at any location within the city to create any noise or to allow the creation of any noise which causes the noise level when measured within any other fully enclosed (windows and doors shut) residential dwelling unit to exceed the interior noise standard in the manner described herein.
(B) If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, each of the noise limits above shall be reduced 5 dBA for noise consisting of impulse or simple tone noise.

2. Other Residential Noise Limitations.

   a. Peddlers – use of loud noise, etc., to advertise goods, etc. No peddler or mobile vendor or any person in their behalf shall shout, cry out, or use any device or instrument to make sounds for the purpose of advertising in such a manner as to create a noise disturbance.

   b. Animal noises. No person owning or having the charge, care, custody, or control of any dog or other animal or fowl shall allow or permit the same to habitually howl, bark, yelp, or make other noises, in such a manner as to create a noise disturbance.

   c. Radios, television sets, musical instruments, and similar devices. No person shall operate or permit the operation or playing of any device which reproduces, produces, or amplifies sound, such as a radio, musical instrument, phonograph, or sound amplifier, in such a manner as to create a noise disturbance

      i. Across any real property boundary or within Noise Zone I, between the hours of 10 p.m. and 7 a.m. on the following day (except for activities for which a Temporary Use Permit has been issued).

      ii. At fifty feet (50’) from any such device, if operated on or over any public right-of-way.

G. **Commercial and Office Noise Provisions.** All operations and businesses shall be conducted to comply with the following standards:

1. All commercial and office activities shall not create any noise that would exceed an exterior noise level of 65 dBA during the hours of 10:00 p.m. to 7:00 a.m.

and 70 dBA during the hours of 7:00 a.m. to 10:00 p.m. when measured at the adjacent property line.

2. Loading and Unloading. No person shall cause the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10 p.m. and 7:00 a.m., in a manner which would cause a noise disturbance to a residential area.

3. Vehicle Repairs and Testing. No person shall cause or permit the repairing, rebuilding, modifying, or testing of any motor vehicle, motorcycle, or motorboat in such a manner as to increase a noise disturbance between the hours of 10 p.m. and 8 a.m. adjacent to a residential area.

H. Industrial noise provision included in Table 17.66.110-1 (Industrial Performance Standards).

Section 17.66.060 Odor, Particulate Matter, and Air Containment Standards

A. Sources of odorous emissions, particulate matter, and air containment standards shall comply with the rules and regulations of the Air Pollution Control District and the State Health and Safety Code.

B. Noxious odorous emissions in a manner or quantity that is detrimental to or endanger the public health, safety, comfort, or welfare is declared to be a public nuisance and unlawful, and shall be modified to prevent further emissions release, except for agricultural operations in compliance with this Title. No emission of odors shall be permitted in such quantities as to be readily detectable when diluted in the ratio of one volume of odorous air to four volumes of clean air at the property line as specified in Section 17.66.030 (Points of Measurement) of this Chapter. Any process which may involve the creation or emission of any odors shall be provided with a secondary safeguard system, so that control will be maintained if the primary safeguard system should fail.

C. No dust or particulate matter shall be emitted that is detectable by a reasonable person without instruments.

D. Exhaust air ducts shall be located or directed away from abutting residentially zoned properties.

Section 17.66.070 Vibration

Uses that generate vibrations that may be considered a public nuisance or hazard on any adjacent property shall be cushioned or isolated to prevent generation of vibrations. Uses shall be operated in compliance with the following provisions:

A. No vibration shall be produced that is transmitted through the ground and is discernible without the aid of instruments at the points of measurement specified in Section 17.66.030 (Points of Measurement) of this Chapter, nor shall any vibration produced exceed 0.002g peak at up to 50 CPS frequency, measured at the point of measurement specified in Section 17.66.030 (Points of Measurement) of this Chapter using either seismic or electronic vibration measuring equipment. Vibrations occurring at higher than 50 CPS frequency of a periodic vibration shall not induce accelerations exceeding .001g. Single-impulse periodic vibrations occurring at an average interval greater than five (5) minutes shall not induce accelerations exceeding .01g.

B. Uses, activities, and processes shall not generate vibrations that cause discomfort or annoyance to reasonable persons of normal sensitivity or which endangers the comfort, repose, health, or peace of residents whose property abuts the property line of the parcel.

C. Uses shall not generate ground vibration that interferes with the operations of equipment and facilities of adjoining parcels.

D. Vibrations from temporary construction/demolition and vehicles that leave the subject parcel (e.g., trucks, trains, and aircraft) are exempt from the provisions of this Section.

Section 17.66.080 Heat

Heat emitted at any point shall not at any time cause a temperature increase on any property in excess of ten (10) degrees Fahrenheit, whether such change be in the air or on the ground, in a natural stream or lake, or in any structure on such adjacent property.

Section 17.66.090 Radioactivity or Electric Disturbance

No activities shall be permitted which emit dangerous radioactivity at any point or electrical disturbance adversely affecting the operation of any equipment other than that of the creator of such disturbance.

Section 17.66.100 Liquid or Solid Wastes

No discharge of any matter shall be permitted at any point into any public sewer, private sewage system, or stream or into the ground, except in accordance with standards approved by the state and county departments of health and local ordinances. There shall be no accumulation outdoors of solid wastes conducive to the breeding of rodents, insects, or other pests unless stored in closed containers.

Section 17.66.110 Special Industrial Performance Standards

A. **Purpose.** The performance standards allow industrial uses to operate consistent with the overall characteristics of the land use category to provide for a healthy, safe, and pleasing environment in keeping with the nature and level of surrounding industrial activity. The performance standards contained in Table 17.66.110-1 (Industrial Performance Standards) are applied based on the zoning district as follows:

1. Industrial Park (IP) Zoning District – Class A Performance Standards. The most restrictive of the performance standards to ensure a high quality working environment and available sites for industrial and business firms whose functional and economic needs require protection from the adverse affects of

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APPENDIX 5.1:

STUDY AREA PHOTOS

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L3
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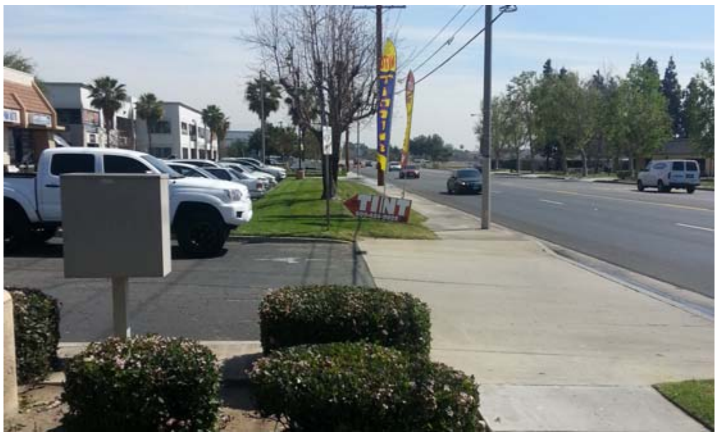

L3_E
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L3_SW
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L3_W
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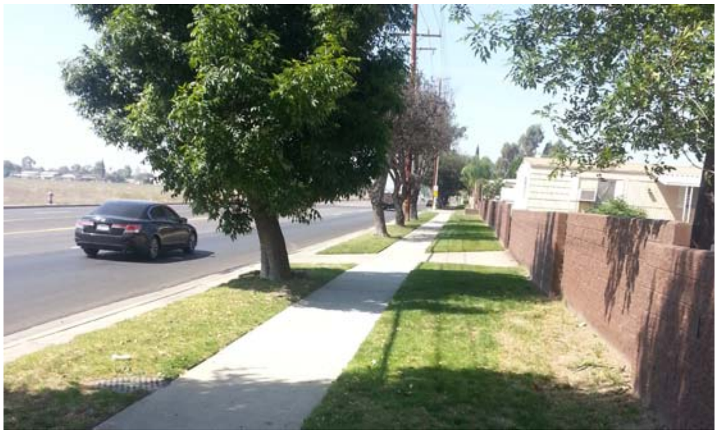

L3_W2
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L4
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L10
34, 4' 26.266000", 117, 36' 40.192000"

L10_E
34, 4' 26.266000", 117, 36' 40.192000"

L10_N
34, 4' 26.266000", 117, 36' 40.192000"

L10_N2
34, 4' 26.266000", 117, 36' 40.192000"

L10_S
34, 4' 26.266000", 117, 36' 40.192000"

L10_S2
34, 4' 26.266000", 117, 36' 40.192000"

L11
34, 4' 35.877000", 117, 36' 11.965000"

L11_Construction East of School
34, 4' 38.933000", 117, 36' 4.039000"

L11_E
34, 4' 35.337000", 117, 36' 13.268000"

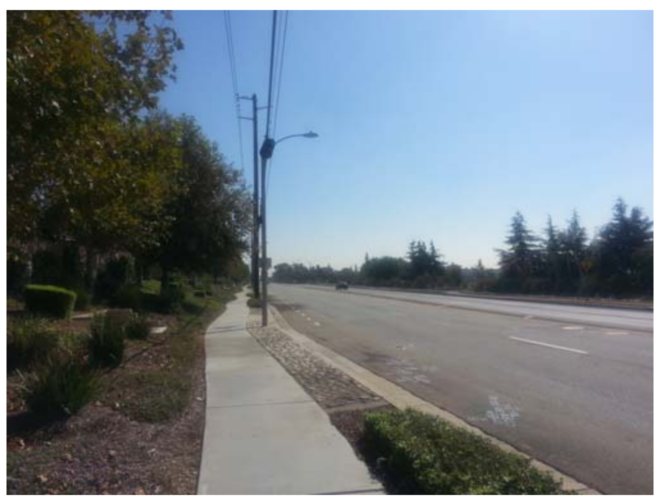

L11_N
34, 4' 35.337000", 117, 36' 13.268000"


L11_NE
34, 4' 35.337000", 117, 36' 13.268000"


L11_S
34, 4' 35.337000", 117, 36' 13.268000"


L11_SW
34, 4' 35.337000", 117, 36' 13.268000"


L12
34, 4' 39.773000", 117, 36' 1.954000"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L12_S
34, 4' 39.773000", 117, 36' 1.954000"


L12_W
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L13
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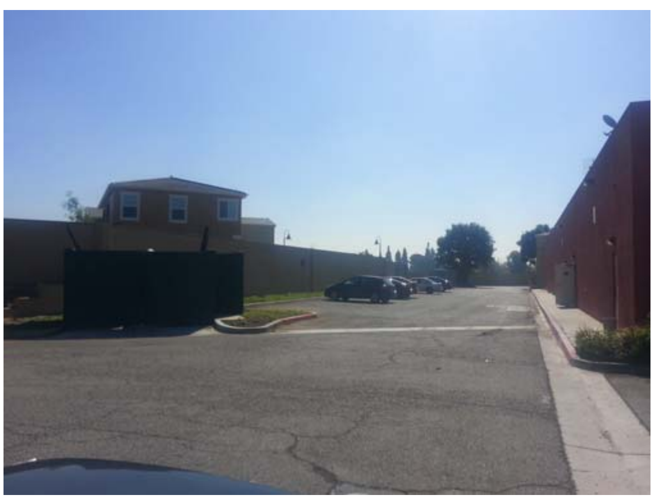
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L13_N
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L13_NE
34, 4' 18.993000", 117, 35' 32.774000"

L13_W
34, 4' 18.993000", 117, 35' 32.774000"

L14
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L14_N
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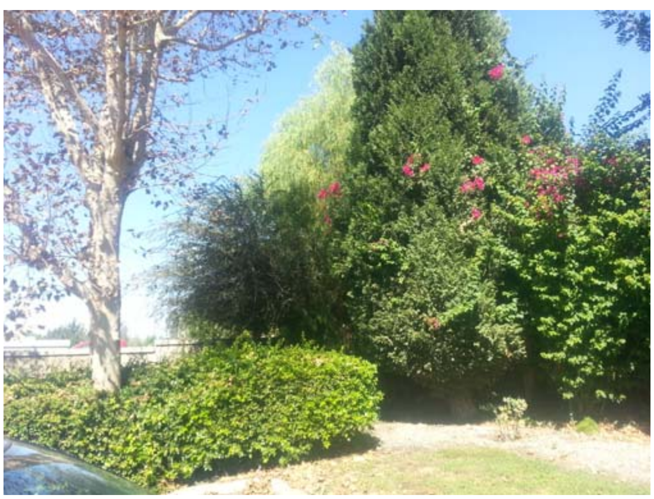

L14_NW
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L14_S
34, 4' 7.183000", 117, 36' 26.680000"

L14_SE
34, 4' 7.183000", 117, 36' 26.680000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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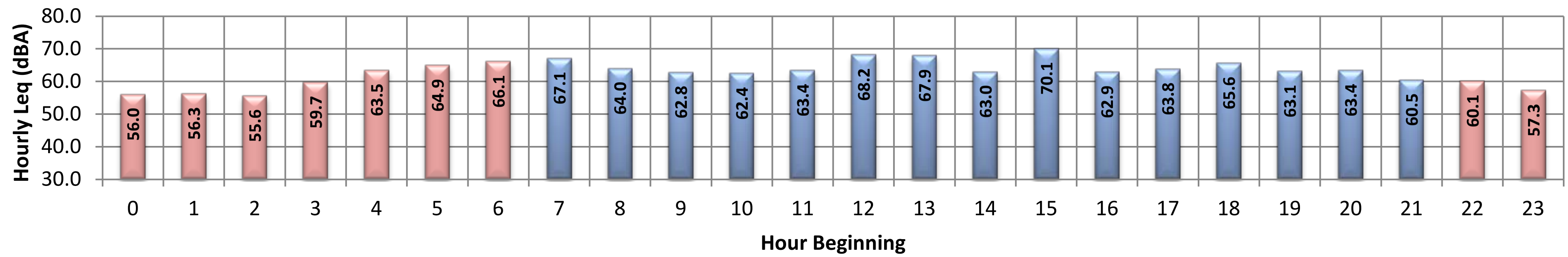
24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location:	L1 - Located near the northwest corner of the Project site at existing residential homes on Rosewood Court.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
		Date: 3/13/2014	65.4	61.6	69.1

Hourly Leq dBA Readings (unadjusted)



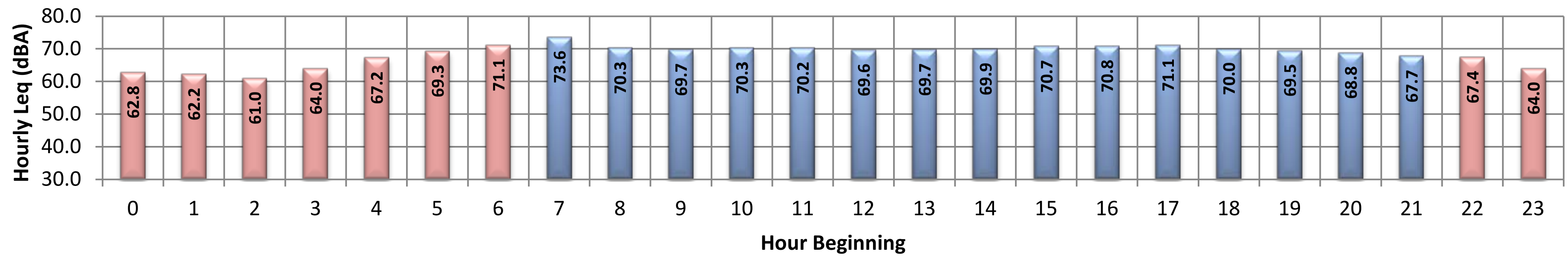
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	60.5	76.8	49.5	67.5	67.0	64.5	63.5	61.0	58.5	53.0	52.0	50.5
	Max	70.1	99.6	56.9	81.0	76.5	72.0	70.0	67.5	65.5	60.0	59.0	58.0
Night	Min	55.6	70.7	45.8	63.0	62.0	60.5	59.5	55.5	52.5	48.0	47.5	46.5
	Max	66.1	81.8	56.9	73.0	71.5	70.0	69.0	67.0	64.5	60.5	59.5	58.0
Hourly Summary													
Night	0	56.0	72.2	45.8	65.0	63.0	61.0	60.0	55.5	52.5	48.0	47.5	46.5
	1	56.3	70.7	47.1	64.0	63.0	61.0	59.5	56.5	54.0	50.5	50.0	48.5
	2	55.6	71.5	47.5	63.0	62.0	60.5	59.5	55.5	53.0	50.0	49.5	48.5
	3	59.7	76.3	51.4	66.5	65.5	63.5	62.5	60.0	58.0	55.0	54.0	52.5
	4	63.5	81.3	53.5	71.5	69.5	67.0	66.0	63.5	61.5	59.0	58.5	57.0
	5	64.9	81.8	55.7	72.0	70.5	68.5	68.0	65.0	63.0	59.5	59.0	57.0
	6	66.1	80.0	56.9	73.0	71.5	70.0	69.0	67.0	64.5	60.5	59.5	58.0
Day	7	67.1	85.4	52.9	74.0	72.5	71.0	70.0	67.5	65.5	60.0	58.5	56.0
	8	64.0	83.3	50.0	72.0	70.0	67.5	66.5	64.0	61.5	54.5	53.0	51.5
	9	62.8	80.5	49.5	71.0	69.5	67.0	66.0	63.5	60.5	53.0	52.0	50.5
	10	62.4	78.4	50.0	71.0	69.0	67.0	65.5	63.0	60.0	53.0	52.0	50.5
	11	63.4	86.5	52.2	71.0	69.0	67.0	66.0	63.0	60.5	56.0	55.0	53.5
	12	68.2	89.2	53.0	81.0	76.5	72.0	70.0	64.5	61.5	56.0	55.5	54.0
	13	67.9	95.6	53.5	74.0	71.5	68.0	67.0	64.0	61.5	56.5	55.5	54.5
	14	63.0	80.2	53.8	71.5	69.0	67.0	65.5	63.0	61.0	57.5	56.5	55.0
	15	70.1	99.6	53.4	72.5	70.0	67.0	65.5	63.0	61.0	57.0	56.0	55.0
	16	62.9	82.7	53.8	70.0	68.0	66.0	65.0	63.0	61.0	58.5	57.5	56.0
	17	63.8	83.4	54.7	72.5	70.0	67.0	66.0	63.5	61.5	58.5	58.0	56.5
	18	65.6	90.1	56.9	76.0	72.5	68.0	66.5	63.5	62.0	59.5	59.0	58.0
	19	63.1	76.8	56.0	69.5	68.0	66.5	65.5	63.5	62.0	59.0	58.5	57.5
	20	63.4	84.2	53.0	71.0	69.0	66.5	65.5	63.0	61.0	58.0	57.0	54.5
	21	60.5	77.9	52.2	67.5	67.0	64.5	63.5	61.0	58.5	54.5	54.0	53.5
Night	22	60.1	76.1	51.4	69.5	67.0	64.0	63.0	60.0	57.5	53.5	53.0	52.0
	23	57.3	72.3	48.8	65.0	64.0	62.0	61.0	57.5	54.5	51.5	51.0	50.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location:	L2 - Located near existing multi-family residential land uses near 1110-C E. 4th Street, north of the Project site.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
		Date: 3/13/2014	70.3	66.7	74.2

Hourly Leq dBA Readings (unadjusted)



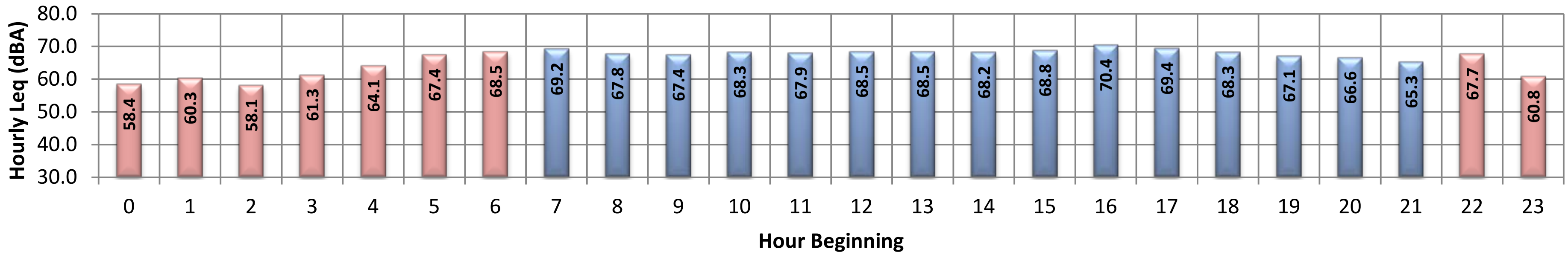
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	67.7	80.5	48.5	77.0	76.0	74.0	73.0	68.0	61.5	53.0	51.0	49.5
	Max	73.6	101.7	56.7	80.0	79.0	77.0	76.0	72.5	69.0	60.5	58.5	57.5
Night	Min	61.0	79.4	44.3	73.5	71.5	66.5	64.0	57.5	54.0	48.5	48.0	45.5
	Max	71.1	89.9	56.7	79.5	78.0	76.5	75.5	72.0	67.0	61.0	60.0	58.5
Hourly Summary													
Night	0	62.8	79.4	45.7	75.0	73.0	69.5	67.0	58.5	54.0	48.5	48.0	46.5
	1	62.2	80.0	48.0	74.5	72.0	67.5	65.5	59.0	55.5	52.0	51.0	49.5
	2	61.0	79.8	44.3	73.5	71.5	66.5	64.0	57.5	55.0	49.5	48.5	45.5
	3	64.0	83.1	52.0	75.0	72.5	68.5	66.5	61.5	59.5	56.5	55.5	54.5
	4	67.2	83.3	55.8	77.0	75.5	73.0	71.0	65.5	63.5	59.5	59.0	56.5
	5	69.3	88.3	55.1	78.5	77.0	75.0	74.0	69.0	64.5	59.0	58.0	56.0
	6	71.1	84.1	56.7	79.5	78.0	76.5	75.5	72.0	67.0	61.0	60.0	58.5
Day	7	73.6	101.7	51.0	80.0	79.0	77.0	76.0	72.5	68.5	60.0	57.5	52.5
	8	70.3	87.8	49.1	78.0	77.5	75.5	75.0	71.0	67.0	55.5	53.0	50.5
	9	69.7	84.8	48.5	78.5	77.0	75.0	74.5	70.5	65.5	53.0	51.0	49.5
	10	70.3	93.5	50.1	78.0	76.5	75.0	74.0	70.5	66.5	55.0	53.5	51.5
	11	70.2	88.7	52.5	78.0	76.5	75.0	74.0	71.0	67.0	57.5	55.5	54.0
	12	69.6	83.7	52.3	77.5	76.5	75.0	74.0	70.5	66.5	58.0	56.0	54.0
	13	69.7	89.3	52.2	78.0	76.5	74.5	73.5	70.5	66.0	56.5	55.5	53.5
	14	69.9	87.2	54.0	77.5	76.5	75.0	74.0	71.0	67.0	58.0	57.0	55.0
	15	70.7	87.6	53.9	78.5	77.0	75.0	74.5	71.5	68.0	59.0	57.5	55.5
	16	70.8	83.1	54.7	78.0	76.5	75.5	74.5	72.0	69.0	60.5	58.5	56.0
	17	71.1	91.6	56.1	78.0	77.0	75.5	75.0	72.0	68.5	60.5	58.5	57.0
	18	70.0	85.2	56.7	78.0	76.5	75.0	74.0	71.0	67.0	59.5	58.5	57.5
	19	69.5	88.2	55.9	77.5	76.5	75.0	74.0	70.5	66.0	58.5	58.0	57.0
	20	68.8	83.7	54.1	77.5	76.0	74.5	73.5	69.5	64.5	57.5	56.5	55.0
	21	67.7	80.5	52.6	77.0	76.0	74.0	73.0	68.0	61.5	55.5	55.0	54.0
Night	22	67.4	89.9	51.6	77.0	75.5	73.0	71.5	66.0	58.5	54.5	54.0	53.0
	23	64.0	83.9	49.9	75.5	74.0	70.5	68.5	60.5	56.0	52.5	52.0	51.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*	*24-Hour*
Location: L3 - Located between the Lamplighter Mobile Home Park and a commercial plaza on the north side of E. 4th Street across from the Project site.	*Analyst:* A. Wolfe	*Day* / *Night*	*CNEL*
	Date: 3/17/2014	68.3 / 64.6	72.1

Hourly Leq dBA Readings (unadjusted)



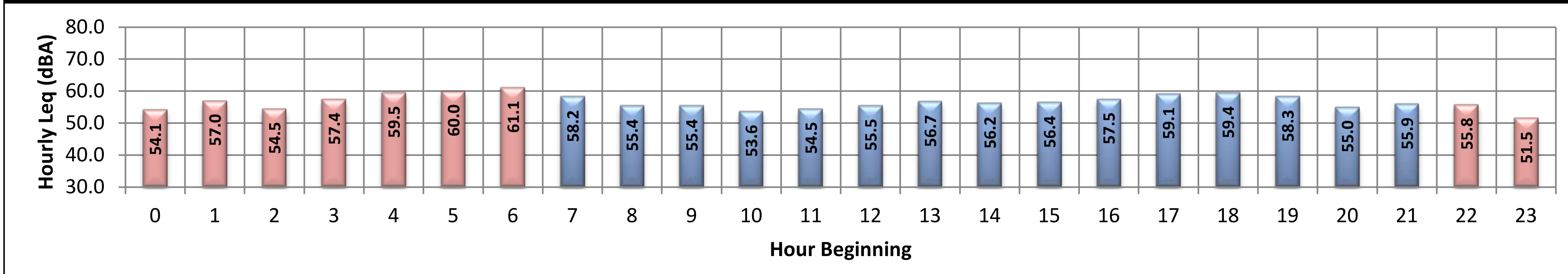
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	65.3	80.1	47.5	74.0	72.5	71.0	69.5	64.5	57.5	51.0	50.0	49.0
	Max	70.4	92.8	55.4	79.0	76.0	74.0	73.0	70.5	67.0	59.5	58.5	56.5
Night	Min	58.1	78.1	45.4	69.5	67.5	64.5	62.0	51.5	49.5	47.5	47.0	46.5
	Max	68.5	97.4	52.2	77.5	75.5	74.0	72.5	69.0	65.0	57.0	55.5	53.0
Hourly Summary													
Night	0	58.4	79.9	46.3	70.5	68.5	64.5	62.0	51.5	49.5	47.5	47.0	46.5
	1	60.3	82.6	46.2	71.5	69.0	65.5	63.0	55.5	51.5	48.5	48.0	47.5
	2	58.1	78.1	45.4	69.5	67.5	64.5	62.0	54.0	51.5	48.5	48.0	47.0
	3	61.3	82.5	47.9	73.5	71.0	67.0	64.5	56.5	53.5	51.0	50.5	49.0
	4	64.1	82.9	50.8	74.5	73.0	70.5	69.0	62.0	55.5	52.5	52.0	51.5
	5	67.4	79.3	52.2	75.5	74.0	72.5	71.5	68.0	64.5	56.5	55.0	53.0
	6	68.5	84.0	52.0	77.5	75.5	74.0	72.5	69.0	65.0	57.0	55.5	53.0
Day	7	69.2	91.7	51.4	78.5	76.0	74.0	72.5	69.5	65.5	55.5	54.0	52.5
	8	67.8	90.8	49.6	76.5	74.5	72.5	71.0	68.0	63.0	52.5	51.5	50.5
	9	67.4	80.1	47.7	76.5	75.0	73.0	72.0	68.0	63.5	52.5	51.0	49.5
	10	68.3	92.8	47.7	76.5	75.0	72.5	71.5	68.0	64.5	53.5	52.0	49.0
	11	67.9	86.2	47.7	76.0	74.5	72.5	71.5	68.5	65.0	54.5	52.5	49.0
	12	68.5	85.5	52.3	76.5	75.0	73.5	72.5	69.0	65.5	56.5	55.0	53.5
	13	68.5	88.0	54.3	77.5	75.0	73.0	72.0	69.0	65.0	58.5	57.0	56.0
	14	68.2	86.5	51.8	76.0	75.0	73.5	72.0	69.0	65.0	57.0	56.0	53.5
	15	68.8	90.7	52.5	77.0	75.0	73.0	72.0	69.0	65.5	57.5	56.0	54.0
	16	70.4	91.4	54.4	79.0	76.0	74.0	73.0	70.5	67.0	59.0	57.5	55.0
	17	69.4	91.0	55.4	77.5	75.0	73.5	72.5	70.0	66.5	59.5	58.5	56.5
	18	68.3	86.4	53.6	76.5	75.0	73.0	72.0	69.0	65.5	57.5	56.5	55.5
	19	67.1	80.3	52.3	76.0	74.5	72.5	71.5	68.0	63.0	55.5	54.5	53.0
	20	66.6	88.4	49.4	76.0	73.5	71.5	70.5	66.5	61.0	53.0	52.0	51.0
	21	65.3	86.7	47.5	74.0	72.5	71.0	69.5	64.5	57.5	51.0	50.0	49.0
Night	22	67.7	97.4	47.1	74.0	72.0	69.5	67.5	60.0	53.5	49.5	49.0	48.0
	23	60.8	83.8	45.4	72.0	70.0	67.0	65.0	55.5	51.5	48.5	48.0	46.5

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location:	L4 - Located near the Vineyard Park residential homes at the intersection of Smiderle Loop and E. 4th Street.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
		Date: 3/13/2014	56.8	57.7	64.2

Hourly Leq dBA Readings (unadjusted)

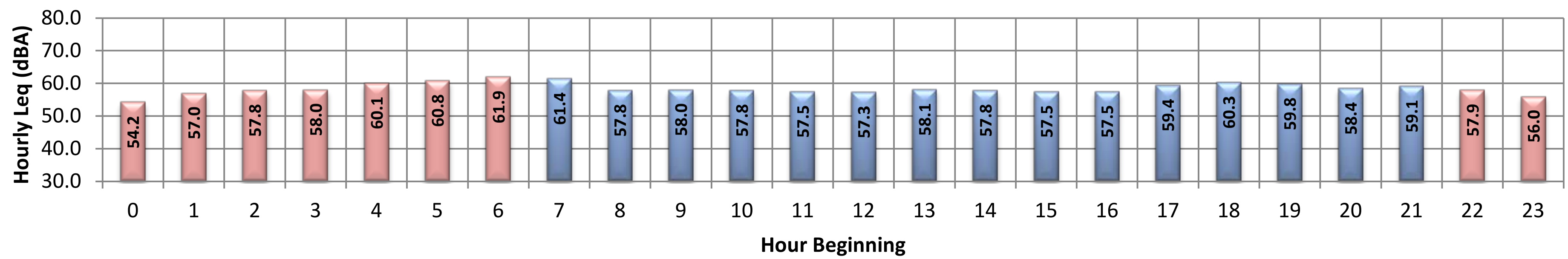


Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	53.6	66.4	45.1	62.0	60.5	58.0	56.5	53.5	51.0	47.5	46.5	45.5
	Max	59.4	80.9	52.2	70.0	66.5	62.5	61.0	58.0	56.5	54.0	53.5	53.0
Night	Min	51.5	62.2	44.0	57.0	56.0	54.5	54.0	52.0	50.5	47.0	46.0	45.0
	Max	61.1	80.1	52.9	69.5	68.0	65.0	63.5	61.0	59.0	56.0	55.0	54.0
Hourly Summary													
Night	0	54.1	71.2	44.3	64.0	61.0	57.5	56.5	53.0	50.5	47.0	46.5	45.5
	1	57.0	72.9	45.9	68.0	66.5	63.0	60.0	55.0	52.5	49.0	48.0	46.5
	2	54.5	69.4	44.0	65.5	64.5	59.5	57.5	53.0	51.0	47.0	46.0	45.0
	3	57.4	74.2	49.3	66.5	65.0	62.5	61.0	56.5	54.0	51.0	50.5	49.5
	4	59.5	80.1	51.8	66.5	64.0	62.0	61.5	59.5	58.0	54.5	53.5	52.0
	5	60.0	74.4	50.8	67.5	65.5	63.0	62.5	60.5	58.5	55.0	54.0	52.5
	6	61.1	78.0	52.9	69.5	68.0	65.0	63.5	61.0	59.0	56.0	55.0	54.0
Day	7	58.2	76.9	47.1	68.0	66.0	62.5	61.0	58.0	55.0	50.0	49.5	48.0
	8	55.4	70.3	45.1	64.5	62.5	60.5	59.0	55.5	52.0	48.0	47.5	46.5
	9	55.4	75.9	45.1	65.0	63.0	60.0	58.5	55.0	51.5	47.5	46.5	45.5
	10	53.6	70.7	46.3	62.0	60.5	58.0	56.5	53.5	51.0	48.0	47.5	46.5
	11	54.5	70.7	45.1	63.0	61.5	59.5	58.0	54.0	51.0	47.5	47.0	45.5
	12	55.5	76.2	45.5	65.5	62.5	59.0	57.5	54.0	51.5	48.0	47.5	46.5
	13	56.7	77.4	46.4	68.0	63.0	59.5	58.0	54.5	52.0	49.0	48.5	47.5
	14	56.2	75.8	46.2	65.5	63.5	60.0	58.5	55.0	53.0	49.5	49.0	47.5
	15	56.4	73.6	47.8	65.5	63.5	60.5	59.0	56.0	53.5	50.5	50.0	49.0
	16	57.5	75.4	48.6	66.5	64.5	62.0	60.5	57.0	55.0	51.5	51.0	50.0
	17	59.1	78.2	50.2	70.0	66.5	62.0	60.5	58.0	56.0	53.5	52.5	51.5
	18	59.4	80.9	51.6	69.0	65.5	61.5	60.0	58.0	56.5	54.0	53.5	53.0
	19	58.3	75.5	52.2	67.5	65.5	62.5	60.5	57.5	56.0	54.0	53.5	53.0
	20	55.0	66.4	49.2	62.0	60.5	58.5	57.5	55.0	53.5	51.0	50.5	50.5
	21	55.9	75.5	48.1	66.0	63.0	59.0	57.5	54.5	52.5	50.0	50.0	49.0
Night	22	55.8	73.7	47.8	67.0	64.5	58.5	57.5	54.0	52.0	50.0	49.0	48.5
	23	51.5	62.2	45.5	57.0	56.0	54.5	54.0	52.0	50.5	48.0	47.5	46.5

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location: L5 - Located near existing single-family residential homes northeast of the Project site on Archibald Avenue.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
	Date: 3/17/2014	58.7	58.8	65.5

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	57.3	67.9	46.5	64.0	63.0	61.0	60.5	57.5	54.5	49.0	48.0	47.5
	Max	61.4	79.5	51.8	70.5	68.0	65.0	64.0	61.0	59.0	55.0	54.0	53.0
Night	Min	54.2	71.2	46.2	64.0	61.5	58.5	57.0	53.5	51.0	48.0	47.5	46.5
	Max	61.9	78.2	54.8	69.5	68.0	65.5	64.5	62.0	60.0	57.0	56.5	55.5

Hourly Summary

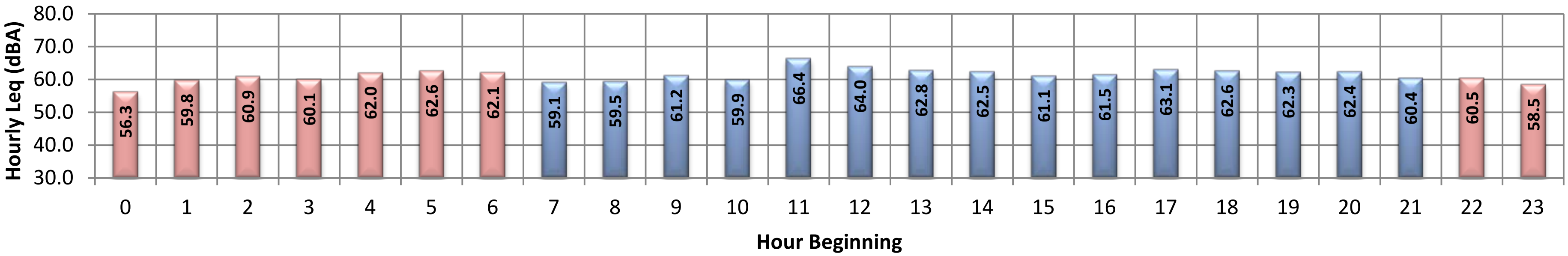
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Night	0	54.2	71.2	46.2	64.0	61.5	58.5	57.0	53.5	51.0	48.0	47.5	46.5
	1	57.0	76.4	46.6	67.0	65.0	63.0	61.0	56.0	52.0	49.0	48.5	47.5
	2	57.8	76.6	47.2	67.5	66.0	63.0	61.0	56.5	53.5	50.5	49.5	48.0
	3	58.0	77.7	46.4	68.5	66.5	63.0	61.1	56.5	53.5	50.0	49.0	47.5
	4	60.1	76.3	50.9	69.5	67.5	64.5	63.0	60.0	57.0	53.0	52.5	51.5
	5	60.8	75.4	50.6	69.0	68.0	65.5	64.0	61.0	58.5	54.0	53.5	52.0
	6	61.9	77.4	54.8	69.5	67.5	65.5	64.5	62.0	60.0	57.0	56.5	55.5
Day	7	61.4	79.5	51.5	70.5	67.5	65.0	64.0	61.0	59.0	54.0	53.5	52.0
	8	57.8	69.6	49.7	65.5	64.0	62.0	61.0	58.0	56.0	52.5	51.5	50.5
	9	58.0	73.7	48.2	66.5	65.0	62.5	61.0	58.0	55.0	51.0	50.0	49.0
	10	57.8	73.1	47.0	67.0	65.5	62.5	61.0	57.5	55.0	50.5	49.5	48.5
	11	57.5	72.2	46.5	66.0	64.5	62.5	61.0	57.5	54.5	49.0	48.0	47.5
	12	57.3	72.2	47.7	65.0	64.0	61.5	60.5	57.5	55.0	52.0	51.0	49.5
	13	58.1	70.9	49.6	66.0	64.5	62.5	61.5	58.0	56.0	53.0	52.0	51.0
	14	57.8	71.9	49.6	66.0	64.0	62.0	60.5	58.0	56.0	52.5	52.0	51.0
	15	57.5	69.7	50.0	65.0	64.0	62.0	60.5	57.5	55.5	53.0	52.5	51.0
	16	57.5	67.9	50.5	64.0	63.0	61.0	60.5	58.0	56.0	53.0	52.5	51.5
	17	59.4	78.7	50.3	68.5	66.5	63.0	61.5	59.0	57.0	54.0	53.0	52.0
	18	60.3	76.8	51.8	70.0	67.5	64.0	62.5	59.5	57.5	55.0	54.0	53.0
	19	59.8	76.8	51.1	70.5	68.0	64.0	62.0	58.5	56.5	54.0	53.0	52.5
	20	58.4	74.1	50.5	66.5	65.0	62.5	61.5	58.0	56.0	53.0	52.5	51.5
	21	59.1	77.3	48.7	69.5	67.0	63.0	61.5	58.0	55.5	51.5	50.5	49.5
Night	22	57.9	78.2	48.2	67.0	65.0	62.0	60.5	57.0	54.5	51.0	50.5	49.5
	23	56.0	75.2	47.8	66.0	63.0	60.0	58.5	55.0	52.5	50.0	49.5	49.0

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:*	9035
Location:	L6 - Located near an existing commercial plaza with a gasoline station and drive-through restaurants at the intersection of Archibald Avenue and Inland Empire Boulevard.	*Analyst:*	A. Wolfe
		Date:	3/13/2014

Energy Average Leq		*24-Hour*
Day	*Night*	*CNEL*
62.3	60.7	67.7

Hourly Leq dBA Readings (unadjusted)



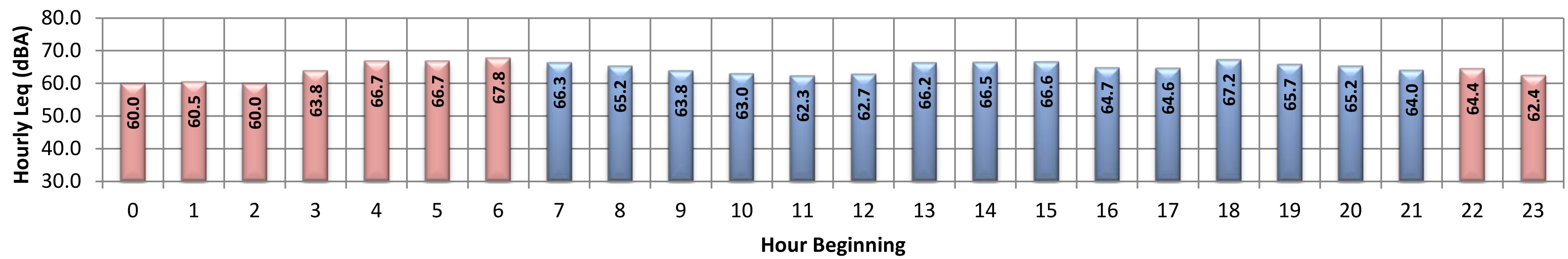
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	59.1	71.5	50.7	65.5	63.5	62.0	61.5	59.5	58.0	55.5	54.0	52.0
	Max	66.4	93.9	59.2	78.0	75.0	71.0	67.0	63.0	62.0	60.5	60.5	60.0
Night	Min	56.3	70.9	48.5	63.0	61.0	59.5	58.5	56.5	55.0	52.0	51.0	50.0
	Max	62.6	84.7	56.5	70.0	68.0	67.5	66.5	63.0	61.5	58.5	58.0	57.0
Hourly Summary													
Night	0	56.3	74.3	48.5	63.0	61.0	59.5	58.5	56.5	55.0	52.0	51.0	50.0
	1	59.8	74.5	51.0	67.5	67.5	67.0	66.5	58.0	56.0	53.5	53.0	52.0
	2	60.9	84.7	50.5	68.5	68.0	67.5	62.5	57.5	55.5	53.0	52.5	51.5
	3	60.1	78.9	51.4	70.0	67.0	63.0	61.0	59.5	57.5	54.0	53.5	52.0
	4	62.0	71.7	55.9	67.0	66.0	64.5	64.0	62.5	61.5	58.5	58.0	56.5
	5	62.6	72.9	55.0	68.5	67.5	66.5	66.0	63.0	61.0	58.5	58.0	57.0
	6	62.1	78.3	56.5	68.5	67.0	65.5	65.0	62.0	60.5	58.5	58.0	57.0
Day	7	59.1	74.1	53.5	65.5	63.5	62.0	61.5	59.5	58.0	55.5	55.0	54.0
	8	59.5	77.0	50.7	67.0	65.5	63.0	62.0	59.5	58.0	55.5	54.0	52.0
	9	61.2	81.5	53.1	71.5	69.0	65.5	63.5	60.0	58.0	55.5	55.0	54.0
	10	59.9	74.7	54.1	66.0	64.0	63.0	62.0	60.5	59.0	56.5	56.0	55.0
	11	66.4	93.9	53.8	78.0	75.0	71.0	65.0	60.5	59.0	57.0	56.5	55.5
	12	64.0	89.4	54.2	74.5	70.5	66.0	63.5	60.5	59.0	56.0	55.5	54.5
	13	62.8	81.7	54.7	69.5	68.0	67.5	67.0	62.5	60.5	58.0	57.5	56.0
	14	62.5	72.9	57.7	69.0	69.0	65.0	64.0	62.5	61.5	59.5	59.5	58.5
	15	61.1	75.0	55.5	66.0	65.0	63.5	63.0	61.5	60.5	58.0	57.5	57.0
	16	61.5	72.2	55.7	68.0	66.5	65.0	64.0	62.0	60.5	57.5	57.0	56.5
	17	63.1	81.1	56.5	68.5	67.0	65.0	64.5	63.0	61.5	60.0	59.5	58.5
	18	62.6	75.6	59.2	68.5	66.0	64.5	63.5	62.5	61.5	60.5	60.5	60.0
	19	62.3	73.6	58.3	66.0	65.5	64.5	64.0	62.5	61.5	60.5	60.0	59.5
	20	62.4	73.9	57.7	66.5	65.5	64.5	64.0	62.5	62.0	60.0	59.5	58.5
	21	60.4	71.5	55.8	65.5	64.0	63.0	62.0	60.5	59.5	58.0	57.5	56.5
Night	22	60.5	72.5	53.2	67.5	65.5	62.5	62.0	60.5	59.5	57.5	57.0	56.0
	23	58.5	70.9	53.0	63.0	62.0	61.0	60.5	59.0	58.0	55.5	55.0	54.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location: L7 - Located on the south side of Inland Empire Boulevard across from the proposed Urban Residential land use of the Project site, west of Archibald Avenue.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
	Date: 3/17/2014	65.2	64.5	71.3

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	62.3	75.2	52.5	70.5	69.0	67.0	65.5	61.5	59.5	55.0	54.5	53.0
	Max	67.2	91.4	61.4	73.5	72.0	70.0	69.0	67.0	65.0	63.5	63.0	62.0
Night	Min	60.0	68.4	51.6	65.0	63.5	62.0	61.5	60.0	58.5	56.0	55.0	53.5
	Max	67.8	90.5	63.4	73.5	72.5	70.5	69.5	68.0	66.5	65.0	65.0	64.0
Hourly Summary													
Night	0	60.0	76.1	52.3	66.0	63.5	62.0	61.5	60.5	59.0	56.5	56.0	54.5
	1	60.5	78.6	51.6	68.0	66.5	64.0	62.5	60.0	58.5	56.0	55.0	53.5
	2	60.0	68.4	52.7	65.0	64.0	63.0	62.5	60.5	59.0	56.5	55.5	54.0
	3	63.8	80.6	52.8	69.0	67.5	66.5	66.0	64.5	63.0	58.0	56.5	54.0
	4	66.7	83.3	61.8	72.0	70.0	68.5	68.0	66.5	65.5	64.0	63.5	63.0
	5	66.7	85.6	62.2	73.0	71.0	69.0	68.0	66.5	65.5	64.0	64.0	63.0
	6	67.8	81.8	63.4	73.5	72.5	70.5	69.5	68.0	66.5	65.0	65.0	64.0
Day	7	66.3	80.5	61.4	73.0	72.0	70.0	68.5	66.0	65.0	63.5	63.0	62.0
	8	65.2	75.2	60.1	71.0	70.0	68.0	67.0	65.0	64.5	62.5	62.0	61.0
	9	63.8	80.6	55.0	72.0	70.5	68.0	66.0	63.5	62.0	59.5	58.5	56.5
	10	63.0	81.7	54.8	72.0	70.0	67.0	66.0	62.5	60.5	57.5	57.0	56.0
	11	62.3	79.2	54.1	71.0	69.5	67.0	65.5	61.5	59.5	56.0	55.5	54.5
	12	62.7	83.6	52.5	71.5	70.0	67.5	66.0	61.5	59.5	55.0	54.5	53.0
	13	66.2	76.6	60.2	72.5	71.5	70.0	69.0	66.5	64.5	62.5	62.0	61.5
	14	66.5	78.3	59.6	72.5	71.5	70.0	69.0	67.0	65.0	63.0	62.5	61.5
	15	66.6	85.8	59.4	73.5	71.5	69.5	68.5	66.0	64.5	62.5	61.5	60.5
	16	64.7	77.1	57.6	71.0	70.0	68.0	67.5	65.0	63.5	61.5	61.0	59.0
	17	64.6	75.2	58.8	70.5	69.0	68.0	67.0	65.0	63.5	61.5	61.0	60.0
	18	67.2	91.4	60.9	72.5	71.0	69.0	68.0	66.0	65.0	63.0	62.5	61.5
	19	65.7	81.0	60.9	72.5	70.5	68.5	67.5	65.5	64.5	63.0	62.5	62.0
	20	65.2	77.6	59.8	72.5	71.0	68.5	67.5	65.0	64.0	62.0	61.5	60.5
	21	64.0	77.8	58.1	71.5	70.5	68.0	66.0	63.5	62.5	60.5	60.0	59.0
Night	22	64.4	90.5	55.6	70.5	68.5	66.0	65.0	63.0	61.0	59.0	58.0	56.5
	23	62.4	81.4	56.3	71.0	68.5	65.5	64.0	62.0	60.5	58.5	58.0	57.0

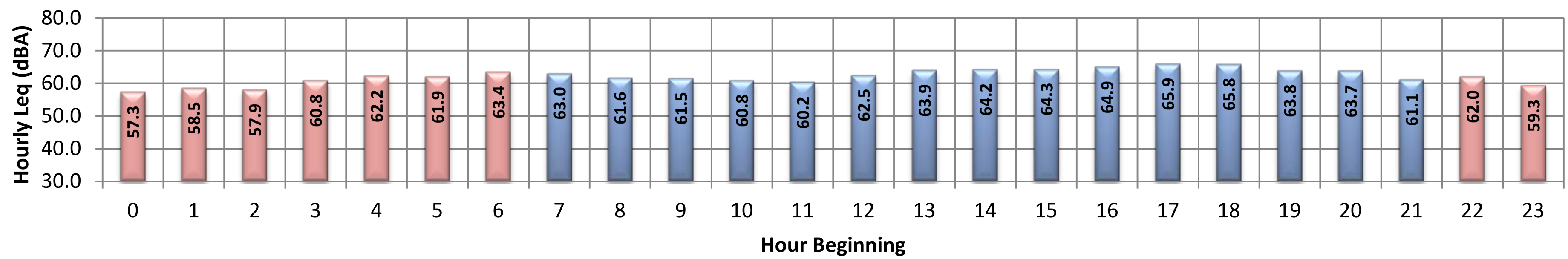
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:*	9035
Location:	L8 - Located on Inland Empire Boulevard near an existing waterway within the proposed Project site boundaries.	*Analyst:*	A. Wolfe
		Date:	3/17/2014

Energy Average Leq		*24-Hour*
Day	*Night*	*CNEL*
63.5	60.8	68.1

Hourly Leq dBA Readings (unadjusted)



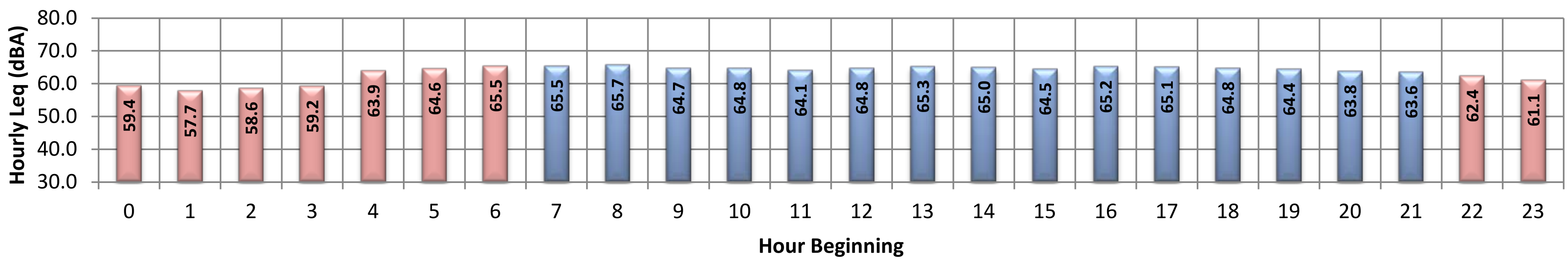
Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	60.2	73.5	50.6	68.5	67.0	65.0	64.0	60.0	57.5	54.0	53.5	52.0
	Max	65.9	89.5	59.4	72.5	71.0	69.5	68.5	66.0	64.5	62.0	61.5	60.5
Night	Min	57.3	69.4	48.0	62.5	61.0	60.0	59.5	57.5	55.5	52.5	52.0	50.0
	Max	63.4	90.4	57.7	70.5	69.0	67.5	66.5	63.0	62.0	60.0	59.5	59.0
Hourly Summary													
Night	0	57.3	70.0	48.7	62.5	61.0	60.0	59.5	58.0	56.5	53.5	53.0	50.5
	1	58.5	77.8	48.0	68.0	66.5	63.0	61.0	57.5	55.5	52.5	52.0	50.0
	2	57.9	69.4	48.8	64.0	63.0	61.0	60.5	58.5	56.5	53.0	52.0	50.0
	3	60.8	73.0	51.2	65.5	65.0	64.0	63.5	61.5	60.0	56.0	55.5	53.0
	4	62.2	82.4	56.3	68.5	66.5	64.0	63.5	62.0	61.0	59.0	58.5	57.5
	5	61.9	77.9	55.7	69.0	68.0	65.5	64.5	62.0	60.0	58.0	57.5	56.5
	6	63.4	74.4	57.7	70.5	69.0	67.5	66.5	63.0	62.0	60.0	59.5	59.0
Day	7	63.0	78.6	56.7	71.0	69.5	67.5	66.5	62.5	60.5	58.5	58.0	57.0
	8	61.6	73.5	55.9	69.0	68.0	66.0	64.5	61.0	60.0	58.0	57.5	57.0
	9	61.5	79.0	53.5	70.0	68.5	66.0	65.0	60.5	58.5	56.5	56.0	54.5
	10	60.8	78.2	52.4	69.5	68.0	65.5	64.0	60.0	58.0	55.5	55.5	54.0
	11	60.2	75.9	50.6	68.5	67.0	65.0	64.0	60.0	57.5	54.0	53.5	52.0
	12	62.5	79.7	53.3	69.5	68.0	66.5	65.5	63.0	60.5	56.5	55.5	54.5
	13	63.9	77.0	55.5	70.5	69.5	68.0	67.0	64.5	62.5	58.5	57.5	56.5
	14	64.2	75.2	56.1	70.5	69.5	67.5	67.0	64.5	63.0	59.5	59.0	58.0
	15	64.3	83.6	56.2	72.0	70.0	68.0	67.0	64.0	62.5	59.5	59.0	57.5
	16	64.9	76.6	56.6	71.5	70.5	69.0	68.0	65.0	63.5	60.5	59.5	57.5
	17	65.9	78.2	59.3	72.0	71.0	69.5	68.5	66.0	64.5	62.0	61.5	60.5
	18	65.8	88.8	59.4	72.5	70.5	69.0	68.0	65.0	63.5	61.5	61.0	60.5
	19	63.8	77.7	58.3	70.5	69.0	67.5	66.5	64.0	62.5	60.5	60.0	59.0
	20	63.7	89.5	57.1	71.0	69.0	66.5	65.0	62.5	61.0	59.0	58.5	58.0
	21	61.1	75.2	53.1	70.0	68.5	66.0	64.0	60.0	58.5	56.5	56.0	54.5
Night	22	62.0	90.4	50.4	68.5	66.5	64.0	62.5	60.5	58.5	55.0	54.0	52.0
	23	59.3	75.5	51.6	67.0	65.0	62.5	61.5	59.0	57.5	55.0	54.5	53.5

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location: L9 - Located just north of the I-10 freeway westbound on-ramp at Vineyard Avenue, south of existing single-family residential homes.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
	Date: 3/17/2014	64.8	62.2	69.4

Hourly Leq dBA Readings (unadjusted)



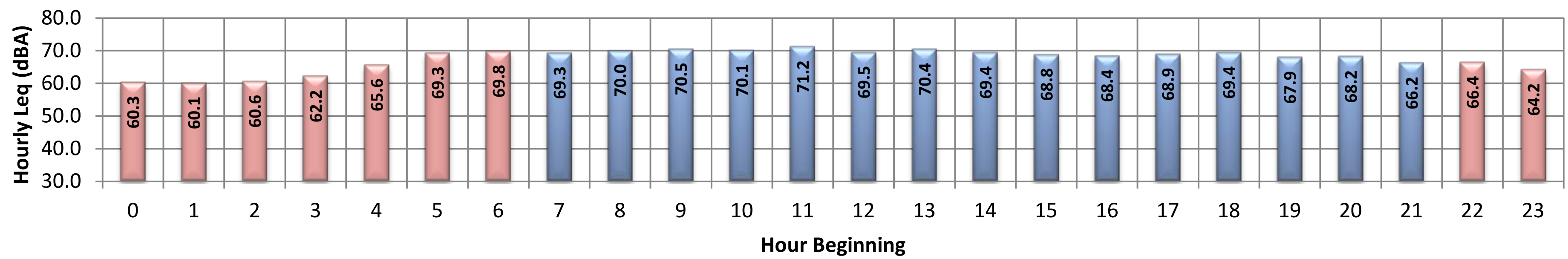
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	63.6	78.5	54.5	72.0	70.5	68.0	66.5	62.5	60.5	57.5	57.0	55.5
	Max	65.7	86.8	58.3	75.5	73.5	70.5	68.5	65.0	63.0	60.5	60.0	59.0
Night	Min	57.7	74.9	46.9	66.0	64.0	61.5	60.0	57.5	55.5	51.5	50.5	49.0
	Max	65.5	82.0	57.4	74.0	72.0	70.0	68.5	65.0	63.0	60.0	59.5	58.5
Hourly Summary													
Night	0	59.4	75.0	48.8	69.0	67.0	63.5	62.0	59.0	56.5	53.0	52.0	50.0
	1	57.7	75.7	47.4	66.0	64.0	61.5	60.0	57.5	55.5	51.5	50.5	49.0
	2	58.6	74.9	46.9	68.5	66.0	62.0	61.0	58.0	56.0	51.5	50.5	49.0
	3	59.2	77.5	47.6	67.5	65.0	62.5	61.5	59.0	57.0	53.0	51.5	49.0
	4	63.9	82.0	49.8	73.0	71.0	67.5	66.0	63.0	61.0	57.5	56.5	54.5
	5	64.6	80.8	56.7	72.5	71.0	68.5	67.0	64.5	62.5	60.0	59.5	58.5
	6	65.5	80.9	57.4	74.0	72.0	70.0	68.5	65.0	63.0	60.0	59.5	58.5
Day	7	65.5	82.4	57.2	74.0	72.5	70.0	68.5	65.0	63.0	60.5	60.0	58.5
	8	65.7	79.3	58.3	75.5	73.5	70.5	68.5	64.5	63.0	60.5	60.0	59.0
	9	64.7	82.2	57.4	73.0	71.0	68.5	67.5	64.5	62.5	60.5	60.0	58.5
	10	64.8	83.5	56.7	73.5	71.5	69.0	67.5	64.5	62.5	60.0	59.0	58.0
	11	64.1	79.2	56.8	73.0	71.0	68.5	67.0	63.5	62.0	59.5	58.5	58.0
	12	64.8	78.6	56.7	74.0	72.5	69.5	68.0	64.0	62.0	59.5	59.0	57.5
	13	65.3	86.8	56.4	73.5	72.0	69.0	67.5	64.0	62.0	59.5	59.0	58.0
	14	65.0	80.5	56.1	74.0	72.5	69.0	67.5	64.5	62.5	60.0	59.5	58.0
	15	64.5	78.5	57.7	72.0	70.5	68.5	67.5	64.5	62.5	60.5	60.0	58.5
	16	65.2	85.7	56.8	73.5	72.0	69.5	68.0	64.5	62.5	60.0	59.5	58.5
	17	65.1	80.4	55.7	74.0	72.5	69.5	68.0	64.5	63.0	60.0	59.5	58.0
	18	64.8	85.2	57.4	72.5	71.0	68.5	67.5	64.0	62.5	60.0	59.5	58.5
	19	64.4	84.6	55.1	73.5	71.0	68.5	67.0	63.5	61.5	59.0	58.5	57.0
	20	63.8	79.7	56.1	73.0	71.0	68.0	67.0	63.0	61.0	58.5	57.5	57.0
	21	63.6	80.6	54.5	73.5	71.5	68.5	66.5	62.5	60.5	57.5	57.0	55.5
Night	22	62.4	79.4	52.3	72.0	70.0	67.0	65.0	61.5	59.5	56.5	56.0	54.0
	23	61.1	81.0	50.8	71.0	69.0	65.5	63.5	60.0	57.5	54.5	53.5	52.5

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location: L10 - Located along the west side of Vineyard Avenue at an existing residential dwelling west of the Project site.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
	Date: 9/23/2014	69.4	65.7	73.2

Hourly Leq dBA Readings (unadjusted)



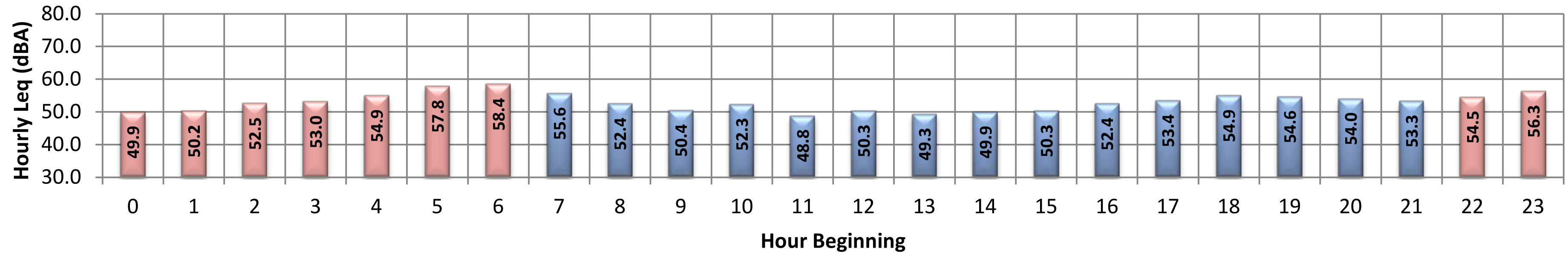
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	66.2	81.9	48.1	75.0	73.0	71.5	70.5	67.0	62.5	53.0	52.0	50.0
	Max	71.2	96.6	55.1	80.0	78.0	75.5	74.5	71.5	67.5	60.5	59.5	57.0
Night	Min	60.1	79.6	47.0	70.5	69.0	66.0	63.5	56.5	52.5	49.0	48.5	48.0
	Max	69.8	92.1	56.9	78.0	76.5	74.0	73.0	70.0	67.0	60.0	59.0	58.0
Hourly Summary													
Night	0	60.3	82.1	47.1	70.5	69.0	66.5	64.5	58.5	53.0	49.0	48.5	48.0
	1	60.1	83.7	47.0	71.0	69.0	66.0	63.5	56.5	52.5	49.5	49.0	48.5
	2	60.6	82.9	47.5	71.5	69.0	66.0	64.0	58.0	54.5	51.0	50.5	49.0
	3	62.2	79.6	50.1	72.0	71.0	68.5	66.5	60.5	57.5	54.5	53.5	52.0
	4	65.6	84.1	52.5	75.0	73.0	71.0	70.0	65.0	60.5	56.0	55.0	53.5
	5	69.3	92.1	56.9	78.0	76.5	74.0	72.5	69.0	64.5	59.0	58.5	58.0
	6	69.8	89.5	56.5	78.0	76.0	74.0	73.0	70.0	67.0	60.0	59.0	57.5
Day	7	69.3	81.9	55.1	76.5	75.5	74.0	73.0	70.5	67.5	60.5	59.5	57.0
	8	70.0	87.1	51.6	80.0	78.0	74.0	73.0	70.0	66.5	56.0	54.0	52.5
	9	70.5	86.6	51.9	79.5	78.0	75.5	74.5	71.5	67.5	55.5	54.0	52.5
	10	70.1	90.9	49.7	78.0	76.5	75.0	74.0	71.0	66.5	54.5	53.0	51.5
	11	71.2	96.6	50.2	79.5	77.5	75.5	74.5	71.0	67.0	55.5	53.5	51.0
	12	69.5	89.7	49.5	78.0	76.0	74.5	73.5	70.0	66.5	55.0	52.5	50.5
	13	70.4	89.9	48.1	79.0	77.5	75.0	74.0	70.5	67.0	55.5	52.5	50.0
	14	69.4	85.4	49.0	78.5	76.5	74.0	73.0	70.0	66.5	55.0	52.5	51.0
	15	68.8	87.2	48.9	77.0	75.0	73.0	72.0	69.5	66.5	58.5	55.5	52.0
	16	68.4	87.4	49.3	76.0	74.5	72.5	71.5	69.0	66.0	56.5	53.0	50.5
	17	68.9	84.3	50.9	76.0	74.5	73.0	72.5	70.0	67.0	59.0	56.5	53.5
	18	69.4	86.4	52.0	78.0	75.5	73.5	72.5	70.0	67.0	59.0	56.5	54.0
	19	67.9	88.5	52.6	76.0	74.5	72.0	71.0	68.5	65.5	58.0	56.0	54.5
	20	68.2	90.7	52.3	75.5	74.0	72.5	71.5	68.5	65.0	56.0	54.5	53.5
	21	66.2	82.7	50.1	75.0	73.0	71.5	70.5	67.0	62.5	53.0	52.0	51.0
Night	22	66.4	92.0	49.4	74.5	73.0	71.0	70.0	66.0	60.5	52.5	51.5	50.5
	23	64.2	83.2	47.1	74.0	72.5	70.5	69.0	63.5	57.5	50.5	50.0	49.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:* 9035	*Energy Average Leq*		*24-Hour*
Location:	L11 - Located at the southwest corner of the existing Bernt Elementary School along the northern boundary of the Project site.	*Analyst:* A. Wolfe	*Day*	*Night*	*CNEL*
		Date: 9/23/2014	52.6	55.1	61.4

Hourly Leq dBA Readings (unadjusted)



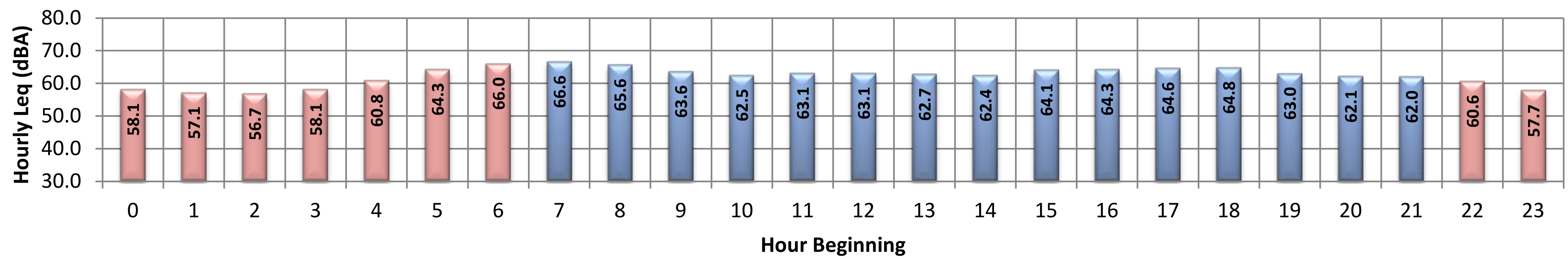
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	48.8	61.3	43.6	56.0	55.0	52.5	51.0	48.0	47.0	45.5	45.0	44.0
	Max	55.6	75.3	50.6	63.0	60.5	58.5	57.5	56.0	54.5	52.0	51.5	51.0
Night	Min	49.9	60.5	43.7	56.0	54.5	53.0	52.0	49.5	48.0	45.5	45.0	44.5
	Max	58.4	78.1	53.7	68.5	66.0	62.0	61.0	58.5	57.0	55.0	54.5	54.0
Hourly Summary													
Night	0	49.9	60.5	44.5	56.0	54.5	53.0	52.5	50.5	48.5	46.0	45.5	45.0
	1	50.2	65.5	44.0	59.0	57.0	55.5	52.0	49.5	48.0	45.5	45.5	44.5
	2	52.5	67.0	43.7	61.0	59.5	56.5	56.0	52.5	50.5	46.0	45.0	44.5
	3	53.0	64.7	46.9	59.5	58.5	56.5	55.5	53.0	52.0	49.5	49.0	48.0
	4	54.9	65.2	50.9	59.0	58.0	57.0	56.5	55.5	54.0	52.0	52.0	51.0
	5	57.8	69.9	52.1	67.0	66.0	61.5	59.5	57.0	56.0	54.0	53.5	53.0
	6	58.4	67.4	53.7	64.5	63.5	62.0	61.0	58.5	57.0	55.0	54.5	54.0
Day	7	55.6	67.7	50.3	62.0	60.0	58.5	57.5	56.0	54.5	51.5	51.0	50.5
	8	52.4	64.4	48.4	57.5	56.5	55.5	54.5	52.5	51.5	50.0	49.5	49.0
	9	50.4	66.6	46.4	57.0	55.5	53.0	52.0	50.0	49.0	48.0	47.5	47.0
	10	52.3	72.9	45.3	61.5	59.0	55.0	53.0	49.5	48.5	46.5	46.0	45.5
	11	48.8	61.3	44.3	56.0	55.0	52.5	51.0	48.0	47.0	45.5	45.5	45.0
	12	50.3	68.8	43.7	58.0	56.0	53.5	51.5	49.0	47.5	45.5	45.0	44.5
	13	49.3	64.5	43.6	58.5	56.0	53.5	52.0	48.5	47.0	45.5	45.0	44.0
	14	49.9	68.0	43.7	58.0	56.0	53.0	51.5	49.0	47.5	46.0	45.5	45.0
	15	50.3	65.2	43.9	57.0	55.5	53.5	53.0	50.0	48.5	46.5	46.5	45.0
	16	52.4	75.3	44.4	59.0	56.5	54.0	53.0	51.0	49.5	47.5	46.5	45.5
	17	53.4	67.8	47.9	60.0	58.5	56.0	55.0	53.5	52.5	50.5	50.0	49.0
	18	54.9	70.1	49.2	63.0	60.5	57.0	56.0	54.5	53.5	51.5	51.0	50.0
	19	54.6	67.7	50.6	61.5	60.0	57.5	56.5	54.5	53.5	52.0	51.5	51.0
	20	54.0	67.4	50.5	60.0	58.5	56.0	55.0	54.0	53.0	51.5	51.5	51.0
	21	53.3	65.4	47.4	59.0	57.0	55.5	55.0	54.5	52.5	49.0	48.5	48.0
Night	22	54.5	72.3	46.5	65.5	62.0	57.5	55.5	52.0	50.5	48.5	48.0	47.0
	23	56.3	78.1	44.7	68.5	66.0	61.5	55.0	50.0	48.5	46.0	46.0	45.5

24-Hour Noise Level Measurement Summary

Project Name:	Meredith International Centre General Plan & Specific Plan Amendments	*JN:*	9035
Location:	L12 - Located north of 4th Street at the existing wall surrounding residential dwellings, northeast of the Project site.	*Analyst:*	A. Wolfe
		Date:	9/23/2014

Energy Average Leq		*24-Hour*
Day	*Night*	*CNEL*
63.8	61.2	68.4

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	62.0	78.2	43.1	70.0	68.5	67.0	66.0	61.5	55.5	47.0	46.0	44.0
	Max	66.6	91.4	49.8	75.0	73.5	71.0	70.0	66.5	63.0	55.0	54.0	51.0
Night	Min	56.7	74.0	44.8	66.5	64.5	62.5	60.5	52.5	49.5	47.0	46.5	45.5
	Max	66.0	84.4	55.1	74.5	73.0	71.0	70.0	66.0	62.5	58.0	57.5	56.5
Hourly Summary													
Night	0	58.1	79.7	46.6	69.5	67.0	63.5	60.5	52.5	50.5	48.0	47.5	47.0
	1	57.1	78.3	44.8	68.0	66.0	62.5	61.0	53.0	50.0	47.0	46.5	45.5
	2	56.7	74.0	45.2	66.5	64.5	62.5	61.0	56.0	52.5	48.5	47.5	46.0
	3	58.1	82.6	48.0	67.0	66.0	63.0	61.0	56.0	54.0	51.5	50.5	49.0
	4	60.8	80.1	51.0	70.5	68.5	66.0	64.5	59.5	56.5	54.0	52.5	51.5
	5	64.3	84.4	54.1	73.5	71.5	69.0	68.0	63.5	59.5	56.5	56.0	55.0
	6	66.0	83.6	55.1	74.5	73.0	71.0	70.0	66.0	62.5	58.0	57.5	56.5
Day	7	66.6	91.4	49.8	74.5	72.5	70.5	69.5	66.5	63.0	55.0	54.0	51.0
	8	65.6	78.7	47.3	75.0	73.5	71.0	70.0	66.0	61.0	51.0	49.5	48.5
	9	63.6	84.7	46.4	73.5	72.0	69.0	67.5	63.5	58.5	49.0	48.5	47.5
	10	62.5	78.2	45.2	71.5	70.0	68.0	67.0	63.0	59.0	48.5	47.0	46.0
	11	63.1	86.1	43.7	72.5	70.5	68.0	66.5	63.0	58.5	47.0	46.0	44.5
	12	63.1	79.6	44.1	72.5	70.5	68.0	67.0	63.5	59.5	48.5	46.5	45.0
	13	62.7	83.6	43.1	72.0	70.0	67.5	66.5	63.0	58.5	47.0	46.0	44.0
	14	62.4	78.6	43.9	72.0	70.0	67.5	66.5	62.5	58.5	47.0	46.0	44.5
	15	64.1	83.7	43.7	73.5	71.5	69.0	68.0	64.5	60.0	49.0	47.5	45.0
	16	64.3	80.5	46.6	73.0	71.0	69.0	68.0	65.0	61.5	52.5	50.0	48.0
	17	64.6	85.7	47.0	73.0	71.0	69.0	68.0	65.0	61.5	52.0	50.5	48.5
	18	64.8	88.2	48.6	71.5	70.0	68.5	67.5	65.0	61.5	52.5	51.5	50.0
	19	63.0	81.4	47.9	71.5	70.0	68.0	67.0	63.5	59.5	51.0	50.0	49.5
	20	62.1	79.4	47.6	70.5	69.0	67.5	66.5	63.0	57.5	51.0	50.5	49.0
	21	62.0	87.8	46.1	70.0	68.5	67.0	66.0	61.5	55.5	49.5	48.5	47.5
Night	22	60.6	79.3	47.3	71.0	69.0	66.5	65.0	60.0	53.5	49.5	49.0	48.0
	23	57.7	78.0	46.4	68.5	67.0	64.5	62.5	53.5	49.5	47.5	47.0	46.5

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments

Location: L13 - Located between an existing commercial plaza, at the northeast corner of the intersection of Archibald Avenue and Inland Empire Boulevard, and existing residential dwellings.

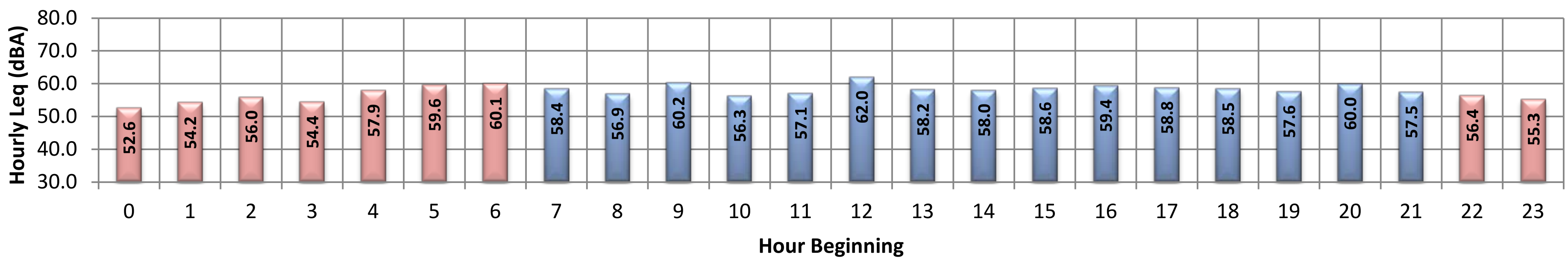
JN: 9035

Analyst: A. Wolfe

Date: 9/23/2014

Energy Average Leq		*24-Hour*
Day	*Night*	*CNEL*
58.7	56.9	64.0

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	56.3	68.5	49.3	62.5	61.5	60.0	58.5	56.0	54.0	51.5	51.0	50.0
	Max	62.0	84.6	51.8	74.5	72.0	66.0	63.0	59.5	57.0	54.0	53.5	52.5
Night	Min	52.6	62.8	45.5	58.5	57.0	56.0	55.5	52.5	50.5	47.0	46.5	46.0
	Max	60.1	85.8	54.5	66.5	64.5	63.0	62.0	60.5	59.0	57.0	56.5	55.5
Hourly Summary													
Night	0	52.6	75.1	46.6	58.5	57.0	56.0	55.5	53.0	51.0	48.5	48.0	47.0
	1	54.2	74.0	45.5	64.5	62.0	58.0	56.5	52.5	50.5	47.0	46.5	46.0
	2	56.0	85.8	46.9	64.0	61.5	58.5	57.0	54.5	52.0	49.0	48.5	47.5
	3	54.4	62.8	48.3	59.0	58.5	57.5	56.5	55.0	53.5	51.0	50.5	49.5
	4	57.9	72.2	52.0	65.0	63.0	61.0	60.0	58.0	56.5	54.5	53.5	53.0
	5	59.6	70.9	53.6	64.5	63.5	62.5	62.0	60.0	59.0	56.0	55.5	54.5
	6	60.1	69.3	54.5	65.5	64.5	63.0	62.0	60.5	59.0	57.0	56.5	55.5
Day	7	58.4	75.5	49.7	66.0	64.5	62.5	61.5	58.5	56.5	53.0	52.0	50.5
	8	56.9	68.5	49.3	63.5	62.5	61.0	60.0	57.5	55.5	52.0	51.0	50.0
	9	60.2	80.4	50.0	70.0	68.0	65.0	63.0	58.5	55.5	52.5	52.0	51.0
	10	56.3	70.2	49.9	62.5	61.5	60.0	59.0	56.5	55.0	52.0	51.5	51.0
	11	57.1	72.5	50.0	64.0	62.5	61.0	60.0	57.5	55.0	52.0	51.5	50.5
	12	62.0	84.6	50.0	74.5	72.0	66.0	63.0	58.5	56.0	53.5	52.5	51.5
	13	58.2	77.8	50.0	66.5	64.5	62.0	61.0	58.0	56.0	53.0	52.0	51.0
	14	58.0	72.3	50.2	65.0	64.5	62.5	61.0	58.0	56.0	53.0	52.5	51.5
	15	58.6	76.4	50.8	66.0	63.5	62.0	61.5	59.0	56.5	53.0	52.0	51.0
	16	59.4	76.4	50.5	68.5	66.0	63.0	61.5	59.5	57.0	54.0	53.5	52.0
	17	58.8	81.1	51.0	65.5	64.0	61.5	61.0	59.0	57.0	54.0	53.0	52.0
	18	58.5	77.2	51.6	65.0	63.5	61.5	61.0	58.5	57.0	54.0	53.5	52.5
	19	57.6	72.4	51.8	65.0	63.0	61.0	60.0	58.0	56.0	53.5	53.0	52.5
	20	60.0	82.5	50.2	66.5	63.5	62.5	62.5	58.0	56.0	53.0	52.5	51.0
	21	57.5	74.8	49.8	68.5	65.5	60.0	58.5	56.0	54.0	51.5	51.0	50.5
Night	22	56.4	76.8	48.1	66.5	64.0	60.0	58.5	56.0	54.0	50.5	50.0	49.0
	23	55.3	70.1	47.9	61.0	60.0	58.5	57.5	56.0	55.0	50.0	49.5	49.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name: Meredith International Centre General Plan & Specific Plan Amendments

Location: L14 - Located south of the I-10 Freeway behind an existing noise barrier in the parking lot of the Residence Inn on Convention Center Way.

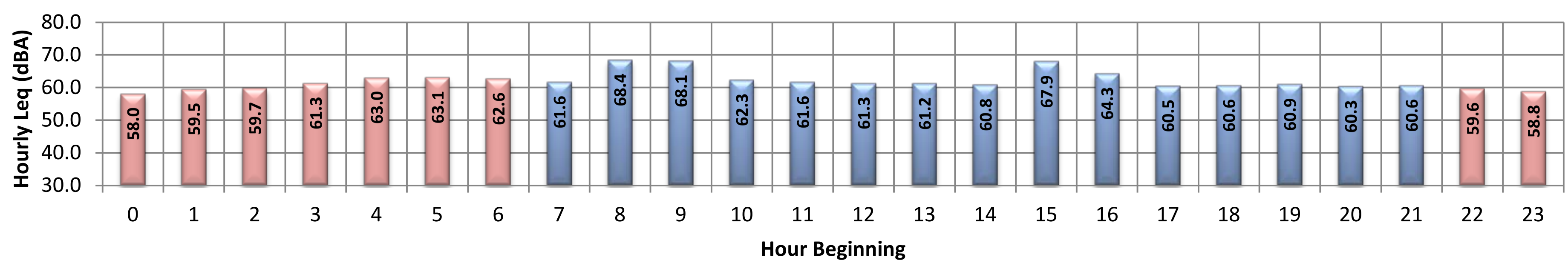
JN: 9035

Analyst: A. Wolfe

Date: 9/23/2014

Energy Average Leq		*24-Hour*
Day	*Night*	*CNEL*
63.9	61.0	68.2

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	60.3	68.9	53.5	65.0	64.0	63.0	62.5	59.0	57.5	55.5	55.0	54.5
	Max	68.4	77.4	57.8	75.0	75.0	75.0	74.5	69.5	63.5	60.5	59.5	58.5
Night	Min	58.0	67.6	47.9	64.0	63.0	61.5	61.0	58.5	57.0	53.5	52.5	50.5
	Max	63.1	76.2	58.2	67.5	66.5	65.5	65.0	63.5	62.5	61.0	60.5	59.5
Hourly Summary													
Night	0	58.0	71.5	47.9	64.0	63.0	61.5	61.0	58.5	57.0	53.5	52.5	50.5
	1	59.5	71.8	49.9	64.5	64.0	63.0	62.5	60.5	58.0	54.5	53.5	51.5
	2	59.7	76.2	51.5	66.5	64.5	62.5	62.0	60.0	58.0	55.5	54.5	53.0
	3	61.3	72.7	53.1	66.0	65.0	64.0	63.5	62.0	60.5	57.5	56.5	54.5
	4	63.0	74.8	58.2	67.0	66.0	65.0	64.5	63.5	62.5	61.0	60.5	59.5
	5	63.1	72.8	57.0	67.5	66.5	65.5	65.0	63.5	62.5	60.0	59.5	58.5
	6	62.6	71.9	56.7	67.0	66.0	65.0	64.5	63.0	62.0	60.0	59.5	58.5
Day	7	61.6	70.9	55.2	67.0	66.0	64.5	64.0	62.0	60.5	58.0	57.5	56.5
	8	68.4	75.2	57.0	73.5	73.5	73.0	73.0	69.5	63.5	60.5	59.5	58.5
	9	68.1	75.6	57.8	75.0	75.0	75.0	74.5	64.0	62.0	60.0	59.5	58.5
	10	62.3	71.9	56.1	66.5	65.5	64.5	64.0	63.0	61.5	59.5	59.0	58.0
	11	61.6	69.3	55.1	65.5	64.5	63.5	63.5	62.0	61.0	59.0	58.5	57.0
	12	61.3	70.0	56.0	65.0	64.5	63.5	63.0	62.0	60.5	59.0	58.5	57.0
	13	61.2	68.9	55.9	65.0	64.5	63.5	63.0	61.5	60.5	58.5	58.0	57.0
	14	60.8	70.9	54.5	65.0	64.0	63.0	62.5	61.5	60.0	58.0	57.0	56.0
	15	67.9	77.4	53.8	74.5	74.5	74.5	74.5	61.5	58.5	56.0	55.5	55.0
	16	64.3	74.5	53.5	74.0	73.5	73.5	72.0	59.0	57.5	55.5	55.0	54.5
	17	60.5	69.6	54.3	65.0	64.0	63.0	62.5	61.0	60.0	57.5	57.0	55.5
	18	60.6	72.7	55.5	65.0	64.0	63.0	62.5	61.0	60.0	58.0	57.5	56.5
	19	60.9	76.0	54.1	66.0	65.5	64.0	63.0	61.5	60.0	57.5	57.0	56.0
	20	60.3	70.3	53.7	65.5	64.5	63.0	62.5	60.5	59.5	57.0	56.5	55.5
	21	60.6	76.0	54.0	66.5	64.5	63.0	62.5	60.5	59.5	57.5	56.5	55.0
Night	22	59.6	72.9	51.4	65.5	64.5	63.0	62.0	60.0	58.5	56.0	55.0	53.5
	23	58.8	67.6	49.3	64.0	63.0	62.0	61.5	59.5	57.5	55.0	54.0	52.0

APPENDIX 6.1:

OFF-SITE TRAFFIC NOISE PREDICTION VOLUME DEVELOPMENT WORKSHEETS

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			PA-1 (Option B) Trip Dist % (Li/Manu)		PA-1 (Option B) Trip Dist % (Ware)		PA-2 (Table A) Trip %		PA-1 (Option B) Trips (Li/Manu)				PA-1 (Option B) Trips (Warehousing)				PA-2 (Table A) Trips				Year 2017 Total Trips			
SegmentID	Roadway	Segment	Autos	Trucks	Autos	Trucks	Autos	Trucks	Autos	MT	HT	Total	Autos	MT	HT	Total	Autos	MT	HT	Total	Autos	MT	HT	Total
1	Baker Av.	n/o 6th St.	4%	0%	4%	0%	0%	0%	136	0	0	136	128	0	0	128	0	0	0	0	264	0	0	264
2	Vineyard Av.	n/o 8th St.	7%	5%	7%	0%	7%	7%	238	17	29	284	223	0	0	223	211	18	2	231	672	35	31	739
3	Vineyard Av.	s/o 8th St.	7%	9%	7%	0%	7%	7%	238	31	52	321	223	0	0	223	211	18	2	231	672	49	55	776
4	Vineyard Av.	n/o 4th St.	22%	9%	22%	0%	22%	22%	747	31	52	831	702	0	0	702	663	56	8	727	2112	87	60	2260
5	Vineyard Av.	s/o 4th St.	24%	11%	24%	1%	36%	36%	815	38	64	917	766	1	7	774	1085	92	13	1190	2666	132	83	2881
6	Vineyard Av.	s/o Inland Empire Bl.	31%	59%	31%	75%	29%	29%	1053	204	342	1599	989	104	510	1604	874	74	10	958	2916	382	862	4161
7	Hellman Av.	n/o 4th St.	5%	0%	5%	0%	5%	5%	170	0	0	170	160	0	0	160	151	13	2	165	480	13	2	495
8	Archibald Av.	s/o Arrow Rte.	12%	6%	12%	0%	7%	7%	408	21	35	463	383	0	0	383	211	18	2	231	1001	39	37	1077
9	Archibald Av.	n/o 6th St.	14%	6%	14%	0%	14%	14%	476	21	35	531	447	0	0	447	422	36	5	463	1344	57	40	1440
10	Archibald Av.	s/o 6th St.	17%	8%	17%	0%	17%	17%	577	28	46	651	542	0	0	542	512	44	6	562	1632	71	52	1756
11	Archibald Av.	n/o Inland Empire Bl.	20%	10%	20%	1%	18%	18%	679	35	58	772	638	1	7	646	542	46	6	595	1860	82	71	2013
12	Archibald Av.	s/o Inland Empire Bl.	11%	20%	11%	23%	13%	13%	374	69	116	559	351	32	157	539	392	33	5	430	1116	134	277	1528
13	Haven Av.	n/o Inland Empire Bl.	2%	0%	2%	0%	2%	2%	68	0	0	68	64	0	0	64	60	5	1	66	192	5	1	198
14	4th St.	w/o Baker Av.	4%	2%	4%	1%	4%	4%	136	7	12	154	128	1	7	136	121	10	1	132	384	19	20	422
15	4th St.	e/o Baker Av.	4%	2%	4%	1%	4%	4%	136	7	12	154	128	1	7	136	121	10	1	132	384	19	20	422
16	4th St.	w/o Hellman Av.	4%	0%	4%	0%	10%	10%	136	0	0	136	128	0	0	128	301	26	3	331	565	26	3	594
17	4th St.	e/o Hellman Av.	3%	0%	3%	0%	5%	5%	102	0	0	102	96	0	0	96	151	13	2	165	348	13	2	363
18	4th St.	e/o Archibald Av.	3%	2%	3%	1%	3%	3%	102	7	12	120	96	1	7	104	90	8	1	99	288	16	19	323
19	4th St.	w/o Haven Av.	3%	2%	3%	1%	3%	3%	102	7	12	120	96	1	7	104	90	8	1	99	288	16	19	323
20	4th St.	e/o Haven Av.	3%	2%	3%	1%	3%	3%	102	7	12	120	96	1	7	104	90	8	1	99	288	16	19	323
21	Inland Empire Bl.	e/o Archibald Av.	4%	0%	4%	0%	4%	4%	136	0	0	136	128	0	0	128	121	10	1	132	384	10	1	396
22	Inland Empire Bl.	w/o Haven Av.	4%	0%	4%	0%	2%	2%	136	0	0	136	128	0	0	128	60	5	1	66	324	5	1	330
23	Inland Empire Bl.	e/o Haven Av.	2%	0%	2%	0%	2%	2%	68	0	0	68	64	0	0	64	60	5	1	66	192	5	1	198
			3,397	925	3,191	819	3,014	291		1415				632										
										0.3738318	0.6261682	1		0.1693588	0.8306412	1		0.8800	0.1200	1				
										MT/HT Split				MT/HT Split				MT/HT Split						

Project Trip Generation (Actual PM Peak Hour Trips-not PCE From Air Quality Study)

Project Trips	Autos	MT	HT	Total	Autos	MT	HT	Total
(PA-1 Option B)	6,588	484	1,260	8,332				
PA 2 (Table A) Shopping Center (86,000 SF)	3,014	256	35	3,305				
Year 2017 Total	9,601	741	1,295	11,637	82.51%	6.37%	11.12%	100.00%
PA-2	14,954	1,271	173					
PA-3	8,780	746	102					
PA-4	4,851	412	56					
(PA-2, PA-3 & PA-4) Total:	28,586	2,430	331	31,347				
(PA-1 Option B & PA-2, PA-3, PA-4) Year 2020 Total	35,173	2,914	1,591	39,679	88.65%	7.35%	4.01%	100.00%

	Daily Net Trip Gen			
PA-2	16,399	Table 3-2	Year 2017 PA 2	3305
PA-3	9,628	Table 3-3		
PA-4	5,320	Table 3-4		
	31,347			

			PA-2 Trip %		PA-3 Trip %		PA-4 Trip %		PA-1 (Option B) Trips				PA-2 Trips				PA-3 Trips				PA-4 Trips				Year 2020 Total Trips			
SegmentID	Roadway	Segment	Autos	Trucks	Autos	Trucks	Autos	Trucks	Autos	MT	HT	Total	Autos	MT	HT	Total	Autos	MT	HT	Total	Autos	MT	HT	Total	Autos	MT	HT	Total
1	Baker Av.	n/o 6th St.	0%	0%	4%	4%	0%	0%	128	0	0	128	0	0	0	0	351	30	4	385	0	0	0	0	479	30	4	513
2	Vineyard Av.	n/o 8th St.	7%	7%	7%	7%	4%	4%	223	0	0	223	1047	89	12	1148	615	52	7	674	194	16	2	213	2079	158	22	2258
3	Vineyard Av.	s/o 8th St.	7%	7%	7%	7%	6%	6%	223	0	0	223	1047	89	12	1148	615	52	7	674	291	25	3	319	2176	166	23	2364
4	Vineyard Av.	n/o 4th St.	22%	22%	22%	22%	13%	13%	702	0	0	702	3290	280	38	3608	1932	164	22	2118	631	54	7	692	6554	497	68	7120
5	Vineyard Av.	s/o 4th St.	36%	36%	17%	17%	19%	19%	766	1	7	774	5384	458	62	5904	1493	127	17	1637	922	78	11	1011	8564	664	97	9325
6	Vineyard Av.	s/o Inland Empire Bl.	29%	29%	11%	11%	24%	24%	989	104	510	1604	4337	369	50	4756	966	82	11	1059	1164	99	13	1277	7456	654	585	8695
7	Hellman Av.	n/o 4th St.	5%	5%	5%	5%	2%	2%	160	0	0	160	748	64	9	820	439	37	5	481	97	8	1	106	1443	109	15	1567
8	Archibald Av.	s/o Arrow Rte.	7%	7%	7%	7%	5%	5%	383	0	0	383	1047	89	12	1148	615	52	7	674	243	21	3	266	2287	162	22	2471
9	Archibald Av.	n/o 6th St.	14%	14%	14%	14%	8%	8%	447	0	0	447	2094	178	24	2296	1229	104	14	1348	388	33	4	426	4158	315	43	4516
10	Archibald Av.	s/o 6th St.	17%	17%	17%	17%	10%	10%	542	0	0	542	2542	216	29	2788	1493	127	17	1637	485	41	6	532	5062	384	52	5499
11	Archibald Av.	n/o Inland Empire Bl.	18%	18%	37%	37%	17%	17%	638	1	7	646	2692	229	31	2952	3249	276	38	3562	825	70	10	904	7403	576	85	8065
12	Archibald Av.	s/o Inland Empire Bl.	13%	13%	31%	31%	41%	41%	351	32	157	539	1944	165	23	2132	2722	231	32	2985	1989	169	23	2181	7006	598	234	7837
13	Haven Av.	n/o Inland Empire Bl.	2%	2%	2%	2%	1%	1%	64	0	0	64	299	25	3	328	176	15	2	193	49	4	1	53	587	44	6	638
14	4th St.	w/o Baker Av.	4%	4%	4%	4%	4%	4%	128	1	7	136	598	51	7	656	351	30	4	385	194	16	2	213	1271	99	20	1390
15	4th St.	e/o Baker Av.	4%	4%	4%	4%	4%	4%	128	1	7	136	598	51	7	656	351	30	4	385	194	16	2	213	1271	99	20	1390
16	4th St.	w/o Hellman Av.	10%	10%	9%	9%	2%	2%	128	0	0	128	1495	127	17	1640	790	67	9	867	97	8	1	106	2510	203	28	2740
17	4th St.	e/o Hellman Av.	5%	5%	9%	9%	0%	0%	96	0	0	96	748	64	9	820	790	67	9	867	0	0	0	0	1634	131	18	1782
18	4th St.	e/o Archibald Av.	3%	3%	3%	3%	2%	2%	96	1	7	104	449	38	5	492	263	22	3	289	97	8	1	106	905	70	16	991
19	4th St.	w/o Haven Av.	3%	3%	3%	3%	2%	2%	96	1	7	104	449	38	5	492	263	22	3	289	97	8	1	106	905	70	16	991
20	4th St.	e/o Haven Av.	3%	3%	3%	3%	2%	2%	96	1	7	104	449	38	5	492	263	22	3	289	97	8	1	106	905	70	16	991
21	Inland Empire Bl.	e/o Archibald Av.	4%	4%	4%	4%	2%	2%	128	0	0	128	598	51	7	656	351	30	4	385	97	8	1	106	1174	89	12	1275
22	Inland Empire Bl.	w/o Haven Av.	2%	2%	2%	2%	1%	1%	128	0	0	128	299	25	3	328	176	15	2	193	49	4	1	53	651	44	6	701
23	Inland Empire Bl.	e/o Haven Av.	2%	2%	2%	2%	1%	1%	64	0	0	64	299	25	3	328	176	15	2	193	49	4	1	53	587	44	6	638
			14,954	**1,445**	**8,780**	**848**	**4,851**	**469**																				
														0.8800	0.1200	1		0.8800	0.1200	1		0.8800	0.1200	1				
														MT/HT Split				MT/HT Split				MT/HT Split						

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Baker Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,790 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	479 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.92	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-15.63	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-24.28	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.7	59.8	58.0	51.9	60.6	61.2
Medium Trucks:	62.2	60.7	54.3	52.8	61.2	61.5
Heavy Trucks:	58.8	57.4	48.4	49.6	58.0	58.1
Vehicle Noise:	65.9	64.3	59.9	56.4	64.9	65.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	43	93	201
CNEL:	21	46	99	213

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Vineyard Av.
Road Segment: n/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,670 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,867 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.47	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	79.45	-10.23	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	84.25	-18.88	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.4	68.5	66.7	60.7	69.3	69.9
Medium Trucks:	70.7	69.2	62.8	61.3	69.8	70.0
Heavy Trucks:	66.9	65.4	56.4	57.6	66.0	66.1
Vehicle Noise:	74.4	72.8	68.5	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	56	120	258	556
CNEL:	59	127	273	588

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Vineyard Av.
Road Segment: s/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,540 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,854 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.01	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	81.00	-10.72	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-19.37	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.3	61.2	69.8	70.4
Medium Trucks:	71.1	69.6	63.2	61.6	70.1	70.3
Heavy Trucks:	66.8	65.4	56.3	57.6	65.9	66.1
Vehicle Noise:	74.8	73.1	68.9	65.3	73.8	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	364	784
CNEL:	83	179	385	830

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Vineyard Av.
Road Segment: n/o 4th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,110 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,611 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.47	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-9.23	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.89	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.9	68.0	66.2	60.1	68.8	69.4
Medium Trucks:	70.0	68.5	62.1	60.6	69.0	69.2
Heavy Trucks:	65.7	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	73.7	72.0	67.9	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	89	192	413	890
CNEL:	94	203	437	942

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Vineyard Av.
Road Segment: s/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,240 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,824 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.27	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-8.43	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-17.09	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.9	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	69.2	67.7	61.3	59.8	68.3	68.5
Heavy Trucks:	65.4	63.9	54.9	56.2	64.5	64.6
Vehicle Noise:	72.9	71.3	67.0	63.4	71.9	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	79	171	368	793
CNEL:	84	181	389	838

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Vineyard Av.
Road Segment: s/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,540 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,954 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.47	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-8.24	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-16.89	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	69.4	67.9	61.5	60.0	68.5	68.7
Heavy Trucks:	65.6	64.1	55.1	56.3	64.7	64.8
Vehicle Noise:	73.1	71.5	67.2	63.6	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	82	176	379	817
CNEL:	86	186	401	863

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Hellman Av.
Road Segment: n/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,320 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	432 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.37	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	77.72	-16.08	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-24.73	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.7	58.9	52.9	61.5	62.1
Medium Trucks:	63.1	61.6	55.3	53.7	62.2	62.4
Heavy Trucks:	59.7	58.3	49.3	50.5	58.9	59.0
Vehicle Noise:	66.8	65.2	60.8	57.3	65.8	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	17	38	81	174
CNEL:	18	40	85	184

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Av.
Road Segment: s/o Arrow Rte.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,080 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,208 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.20	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-9.50	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.16	1.33	-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:	69.8	67.9	66.1	60.0	68.7	69.3
Medium Trucks:	70.1	68.6	62.2	60.7	69.1	69.4
Heavy Trucks:	66.2	64.8	55.8	57.0	65.4	65.5
Vehicle Noise:	73.8	72.1	67.9	64.3	72.8	73.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	77	165	356	767
CNEL:	81	175	376	810

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,480 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,248 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.28	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-9.43	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.08	1.33	-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:	69.8	67.9	66.2	60.1	68.7	69.3
Medium Trucks:	70.2	68.7	62.3	60.7	69.2	69.4
Heavy Trucks:	66.3	64.9	55.8	57.1	65.5	65.6
Vehicle Noise:	73.9	72.2	67.9	64.4	72.9	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	167	360	776
CNEL:	82	177	381	820

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Av.
Road Segment: s/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,280 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.34	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-9.36	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.02	1.33	-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:	69.9	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	70.2	68.7	62.4	60.8	69.3	69.5
Heavy Trucks:	66.4	64.9	55.9	57.2	65.5	65.6
Vehicle Noise:	73.9	72.3	68.0	64.4	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	363	783
CNEL:	83	178	384	828

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,860 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,886 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.91	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-8.80	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.45	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	70.4	68.9	62.5	61.0	69.4	69.7
Heavy Trucks:	66.1	64.7	55.7	56.9	65.3	65.4
Vehicle Noise:	74.1	72.5	68.3	64.6	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	205	442	951
CNEL:	101	217	468	1,007

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,650 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,565 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.83	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-7.88	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.53	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	71.3	69.8	63.5	61.9	70.4	70.6
Heavy Trucks:	67.0	65.6	56.6	57.8	66.2	66.3
Vehicle Noise:	75.0	73.4	69.2	65.5	74.0	74.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	110	236	508	1,095
CNEL:	116	250	538	1,160

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Haven Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,730 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,173 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	154 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	84.0 feet
Centerline Dist. to Observer:	84.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	33.941
Medium Trucks:	33.679
Heavy Trucks:	33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.90	2.42	-1.20	*-4.75*	0.000	0.000
Medium Trucks:	79.45	-5.81	2.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.46	2.47	-1.20	*-5.21*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.6	72.7	70.9	64.9	73.5	74.1
Medium Trucks:	74.9	73.4	67.0	65.5	74.0	74.2
Heavy Trucks:	71.1	69.6	60.6	61.9	70.2	70.3
Vehicle Noise:	78.6	77.0	72.7	69.1	77.6	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	270	582	1,254	2,702
CNEL:	286	615	1,326	2,856

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: w/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,340 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,834 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.40	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-10.31	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.96	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.1	63.4	57.3	65.9	66.5
Medium Trucks:	67.3	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	63.5	62.1	53.0	54.3	62.6	62.8
Vehicle Noise:	71.0	69.4	65.1	61.5	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	276	594
CNEL:	63	135	292	628

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: e/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,550 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,355 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.79	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.50	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.15	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	68.1	66.6	60.2	58.7	67.2	67.4
Heavy Trucks:	63.4	62.0	53.0	54.2	62.6	62.7
Vehicle Noise:	71.8	70.2	66.1	62.3	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	311	670
CNEL:	71	153	330	710

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: w/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,310 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,531 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.26	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-11.97	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.62	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	68.6	67.1	60.8	59.2	67.7	67.9
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.2
Vehicle Noise:	72.4	70.7	66.6	62.8	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	73	157	337	727
CNEL:	77	166	358	771

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: e/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,630 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,463 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.46	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-12.16	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.82	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	68.4	66.9	60.6	59.0	67.5	67.7
Heavy Trucks:	63.8	62.4	53.3	54.6	62.9	63.1
Vehicle Noise:	72.2	70.5	66.4	62.7	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	71	152	327	705
CNEL:	75	161	347	748

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,680 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.86	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.56	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.21	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	69.0	67.5	61.2	59.6	68.1	68.3
Heavy Trucks:	64.4	63.0	53.9	55.2	63.5	63.7
Vehicle Noise:	72.8	71.1	67.0	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	77	167	359	773
CNEL:	82	177	380	820

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: w/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,720 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.75	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.46	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.11	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	69.1	67.6	61.3	59.7	68.2	68.4
Heavy Trucks:	64.5	63.1	54.0	55.3	63.6	63.8
Vehicle Noise:	72.9	71.2	67.1	63.4	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	169	365	786
CNEL:	83	179	386	833

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: 4th St.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,780 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,178 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.27	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-10.43	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.09	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.2	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	70.2	68.7	62.3	60.8	69.2	69.4
Heavy Trucks:	65.5	64.1	55.0	56.3	64.7	64.8
Vehicle Noise:	73.9	72.2	68.2	64.4	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	92	198	427	920
CNEL:	97	210	452	975

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,920 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,092 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.73	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-13.43	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-22.09	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.8	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	69.8	68.2	61.9	60.3	68.8	69.0
Heavy Trucks:	65.1	63.7	54.6	55.9	64.2	64.4
Vehicle Noise:	73.5	71.8	67.7	64.0	72.5	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	138	298	642
CNEL:	68	147	316	681

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,720 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,272 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.06	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.77	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-21.42	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.6	66.8	60.7	69.4	70.0
Medium Trucks:	70.4	68.9	62.5	61.0	69.5	69.7
Heavy Trucks:	65.8	64.3	55.3	56.5	64.9	65.0
Vehicle Noise:	74.1	72.5	68.4	64.6	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	71	153	330	711
CNEL:	75	162	350	754

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,480 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,248 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.15	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.85	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.51	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.8	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	67.8	66.2	59.9	58.3	66.8	67.0
Heavy Trucks:	63.1	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	71.5	69.8	65.7	62.0	70.5	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	63	137	294	634
CNEL:	67	145	312	672

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project | *Project Name:* Merideth
Road Name: Baker Av. | *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,080 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	508 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.67	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-15.37	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-24.03	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.9	60.0	58.3	52.2	60.8	61.4
Medium Trucks:	62.5	60.9	54.6	53.0	61.5	61.7
Heavy Trucks:	59.1	57.7	48.6	49.9	58.2	58.3
Vehicle Noise:	66.2	64.5	60.1	56.7	65.2	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	21	45	97	209
CNEL:	22	48	103	221

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Vineyard Av.
Road Segment: n/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,270 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,027 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.83	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	79.45	-9.87	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	84.25	-18.53	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	71.1	69.6	63.2	61.7	70.1	70.3
Heavy Trucks:	67.2	65.8	56.8	58.0	66.4	66.5
Vehicle Noise:	74.8	73.1	68.8	65.3	73.8	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	127	273	588
CNEL:	62	134	288	621

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Vineyard Av.
Road Segment: s/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,960 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,196 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	0.72	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	81.00	-9.98	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-18.64	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	69.8	68.0	61.9	70.6	71.2
Medium Trucks:	71.8	70.3	63.9	62.4	70.8	71.1
Heavy Trucks:	67.5	66.1	57.1	58.3	66.7	66.8
Vehicle Noise:	75.5	73.8	69.7	66.0	74.5	74.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	88	189	407	878
CNEL:	93	200	431	929

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Vineyard Av.
Road Segment: n/o 4th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,990 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,999 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.07	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-8.63	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.28	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.6	66.8	60.7	69.4	70.0
Medium Trucks:	70.6	69.1	62.7	61.2	69.6	69.8
Heavy Trucks:	66.3	64.9	55.8	57.1	65.4	65.6
Vehicle Noise:	74.3	72.6	68.5	64.8	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	98	210	453	976
CNEL:	103	223	480	1,033

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Vineyard Av.
Road Segment: s/o 4th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,280 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,228 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.85	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-7.85	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-16.51	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	69.8	68.3	61.9	60.4	68.8	69.1
Heavy Trucks:	65.9	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	73.5	71.9	67.6	64.0	72.5	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	87	187	402	866
CNEL:	92	197	425	916

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: s/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,470 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,347 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.01	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-7.70	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-16.35	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	67.8	66.0	59.9	68.6	69.2
Medium Trucks:	70.0	68.4	62.1	60.5	69.0	69.2
Heavy Trucks:	66.1	64.7	55.6	56.9	65.2	65.4
Vehicle Noise:	73.7	72.0	67.7	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	89	191	412	888
CNEL:	94	202	436	938

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Hellman Av. — *Job Number:* 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,570 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	457 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.13	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	77.72	-15.83	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-24.49	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.8	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	63.4	61.9	55.5	54.0	62.4	62.7
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	67.1	65.4	61.0	57.6	66.1	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	84	181
CNEL:	19	41	89	191

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Archibald Av. — *Job Number:* 9035
Road Segment: s/o Arrow Rte.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,590 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,459 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.67	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-9.04	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.69	1.33	-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:	70.2	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	70.5	69.0	62.7	61.1	69.6	69.8
Heavy Trucks:	66.7	65.3	56.2	57.5	65.8	66.0
Vehicle Noise:	74.2	72.6	68.3	64.7	73.3	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	82	177	382	824
CNEL:	87	188	404	871

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Archibald Av. — *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,450 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,645 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.99	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.72	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.37	1.33	-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:	70.5	68.6	66.9	60.8	69.4	70.1
Medium Trucks:	70.9	69.4	63.0	61.5	69.9	70.1
Heavy Trucks:	67.0	65.6	56.6	57.8	66.2	66.3
Vehicle Noise:	74.6	72.9	68.6	65.1	73.6	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	86	186	401	865
CNEL:	91	197	424	914

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Archibald Av.
Road Segment: s/o 6th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 26,940 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,694 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 40.311
Medium Trucks: 40.091
Heavy Trucks: 40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.07	1.30	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-8.64	1.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-17.29	1.33	-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:	70.6	68.7	67.0	60.9	69.5	70.1
Medium Trucks:	70.9	69.4	63.1	61.5	70.0	70.2
Heavy Trucks:	67.1	65.7	56.6	57.9	66.2	66.4
Vehicle Noise:	74.6	73.0	68.7	65.1	73.6	74.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	88	189	406	875
CNEL:	93	199	429	925

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 34,690 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 3,469 vehicles
Vehicle Speed: 50 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.71	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-8.00	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.65	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.1	69.2	67.4	61.4	70.0	70.6
Medium Trucks:	71.2	69.7	63.3	61.8	70.2	70.5
Heavy Trucks:	66.9	65.5	56.5	57.7	66.1	66.2
Vehicle Noise:	74.9	73.3	69.1	65.4	73.9	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	108	232	499	1,076
CNEL:	114	245	529	1,139

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 42,700 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 4,270 vehicles
Vehicle Speed: 50 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.61	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-7.10	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.75	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.0	70.1	68.3	62.3	70.9	71.5
Medium Trucks:	72.1	70.6	64.2	62.7	71.1	71.4
Heavy Trucks:	67.8	66.4	57.4	58.6	67.0	67.1
Vehicle Noise:	75.8	74.2	70.0	66.3	74.8	75.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	124	266	573	1,235
CNEL:	131	282	607	1,308

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: Haven Av.
Road Segment: n/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 57,230 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 5,723 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 154 feet

Site Data

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Centerline Dist. to Barrier: 84.0 feet
Centerline Dist. to Observer: 84.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 33.941
Medium Trucks: 33.679
Heavy Trucks: 33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.34	2.42	-1.20	-4.75	0.000	0.000
Medium Trucks:	79.45	-5.37	2.47	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.02	2.47	-1.20	-5.21	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.0	73.1	71.4	65.3	73.9	74.5
Medium Trucks:	75.4	73.8	67.5	65.9	74.4	74.6
Heavy Trucks:	71.5	70.1	61.0	62.3	70.6	70.8
Vehicle Noise:	79.0	77.4	73.1	69.5	78.0	78.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	289	623	1,341	2,890
CNEL:	306	658	1,418	3,055

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: 4th St.
Road Segment: w/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,110 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.00	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-9.70	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-18.35	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	65.7	64.0	57.9	66.5	67.2
Medium Trucks:	67.9	66.4	60.1	58.5	67.0	67.2
Heavy Trucks:	64.1	62.7	53.6	54.9	63.2	63.4
Vehicle Noise:	71.6	70.0	65.7	62.2	70.7	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	141	303	653
CNEL:	69	149	320	690

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: 4th St.
Road Segment: e/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,030 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,603 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.06	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.77	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.42	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	68.8	67.3	61.0	59.4	67.9	68.1
Heavy Trucks:	64.2	62.8	53.7	55.0	63.3	63.4
Vehicle Noise:	72.6	70.9	66.8	63.0	71.6	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	75	162	348	750
CNEL:	79	171	369	794

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: 4th St.
Road Segment: w/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,690 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,769 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.63	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.34	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.99	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.3	67.4	65.7	59.6	68.2	68.8
Medium Trucks:	69.3	67.8	61.4	59.9	68.3	68.5
Heavy Trucks:	64.6	63.2	54.1	55.4	63.8	63.9
Vehicle Noise:	73.0	71.3	67.3	63.5	72.0	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	172	372	801
CNEL:	85	183	394	848

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project
Road Name: 4th St.
Road Segment: e/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,960 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,696 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.82	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.52	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.17	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.5	59.4	68.0	68.7
Medium Trucks:	69.1	67.6	61.2	59.7	68.1	68.4
Heavy Trucks:	64.4	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	72.8	71.1	67.1	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	361	778
CNEL:	82	178	383	825

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,280 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,928 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.26	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.96	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.62	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.7	67.8	66.0	60.0	68.6	69.2
Medium Trucks:	69.6	68.1	61.8	60.2	68.7	68.9
Heavy Trucks:	65.0	63.6	54.5	55.8	64.1	64.3
Vehicle Noise:	73.4	71.7	67.6	63.9	72.4	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	183	394	848
CNEL:	90	194	417	899

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,390 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,139 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.19	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.51	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.17	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.2	68.3	66.5	60.4	69.1	69.7
Medium Trucks:	70.1	68.6	62.2	60.7	69.1	69.4
Heavy Trucks:	65.4	64.0	55.0	56.2	64.6	64.7
Vehicle Noise:	73.8	72.2	68.1	64.3	72.8	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	196	422	909
CNEL:	96	207	447	963

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,820 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,482 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.84	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.87	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.52	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	70.7	69.2	62.9	61.3	69.8	70.0
Heavy Trucks:	66.1	64.7	55.6	56.9	65.2	65.3
Vehicle Noise:	74.5	72.8	68.7	64.9	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	100	216	466	1,003
CNEL:	106	229	494	1,063

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Inland Empire Bl. — *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,090 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,309 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.94	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.65	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-21.30	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.6	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	70.5	69.0	62.7	61.1	69.6	69.8
Heavy Trucks:	65.9	64.5	55.4	56.7	65.0	65.1
Vehicle Noise:	74.3	72.6	68.5	64.7	73.3	73.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	156	336	725
CNEL:	77	165	357	768

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Inland Empire Bl. — *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,490 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,349 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.81	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	82.40	-12.51	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	86.40	-21.17	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	70.7	69.2	62.8	61.3	69.7	69.9
Heavy Trucks:	66.0	64.6	55.5	56.8	65.2	65.3
Vehicle Noise:	74.4	72.7	68.6	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	74	159	343	739
CNEL:	78	169	364	784

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 No Project — *Project Name:* Merideth
Road Name: Inland Empire Bl. — *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,220 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,322 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.90	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-12.60	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-21.26	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.3	67.0	67.6
Medium Trucks:	68.0	66.5	60.1	58.6	67.0	67.3
Heavy Trucks:	63.3	61.9	52.9	54.1	62.5	62.6
Vehicle Noise:	71.7	70.1	66.0	62.2	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	142	306	659
CNEL:	70	151	324	699

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: Baker Av. — *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,344 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	534 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.63%
Medium Trucks:	84.8%	4.9%	10.3%	7.37%
Heavy Trucks:	86.5%	2.7%	10.8%	1.00%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.43	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-15.37	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-24.03	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.2	60.3	58.5	52.4	61.1	61.7
Medium Trucks:	62.5	60.9	54.6	53.0	61.5	61.7
Heavy Trucks:	59.1	57.7	48.6	49.9	58.2	58.3
Vehicle Noise:	66.2	64.6	60.3	56.8	65.3	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	99	212
CNEL:	22	48	104	224

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: n/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,009 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,101 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.18%
Medium Trucks:	84.8%	4.9%	10.3%	7.65%
Heavy Trucks:	86.5%	2.7%	10.8%	1.17%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.99	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	79.45	-9.78	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	84.25	-17.93	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	71.2	69.7	63.3	61.7	70.2	70.4
Heavy Trucks:	67.8	66.4	57.3	58.6	67.0	67.1
Vehicle Noise:	75.0	73.3	69.0	65.5	74.0	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	131	282	607
CNEL:	64	138	298	642

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project *Project Name:* Merideth
Road Name: Vineyard Av. *Job Number:* 9035
Road Segment: s/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,736 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,274 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.04%
Medium Trucks:	84.8%	4.9%	10.3%	7.70%
Heavy Trucks:	86.5%	2.7%	10.8%	1.26%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	0.86	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-9.86	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.72	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	69.9	68.1	62.1	70.7	71.3
Medium Trucks:	71.9	70.4	64.1	62.5	71.0	71.2
Heavy Trucks:	68.4	67.0	58.0	59.2	67.6	67.7
Vehicle Noise:	75.8	74.1	69.9	66.3	74.8	75.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	197	425	915
CNEL:	97	208	449	968

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project *Project Name:* Merideth
Road Name: Vineyard Av. *Job Number:* 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,250 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,225 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.35%
Medium Trucks:	84.8%	4.9%	10.3%	7.48%
Heavy Trucks:	86.5%	2.7%	10.8%	1.17%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.40	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-8.47	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.53	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	70.7	69.2	62.9	61.3	69.8	70.0
Heavy Trucks:	67.0	65.6	56.6	57.8	66.2	66.3
Vehicle Noise:	74.6	73.0	68.8	65.1	73.6	74.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	103	221	477	1,027
CNEL:	109	234	504	1,086

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project *Project Name:* Merideth
Road Name: Vineyard Av. *Job Number:* 9035
Road Segment: s/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,161 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,516 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.30%
Medium Trucks:	84.8%	4.9%	10.3%	7.49%
Heavy Trucks:	86.5%	2.7%	10.8%	1.21%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.23	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-7.63	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.56	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.9	68.0	66.2	60.1	68.8	69.4
Medium Trucks:	70.0	68.5	62.1	60.6	69.1	69.3
Heavy Trucks:	66.9	65.5	56.4	57.7	66.0	66.2
Vehicle Noise:	73.9	72.3	68.0	64.4	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	199	429	924
CNEL:	98	210	453	977

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project *Project Name:* Merideth
Road Name: Vineyard Av. *Job Number:* 9035
Road Segment: s/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,631 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,763 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	88.86%
Medium Trucks:	84.8%	4.9%	10.3%	7.91%
Heavy Trucks:	86.5%	2.7%	10.8%	3.23%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.40	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-7.10	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-10.99	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.4	60.3	68.9	69.6
Medium Trucks:	70.5	69.0	62.7	61.1	69.6	69.8
Heavy Trucks:	71.5	70.0	61.0	62.3	70.6	70.7
Vehicle Noise:	75.5	73.9	68.7	66.1	74.5	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	118	255	550	1,185
CNEL:	124	267	576	1,240

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario:	Year 2017 With Project	*Project Name:*	Merideth
Road Name:	Hellman Av.	*Job Number:*	9035
Road Segment:	n/o 4th St.		

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,065 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	506 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.76%
Medium Trucks:	84.8%	4.9%	10.3%	7.25%
Heavy Trucks:	86.5%	2.7%	10.8%	0.99%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.65	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	77.72	-15.68	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-24.33	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.3	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	63.5	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	60.1	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	67.3	65.7	61.4	57.9	66.4	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	41	87	189
CNEL:	20	43	92	199

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario:	Year 2017 With Project	*Project Name:*	Merideth
Road Name:	Archibald Av.	*Job Number:*	9035
Road Segment:	s/o Arrow Rte.		

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,667 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,567 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.27%
Medium Trucks:	84.8%	4.9%	10.3%	7.58%
Heavy Trucks:	86.5%	2.7%	10.8%	1.16%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.86	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.95	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.11	1.33	-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:	70.4	68.5	66.8	60.7	69.3	69.9
Medium Trucks:	70.6	69.1	62.8	61.2	69.7	69.9
Heavy Trucks:	67.3	65.9	56.8	58.1	66.4	66.6
Vehicle Noise:	74.5	72.8	68.5	65.0	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	184	395	852
CNEL:	90	194	418	900

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario:	Year 2017 With Project	*Project Name:*	Merideth
Road Name:	Archibald Av.	*Job Number:*	9035
Road Segment:	n/o 6th St.		

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,890 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,789 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.30%
Medium Trucks:	84.8%	4.9%	10.3%	7.55%
Heavy Trucks:	86.5%	2.7%	10.8%	1.14%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.22	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.60	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.80	1.33	-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:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	71.0	69.5	63.1	61.6	70.0	70.3
Heavy Trucks:	67.6	66.2	57.1	58.4	66.7	66.9
Vehicle Noise:	74.8	73.2	68.9	65.3	73.8	74.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	90	194	417	898
CNEL:	95	205	441	950

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario:	Year 2017 With Project	*Project Name:*	Merideth
Road Name:	Archibald Av.	*Job Number:*	9035
Road Segment:	s/o 6th St.		

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,696 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,870 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.30%
Medium Trucks:	84.8%	4.9%	10.3%	7.53%
Heavy Trucks:	86.5%	2.7%	10.8%	1.17%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.35	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.49	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.56	1.33	-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:	70.9	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	71.1	69.6	63.2	61.7	70.1	70.4
Heavy Trucks:	67.8	66.4	57.4	58.6	67.0	67.1
Vehicle Noise:	74.9	73.3	69.0	65.5	74.0	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	198	426	918
CNEL:	97	209	450	970

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,703 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,670 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.26%
Medium Trucks:	84.8%	4.9%	10.3%	7.55%
Heavy Trucks:	86.5%	2.7%	10.8%	1.19%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.95	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-7.87	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.88	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.3	69.4	67.7	61.6	70.2	70.8
Medium Trucks:	71.3	69.8	63.5	61.9	70.4	70.6
Heavy Trucks:	67.7	66.3	57.2	58.5	66.8	67.0
Vehicle Noise:	75.2	73.5	69.3	65.7	74.2	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	112	242	522	1,124
CNEL:	119	256	552	1,190

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,228 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,423 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	90.57%
Medium Trucks:	84.8%	4.9%	10.3%	7.79%
Heavy Trucks:	86.5%	2.7%	10.8%	1.65%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.73	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-6.92	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-13.67	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.1	70.2	68.4	62.4	71.0	71.6
Medium Trucks:	72.3	70.8	64.4	62.9	71.3	71.6
Heavy Trucks:	69.9	68.5	59.4	60.7	69.1	69.2
Vehicle Noise:	76.3	74.7	70.3	66.9	75.3	75.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	134	289	622	1,340
CNEL:	141	305	656	1,414

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Haven Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	57,428 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,743 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	154 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	84.0 feet
Centerline Dist. to Observer:	84.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.21%
Medium Trucks:	84.8%	4.9%	10.3%	7.73%
Heavy Trucks:	86.5%	2.7%	10.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	33.941
Medium Trucks:	33.679
Heavy Trucks:	33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.35	2.42	-1.20	*-4.75*	0.000	0.000
Medium Trucks:	79.45	-5.36	2.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.02	2.47	-1.20	*-5.21*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.0	73.1	71.4	65.3	73.9	74.5
Medium Trucks:	75.4	73.8	67.5	65.9	74.4	74.6
Heavy Trucks:	71.5	70.1	61.0	62.3	70.7	70.8
Vehicle Noise:	79.1	77.4	73.1	69.6	78.1	78.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	289	623	1,343	2,894
CNEL:	306	659	1,420	3,059

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: 4th St.
Road Segment: w/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,522 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,152 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.69%
Heavy Trucks:	86.5%	2.7%	10.8%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.09	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-9.65	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-17.98	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	65.8	64.1	58.0	66.6	67.2
Medium Trucks:	68.0	66.5	60.1	58.6	67.0	67.3
Heavy Trucks:	64.5	63.0	54.0	55.3	63.6	63.7
Vehicle Noise:	71.8	70.1	65.8	62.3	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	143	309	665
CNEL:	70	151	326	703

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Baker Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 16,452 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,645 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.18%
Medium Trucks:	84.8%	4.9%	10.3%	7.67%
Heavy Trucks:	86.5%	2.7%	10.8%	1.15%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.95	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.70	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.94	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	68.9	67.4	61.0	59.5	67.9	68.2
Heavy Trucks:	64.7	63.2	54.2	55.4	63.8	63.9
Vehicle Noise:	72.7	71.1	67.0	63.2	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	77	165	356	767
CNEL:	81	175	377	813

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: w/o Hellman Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 18,284 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,828 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.32%
Medium Trucks:	84.8%	4.9%	10.3%	7.64%
Heavy Trucks:	86.5%	2.7%	10.8%	1.04%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.48	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.26	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.91	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	69.3	67.8	61.5	59.9	68.4	68.6
Heavy Trucks:	64.7	63.3	54.2	55.5	63.8	64.0
Vehicle Noise:	73.1	71.4	67.4	63.6	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	175	378	814
CNEL:	86	186	401	863

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Hellman Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 17,323 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,732 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.29%
Medium Trucks:	84.8%	4.9%	10.3%	7.66%
Heavy Trucks:	86.5%	2.7%	10.8%	1.05%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.72	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.48	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.13	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	67.3	65.6	59.5	68.1	68.8
Medium Trucks:	69.1	67.6	61.3	59.7	68.2	68.4
Heavy Trucks:	64.5	63.0	54.0	55.3	63.6	63.7
Vehicle Noise:	72.9	71.2	67.2	63.4	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	169	365	786
CNEL:	83	180	387	833

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 19,603 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,960 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.16%
Medium Trucks:	84.8%	4.9%	10.3%	7.71%
Heavy Trucks:	86.5%	2.7%	10.8%	1.14%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.19	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-10.92	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.22	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	69.7	68.2	61.8	60.3	68.7	69.0
Heavy Trucks:	65.4	64.0	54.9	56.2	64.5	64.6
Vehicle Noise:	73.5	71.8	67.7	64.0	72.5	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	86	186	400	862
CNEL:	91	197	424	914

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project | *Project Name:* Merideth
Road Name: 4th St. | *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,713 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,171 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.16%
Medium Trucks:	84.8%	4.9%	10.3%	7.71%
Heavy Trucks:	86.5%	2.7%	10.8%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.26	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.47	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.81	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.2	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	70.1	68.6	62.3	60.7	69.2	69.4
Heavy Trucks:	65.8	64.4	55.3	56.6	64.9	65.1
Vehicle Noise:	73.9	72.3	68.2	64.4	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	199	428	923
CNEL:	98	211	454	977

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project | *Project Name:* Merideth
Road Name: 4th St. | *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,143 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,514 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.16%
Medium Trucks:	84.8%	4.9%	10.3%	7.72%
Heavy Trucks:	86.5%	2.7%	10.8%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.89	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.83	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.21	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.2	61.1	69.8	70.4
Medium Trucks:	70.8	69.3	62.9	61.4	69.8	70.1
Heavy Trucks:	66.4	65.0	55.9	57.2	65.5	65.7
Vehicle Noise:	74.5	72.9	68.8	65.0	73.5	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	102	219	472	1,017
CNEL:	108	232	500	1,077

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,486 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,349 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.36%
Medium Trucks:	84.8%	4.9%	10.3%	7.60%
Heavy Trucks:	86.5%	2.7%	10.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.80	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.60	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-21.25	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	70.6	69.1	62.7	61.2	69.6	69.9
Heavy Trucks:	65.9	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	74.3	72.7	68.6	64.8	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	73	158	341	734
CNEL:	78	168	361	778

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,820 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,382 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.36%
Medium Trucks:	84.8%	4.9%	10.3%	7.60%
Heavy Trucks:	86.5%	2.7%	10.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.70	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.49	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-21.15	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.8	68.9	67.2	61.1	69.7	70.3
Medium Trucks:	70.7	69.2	62.8	61.3	69.7	70.0
Heavy Trucks:	66.0	64.6	55.6	56.8	65.2	65.3
Vehicle Noise:	74.4	72.8	68.7	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	75	161	346	746
CNEL:	79	170	367	791

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Inland Empire Bl.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,418 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,342 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.28%
Medium Trucks:	84.8%	4.9%	10.3%	7.68%
Heavy Trucks:	86.5%	2.7%	10.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.83	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.58	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.23	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.1	66.2	64.5	58.4	67.0	67.6
Medium Trucks:	68.0	66.5	60.2	58.6	67.1	67.3
Heavy Trucks:	63.4	61.9	52.9	54.2	62.5	62.6
Vehicle Noise:	71.8	70.1	66.1	62.3	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	143	308	663
CNEL:	70	152	326	703

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Baker Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,360 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	536 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.43	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-15.14	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-23.79	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.2	60.3	58.5	52.4	61.1	61.7
Medium Trucks:	62.7	61.2	54.8	53.3	61.7	62.0
Heavy Trucks:	59.3	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	66.4	64.8	60.4	56.9	65.4	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	47	101	217
CNEL:	23	49	106	229

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Vineyard Av.
Road Segment: n/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,380 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,138 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.06	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	79.45	-9.64	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	84.25	-18.30	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.0	69.1	67.3	61.2	69.9	70.5
Medium Trucks:	71.3	69.8	63.4	61.9	70.3	70.6
Heavy Trucks:	67.4	66.0	57.0	58.2	66.6	66.7
Vehicle Noise:	75.0	73.3	69.1	65.5	74.0	74.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	131	283	609
CNEL:	64	139	299	644

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Vineyard Av.
Road Segment: s/o 8th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,060 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,306 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	0.93	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	81.00	-9.77	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-18.43	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.9	70.0	68.2	62.2	70.8	71.4
Medium Trucks:	72.0	70.5	64.1	62.6	71.1	71.3
Heavy Trucks:	67.7	66.3	57.3	58.5	66.9	67.0
Vehicle Noise:	75.7	74.1	69.9	66.2	74.7	75.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	195	421	907
CNEL:	96	207	446	960

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,560 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,156 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.30	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-8.41	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.06	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	70.8	69.3	62.9	61.4	69.8	70.1
Heavy Trucks:	66.5	65.1	56.1	57.3	65.7	65.8
Vehicle Noise:	74.5	72.8	68.7	65.0	73.5	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	101	218	469	1,010
CNEL:	107	230	496	1,069

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: s/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,980 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,398 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.07	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-7.63	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-16.28	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.8	66.0	60.0	68.6	69.2
Medium Trucks:	70.0	68.5	62.1	60.6	69.1	69.3
Heavy Trucks:	66.2	64.7	55.7	57.0	65.3	65.4
Vehicle Noise:	73.7	72.1	67.8	64.2	72.7	73.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	193	416	897
CNEL:	95	204	440	948

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: s/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,220 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,522 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.23	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-7.48	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-16.13	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	70.2	68.7	62.3	60.8	69.2	69.5
Heavy Trucks:	66.3	64.9	55.9	57.1	65.5	65.6
Vehicle Noise:	73.9	72.2	68.0	64.4	72.9	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	92	198	426	918
CNEL:	97	209	451	971

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project — *Project Name:* Merideth
Road Name: Hellman Av. — *Job Number:* 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,840 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	484 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.88	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	77.72	-15.58	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-24.24	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.2	59.4	53.4	62.0	62.6
Medium Trucks:	63.6	62.1	55.8	54.2	62.7	62.9
Heavy Trucks:	60.2	58.8	49.8	51.0	59.4	59.5
Vehicle Noise:	67.3	65.7	61.3	57.8	66.3	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	40	87	188
CNEL:	20	43	92	198

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Archibald Av.
Road Segment: s/o Arrow Rte.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,590 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.90	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.81	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.46	1.33	-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:	70.5	68.6	66.8	60.7	69.4	70.0
Medium Trucks:	70.8	69.3	62.9	61.4	69.8	70.1
Heavy Trucks:	66.9	65.5	56.5	57.7	66.1	66.2
Vehicle Noise:	74.5	72.8	68.6	65.0	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	184	396	853
CNEL:	90	194	418	901

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Archibald Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,780 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.20	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.50	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.16	1.33	-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:	70.8	68.9	67.1	61.0	69.7	70.3
Medium Trucks:	71.1	69.6	63.2	61.7	70.1	70.4
Heavy Trucks:	67.2	65.8	56.8	58.0	66.4	66.5
Vehicle Noise:	74.8	73.1	68.9	65.3	73.8	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	89	193	415	894
CNEL:	94	204	439	945

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Archibald Av.
Road Segment: s/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,310 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,831 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.28	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.42	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.08	1.33	-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:	70.8	68.9	67.2	61.1	69.7	70.3
Medium Trucks:	71.2	69.7	63.3	61.7	70.2	70.4
Heavy Trucks:	67.3	65.9	56.8	58.1	66.5	66.6
Vehicle Noise:	74.9	73.2	68.9	65.4	73.9	74.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	195	420	905
CNEL:	96	206	444	956

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,420 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,642 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.92	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-7.79	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.44	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.3	69.4	67.6	61.6	70.2	70.8
Medium Trucks:	71.4	69.9	63.5	62.0	70.5	70.7
Heavy Trucks:	67.1	65.7	56.7	57.9	66.3	66.4
Vehicle Noise:	75.1	73.5	69.3	65.6	74.1	74.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	111	239	516	1,111
CNEL:	118	253	546	1,176

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 44,850 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 4,485 vehicles
Vehicle Speed: 50 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.82	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-6.88	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.54	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	72.3	70.8	64.4	62.9	71.4	71.6
Heavy Trucks:	68.0	66.6	57.6	58.8	67.2	67.3
Vehicle Noise:	76.0	74.4	70.2	66.5	75.0	75.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	128	275	593	1,277
CNEL:	135	291	627	1,351

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Haven Av.
Road Segment: n/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 60,340 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 6,034 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 154 feet

Site Data

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Centerline Dist. to Barrier: 84.0 feet
Centerline Dist. to Observer: 84.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 33.941
Medium Trucks: 33.679
Heavy Trucks: 33.705

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	5.57	2.42	-1.20	*-4.75*	0.000	0.000
Medium Trucks:	79.45	-5.14	2.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.79	2.47	-1.20	*-5.21*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	75.2	73.4	71.6	65.5	74.2	74.8
Medium Trucks:	75.6	74.1	67.7	66.2	74.6	74.9
Heavy Trucks:	71.7	70.3	61.3	62.5	70.9	71.0
Vehicle Noise:	79.3	77.6	73.4	69.8	78.3	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	299	645	1,390	2,994
CNEL:	316	682	1,469	3,165

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: w/o Baker Av.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 22,200 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,220 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.23	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-9.48	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.13	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.9	66.0	64.2	58.1	66.8	67.4
Medium Trucks:	68.2	66.7	60.3	58.8	67.2	67.4
Heavy Trucks:	64.3	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	71.9	70.2	66.0	62.4	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	145	313	675
CNEL:	71	154	331	714

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: e/o Baker Av.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 16,830 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,683 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.85	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-11.55	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.21	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	69.0	67.5	61.2	59.6	68.1	68.3
Heavy Trucks:	64.4	63.0	53.9	55.2	63.5	63.7
Vehicle Noise:	72.8	71.1	67.0	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	77	167	359	774
CNEL:	82	177	381	821

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: w/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,610 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,861 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.41	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.12	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.77	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.9	59.8	68.5	69.1
Medium Trucks:	69.5	68.0	61.6	60.1	68.5	68.8
Heavy Trucks:	64.8	63.4	54.4	55.6	64.0	64.1
Vehicle Noise:	73.2	71.5	67.5	63.7	72.2	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	83	178	384	828
CNEL:	88	189	407	878

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: e/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,850 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,785 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.59	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.30	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.95	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.4	67.5	65.7	59.6	68.3	68.9
Medium Trucks:	69.3	67.8	61.4	59.9	68.4	68.6
Heavy Trucks:	64.6	63.2	54.2	55.4	63.8	63.9
Vehicle Noise:	73.0	71.4	67.3	63.5	72.0	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	81	174	374	805
CNEL:	85	184	396	854

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,030 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.03	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-10.74	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.39	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.9	68.0	66.3	60.2	68.8	69.4
Medium Trucks:	69.9	68.4	62.0	60.4	68.9	69.1
Heavy Trucks:	65.2	63.8	54.7	56.0	64.3	64.5
Vehicle Noise:	73.6	71.9	67.9	64.1	72.6	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	88	189	407	877
CNEL:	93	200	432	930

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: w/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,240 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.39	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-10.31	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-18.97	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.4	68.5	66.7	60.6	69.3	69.9
Medium Trucks:	70.3	68.8	62.4	60.9	69.3	69.6
Heavy Trucks:	65.6	64.2	55.2	56.4	64.8	64.9
Vehicle Noise:	74.0	72.4	68.3	64.5	73.0	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	94	202	435	937
CNEL:	99	214	461	993

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: 4th St.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,110 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,611 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.06	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.65	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.30	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.0	69.1	67.4	61.3	69.9	70.5
Medium Trucks:	71.0	69.4	63.1	61.5	70.0	70.2
Heavy Trucks:	66.3	64.9	55.8	57.1	65.4	65.6
Vehicle Noise:	74.7	73.0	69.0	65.2	73.7	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	104	224	482	1,038
CNEL:	110	237	511	1,100

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Inland Empire Bl.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,750 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,375 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.73	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.43	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-21.08	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	70.8	69.2	62.9	61.3	69.8	70.0
Heavy Trucks:	66.1	64.7	55.6	56.9	65.2	65.4
Vehicle Noise:	74.5	72.8	68.7	65.0	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	75	161	348	749
CNEL:	79	171	368	794

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Inland Empire Bl.
Road Segment: w/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,240 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,424 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.57	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.28	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.93	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.3	61.2	69.8	70.5
Medium Trucks:	70.9	69.4	63.0	61.5	70.0	70.2
Heavy Trucks:	66.2	64.8	55.8	57.0	65.4	65.5
Vehicle Noise:	74.6	73.0	68.9	65.1	73.6	74.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	77	165	356	767
CNEL:	81	175	377	812

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 No Project
Road Name: Inland Empire Bl.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,970 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,397 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.66	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.36	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.02	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	66.4	64.6	58.6	67.2	67.8
Medium Trucks:	68.2	66.7	60.4	58.8	67.3	67.5
Heavy Trucks:	63.6	62.2	53.1	54.4	62.7	62.9
Vehicle Noise:	72.0	70.3	66.2	62.5	71.0	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	147	317	684
CNEL:	72	156	336	725

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: Baker Av. — *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 5,873 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 587 vehicles
Vehicle Speed: 40 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: 44.0 feet
Centerline Dist. to Observer: 44.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.38%
Medium Trucks:	4.9%	10.3%	86.5%	7.58%
Heavy Trucks:	10.8%	91.2%	7.8%	1.03%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 40.460
Medium Trucks: 40.241
Heavy Trucks: 40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.03	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-14.84	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-23.49	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.6	60.7	58.9	52.8	61.5	62.1
Medium Trucks:	63.0	49.1	58.3	62.8	68.6	68.7
Heavy Trucks:	59.6	49.2	64.4	49.0	58.3	61.6
Vehicle Noise:	66.7	61.2	66.3	63.4	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	196	422
CNEL:	46	98	211	455

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: n/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 23,638 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,364 vehicles
Vehicle Speed: 45 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: 33.0 feet
Centerline Dist. to Observer: 33.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.27%
Medium Trucks:	4.9%	10.3%	86.5%	7.68%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 32.833
Medium Trucks: 32.562
Heavy Trucks: 32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.50	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	79.45	-9.25	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	84.25	-17.90	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	71.7	57.8	67.0	71.5	77.3	77.4
Heavy Trucks:	67.8	57.4	72.7	57.2	66.6	69.8
Vehicle Noise:	75.4	70.0	74.7	72.1	78.4	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	120	259	557	1,201
CNEL:	129	278	599	1,291

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: s/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 25,424 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,542 vehicles
Vehicle Speed: 50 mph
Near/Far Lane Distance: 50 feet

Site Data

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Centerline Dist. to Barrier: 44.0 feet
Centerline Dist. to Observer: 44.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.27%
Medium Trucks:	4.9%	10.3%	86.5%	7.68%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 36.551
Medium Trucks: 36.308
Heavy Trucks: 36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.36	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-9.39	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.04	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	72.4	58.5	67.8	72.2	78.0	78.1
Heavy Trucks:	68.1	57.7	72.9	57.5	66.9	70.1
Vehicle Noise:	76.1	70.9	75.2	72.8	79.1	79.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	178	385	828	1,785
CNEL:	191	412	888	1,912

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 38,680 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 3,868 vehicles
Vehicle Speed: 50 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.35%
Medium Trucks:	4.9%	10.3%	86.5%	7.61%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.19	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-7.61	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.26	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	71.6	57.7	67.0	71.4	77.2	77.3
Heavy Trucks:	67.3	56.9	72.1	56.7	66.1	69.3
Vehicle Noise:	75.3	70.1	74.4	72.0	78.3	78.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	212	457	984	2,120
CNEL:	227	489	1,055	2,272

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Vineyard Av.
Road Segment: s/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,305 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,331 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.33%
Medium Trucks:	4.9%	10.3%	86.5%	7.62%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.13	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-6.65	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.24	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	71.0	57.1	66.4	70.8	76.6	76.7
Heavy Trucks:	67.2	56.7	72.0	56.6	65.9	69.2
Vehicle Noise:	74.7	69.4	74.1	71.4	77.7	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	193	417	897	1,933
CNEL:	208	448	965	2,080

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Vineyard Av.
Road Segment: s/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,915 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,392 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	90.11%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	2.18%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.14	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-6.54	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.03	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.8	68.9	67.1	61.1	69.7	70.3
Medium Trucks:	71.1	57.2	66.5	70.9	76.7	76.9
Heavy Trucks:	70.4	60.0	75.3	59.8	69.2	72.4
Vehicle Noise:	75.5	69.7	76.3	71.7	78.1	78.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	205	442	952	2,052
CNEL:	229	493	1,063	2,290

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Hellman Av.
Road Segment: n/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,407 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	641 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.41%
Medium Trucks:	4.9%	10.3%	86.5%	7.56%
Heavy Trucks:	10.8%	91.2%	7.8%	1.03%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.65	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	77.72	-14.47	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.13	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.4	60.6	54.6	63.2	63.8
Medium Trucks:	64.7	50.8	60.1	64.6	70.4	70.5
Heavy Trucks:	61.4	50.9	66.2	50.7	60.1	63.3
Vehicle Noise:	68.5	63.0	68.0	65.1	71.5	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	192	413
CNEL:	45	96	207	446

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Archibald Av.
Road Segment: s/o Arrow Rte.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,371 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,837 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.31%
Medium Trucks:	4.9%	10.3%	86.5%	7.65%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.30	1.30	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-8.47	1.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-17.13	1.33	-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:	70.9	69.0	67.2	61.1	69.8	70.4
Medium Trucks:	71.1	57.2	66.5	70.9	76.8	76.9
Heavy Trucks:	67.3	56.8	72.1	56.6	66.0	69.2
Vehicle Noise:	74.8	69.5	74.1	71.5	77.8	78.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	167	359	773	1,666
CNEL:	179	386	831	1,791

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Archibald Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,316 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,232 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.31%
Medium Trucks:	4.9%	10.3%	86.5%	7.64%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.86	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-7.91	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.56	1.33	-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:	71.4	69.5	67.8	61.7	70.3	70.9
Medium Trucks:	71.7	57.8	67.0	71.5	77.3	77.4
Heavy Trucks:	67.8	57.4	72.7	57.2	66.6	69.8
Vehicle Noise:	75.4	70.0	74.7	72.1	78.4	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	182	391	843	1,816
CNEL:	195	421	906	1,953

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Archibald Av.
Road Segment: s/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,809 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,381 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.33%
Medium Trucks:	4.9%	10.3%	86.5%	7.63%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.06	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-7.72	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.38	1.33	-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:	71.6	69.7	68.0	61.9	70.5	71.1
Medium Trucks:	71.9	58.0	67.2	71.7	77.5	77.6
Heavy Trucks:	68.0	57.6	72.8	57.4	66.7	70.0
Vehicle Noise:	75.6	70.2	74.9	72.3	78.6	79.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	187	403	868	1,870
CNEL:	201	433	933	2,010

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,485 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,448 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.30%
Medium Trucks:	4.9%	10.3%	86.5%	7.64%
Heavy Trucks:	10.8%	91.2%	7.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.79	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-6.98	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.57	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	72.2	58.3	67.6	72.0	77.9	78.0
Heavy Trucks:	68.0	57.5	72.8	57.4	66.7	70.0
Vehicle Noise:	76.0	70.8	75.1	72.6	79.0	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	233	503	1,083	2,334
CNEL:	250	539	1,161	2,502

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,687 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,269 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	90.92%
Medium Trucks:	4.9%	10.3%	86.5%	7.73%
Heavy Trucks:	10.8%	91.2%	7.8%	1.34%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.51	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-6.19	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-13.80	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.9	71.0	69.2	63.2	71.8	72.4
Medium Trucks:	73.0	59.1	68.4	72.8	78.6	78.8
Heavy Trucks:	69.8	59.3	74.6	59.1	68.5	71.7
Vehicle Noise:	76.9	71.5	76.4	73.4	79.8	80.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	266	572	1,233	2,656
CNEL:	287	619	1,333	2,872

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — Project Name: Merideth
Road Name: Haven Av. — Job Number: 9035
Road Segment: n/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 60,978 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 6,098 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 154 feet

Site Data

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Centerline Dist. to Barrier: 84.0 feet
Centerline Dist. to Observer: 84.0 feet
Barrier Distance to Observer: 0.0 feet
Observer Height (Above Pad): 5.0 feet
Pad Elevation: 0.0 feet
Road Elevation: 0.0 feet
Road Grade: 0.0%
Left View: -90.0 degrees
Right View: 90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.20%
Medium Trucks:	4.9%	10.3%	86.5%	7.74%
Heavy Trucks:	10.8%	91.2%	7.8%	1.06%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos: 33.941
Medium Trucks: 33.679
Heavy Trucks: 33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.61	2.42	-1.20	-4.75	0.000	0.000
Medium Trucks:	79.45	-5.10	2.47	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.75	2.47	-1.20	-5.21	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.3	73.4	71.6	65.6	74.2	74.8
Medium Trucks:	75.6	61.7	71.0	75.5	81.3	81.4
Heavy Trucks:	71.8	61.3	76.6	61.1	70.5	73.7
Vehicle Noise:	79.3	73.9	78.6	76.0	82.3	82.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	558	1,203	2,592	5,584
CNEL:	600	1,293	2,787	6,004

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — Project Name: Merideth
Road Name: 4th St. — Job Number: 9035
Road Segment: w/o Baker Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 23,590 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,359 vehicles
Vehicle Speed: 45 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.21%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.49	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-9.24	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-17.78	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.5	58.4	67.0	67.6
Medium Trucks:	68.4	54.5	63.8	68.2	74.1	74.2
Heavy Trucks:	64.7	54.2	69.5	54.0	63.4	66.6
Vehicle Noise:	72.1	66.8	71.5	68.8	75.1	75.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	130	280	603	1,299
CNEL:	140	301	649	1,398

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — Project Name: Merideth
Road Name: 4th St. — Job Number: 9035
Road Segment: e/o Baker Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 18,220 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 1,822 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.21%
Medium Trucks:	4.9%	10.3%	86.5%	7.70%
Heavy Trucks:	10.8%	91.2%	7.8%	1.09%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.50	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.24	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.74	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	69.4	55.5	64.7	69.2	75.0	75.1
Heavy Trucks:	64.9	54.4	69.7	54.2	63.6	66.8
Vehicle Noise:	73.1	68.0	72.1	69.8	76.1	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	151	325	700	1,507
CNEL:	161	347	748	1,612

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — Project Name: Merideth
Road Name: 4th St. — Job Number: 9035
Road Segment: w/o Hellman Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt): 21,350 vehicles
Peak Hour Percentage: 10%
Peak Hour Volume: 2,135 vehicles
Vehicle Speed: 55 mph
Near/Far Lane Distance: 48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.24%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 — Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos: 54.129
Medium Trucks: 53.966
Heavy Trucks: 53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.19	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-10.55	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-19.20	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.1	68.2	66.5	60.4	69.1	69.7
Medium Trucks:	70.1	56.2	65.4	69.9	75.7	75.8
Heavy Trucks:	65.4	54.9	70.2	54.7	64.1	67.4
Vehicle Noise:	73.8	68.7	72.7	70.5	76.8	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	167	361	777	1,674
CNEL:	179	385	830	1,788

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Hellman Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,632 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,963 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.23%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.18	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.91	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.56	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.8	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	69.7	55.8	65.1	69.5	75.3	75.4
Heavy Trucks:	65.0	54.6	69.9	54.4	63.8	67.0
Vehicle Noise:	73.4	68.3	72.3	70.1	76.4	76.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	158	341	735	1,584
CNEL:	169	365	785	1,692

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,291 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,129 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.20%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.17	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.55	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.08	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.1	68.2	66.5	60.4	69.0	69.6
Medium Trucks:	70.1	56.2	65.4	69.9	75.7	75.8
Heavy Trucks:	65.5	55.1	70.3	54.9	64.3	67.5
Vehicle Noise:	73.8	68.7	72.7	70.5	76.8	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	167	361	777	1,674
CNEL:	179	386	831	1,790

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,391 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,339 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.20%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.58	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.14	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.68	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.6	66.9	60.8	69.4	70.0
Medium Trucks:	70.5	56.6	65.8	70.3	76.1	76.2
Heavy Trucks:	65.9	55.5	70.7	55.3	64.7	67.9
Vehicle Noise:	74.2	69.1	73.1	70.9	77.2	77.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	178	384	827	1,783
CNEL:	191	411	885	1,906

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project — *Project Name:* Merideth
Road Name: 4th St. — *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,101 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,710 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	4.9%	10.3%	86.5%	7.73%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.22	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.50	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.05	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	71.1	57.2	66.5	70.9	76.7	76.9
Heavy Trucks:	66.5	56.1	71.4	55.9	65.3	68.5
Vehicle Noise:	74.8	69.7	73.8	71.5	77.8	78.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	197	424	913	1,967
CNEL:	210	453	976	2,103

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project *Project Name:* Merideth
Road Name: Inland Empire Bl. *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,025 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,503 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.27%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.34	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.08	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.74	1.98	-1.20	*-5.50*	0.000	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	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	71.1	57.2	66.5	70.9	76.7	76.9
Heavy Trucks:	66.4	56.0	71.3	55.8	65.2	68.4
Vehicle Noise:	74.8	69.7	73.7	71.5	77.8	78.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	146	316	680	1,465
CNEL:	157	337	726	1,565

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project *Project Name:* Merideth
Road Name: Inland Empire Bl. *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,941 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,494 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.27%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.36	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-12.11	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.76	1.98	-1.20	*-5.50*	0.000	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	69.3	67.5	61.4	70.1	70.7
Medium Trucks:	71.1	57.2	66.4	70.9	76.7	76.8
Heavy Trucks:	66.4	56.0	71.2	55.8	65.2	68.4
Vehicle Noise:	74.8	69.7	73.7	71.5	77.8	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	146	314	677	1,459
CNEL:	156	336	724	1,559

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2020 With Project *Project Name:* Merideth
Road Name: Inland Empire Bl. *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,608 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,461 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.23%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.46	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.19	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.84	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.5	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	68.4	54.5	63.8	68.2	74.1	74.2
Heavy Trucks:	63.8	53.3	68.6	53.1	62.5	65.7
Vehicle Noise:	72.1	67.0	71.0	68.8	75.1	75.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	130	280	604	1,301
CNEL:	139	299	645	1,390

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project *Project Name:* Merideth
Road Name: Baker Av. *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,303 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	630 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.73	1.28	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-14.44	1.31	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-23.09	1.31	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.9	61.0	59.2	53.1	61.8	62.4
Medium Trucks:	63.4	61.9	55.5	54.0	62.4	62.7
Heavy Trucks:	60.0	58.6	49.6	50.8	59.2	59.3
Vehicle Noise:	67.1	65.5	61.1	57.6	66.1	66.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	52	112	242
CNEL:	26	55	119	255

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — Project Name: Merideth
Road Name: Vineyard Av. — Job Number: 9035
Road Segment: n/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,841 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,384 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.54	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	79.45	-9.17	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	84.25	-17.82	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.5	67.8	61.7	70.3	70.9
Medium Trucks:	71.8	70.3	63.9	62.4	70.8	71.0
Heavy Trucks:	67.9	66.5	57.5	58.7	67.1	67.2
Vehicle Noise:	75.5	73.8	69.5	66.0	74.5	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	141	304	655
CNEL:	69	149	321	692

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — Project Name: Merideth
Road Name: Vineyard Av. — Job Number: 9035
Road Segment: s/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,368 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,537 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	0.0 feet
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.35	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-9.36	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-18.01	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	72.4	70.9	64.6	63.0	71.5	71.7
Heavy Trucks:	68.1	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	76.1	74.5	70.3	66.6	75.1	75.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	97	208	449	966
CNEL:	102	220	475	1,023

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — Project Name: Merideth
Road Name: Vineyard Av. — Job Number: 9035
Road Segment: n/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,259 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,326 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.52	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-8.18	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.83	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	71.0	69.5	63.1	61.6	70.1	70.3
Heavy Trucks:	66.7	65.3	56.3	57.5	65.9	66.0
Vehicle Noise:	74.7	73.1	68.9	65.2	73.7	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	105	225	485	1,046
CNEL:	111	239	514	1,107

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — Project Name: Merideth
Road Name: Vineyard Av. — Job Number: 9035
Road Segment: s/o 4th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,477 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,048 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.83	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-6.87	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.52	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.6	66.8	60.8	69.4	70.0
Medium Trucks:	70.8	69.3	62.9	61.4	69.8	70.1
Heavy Trucks:	66.9	65.5	56.5	57.7	66.1	66.2
Vehicle Noise:	74.5	72.8	68.6	65.0	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	101	217	468	1,007
CNEL:	107	229	494	1,065

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Vineyard Av.
Road Segment: s/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,990 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,899 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.67	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-7.03	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.69	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	70.6	69.1	62.7	61.2	69.7	69.9
Heavy Trucks:	66.8	65.3	56.3	57.6	65.9	66.0
Vehicle Noise:	74.3	72.7	68.4	64.8	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	98	212	456	983
CNEL:	104	224	482	1,039

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Hellman Av.
Road Segment: n/o 4th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,324 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	532 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.46	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	77.72	-15.17	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.82	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	64.0	62.5	56.2	54.6	63.1	63.3
Heavy Trucks:	60.7	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	67.7	66.1	61.7	58.2	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	43	93	200
CNEL:	21	46	98	211

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Archibald Av.
Road Segment: s/o Arrow Rte.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,490 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,849 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.31	1.30	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-8.40	1.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-17.05	1.33	-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:	70.9	69.0	67.2	61.1	69.8	70.4
Medium Trucks:	71.2	69.7	63.3	61.8	70.2	70.5
Heavy Trucks:	67.3	65.9	56.9	58.1	66.5	66.6
Vehicle Noise:	74.9	73.2	69.0	65.4	73.9	74.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	196	422	908
CNEL:	96	207	446	960

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Archibald Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,861 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,086 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.66	1.30	-1.20	-4.65	0.000	0.000
Medium Trucks:	79.45	-8.05	1.34	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-16.70	1.33	-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	69.3	67.6	61.5	70.1	70.7
Medium Trucks:	71.5	70.0	63.7	62.1	70.6	70.8
Heavy Trucks:	67.7	66.3	57.2	58.5	66.8	67.0
Vehicle Noise:	75.2	73.6	69.3	65.7	74.2	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	96	206	445	958
CNEL:	101	218	470	1,013

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Archibald Av.
Road Segment: s/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,106 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,111 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.69	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.01	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.67	1.33	-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:	71.3	69.4	67.6	61.5	70.2	70.8
Medium Trucks:	71.6	70.1	63.7	62.2	70.6	70.8
Heavy Trucks:	67.7	66.3	57.3	58.5	66.9	67.0
Vehicle Noise:	75.3	73.6	69.4	65.8	74.3	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	96	208	447	963
CNEL:	102	219	473	1,018

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Archibald Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,210 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,021 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.35	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-7.36	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.01	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.7	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	71.8	70.3	64.0	62.4	70.9	71.1
Heavy Trucks:	67.6	66.1	57.1	58.4	66.7	66.8
Vehicle Noise:	75.5	73.9	69.7	66.0	74.6	74.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	119	256	551	1,187
CNEL:	126	271	583	1,256

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Archibald Av.
Road Segment: s/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	50,290 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,029 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.32	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-6.39	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.04	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.7	70.8	69.0	63.0	71.6	72.2
Medium Trucks:	72.8	71.3	64.9	63.4	71.9	72.1
Heavy Trucks:	68.5	67.1	58.1	59.3	67.7	67.8
Vehicle Noise:	76.5	74.9	70.7	67.0	75.5	75.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	138	297	640	1,378
CNEL:	146	314	677	1,459

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Haven Av.
Road Segment: n/o Inland Empire Bl.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	64,675 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,467 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	154 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	84.0 feet
Centerline Dist. to Observer:	84.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	33.941
Medium Trucks:	33.679
Heavy Trucks:	33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.87	2.42	-1.20	*-4.75*	0.000	0.000
Medium Trucks:	79.45	-4.84	2.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.49	2.47	-1.20	*-5.21*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.6	73.7	71.9	65.8	74.5	75.1
Medium Trucks:	75.9	74.4	68.0	66.5	74.9	75.2
Heavy Trucks:	72.0	70.6	61.6	62.8	71.2	71.3
Vehicle Noise:	79.6	77.9	73.7	70.1	78.6	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	314	675	1,455	3,135
CNEL:	331	714	1,538	3,315

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: w/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,318 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,832 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.39	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-10.31	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.97	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.0	65.1	63.4	57.3	65.9	66.5
Medium Trucks:	67.3	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	63.5	62.1	53.0	54.3	62.6	62.8
Vehicle Noise:	71.0	69.4	65.1	61.5	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	128	276	594
CNEL:	63	135	291	628

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: e/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,322 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,332 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.86	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.57	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-21.22	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	68.0	66.5	60.2	58.6	67.1	67.3
Heavy Trucks:	63.4	62.0	52.9	54.2	62.5	62.6
Vehicle Noise:	71.8	70.1	66.0	62.2	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	143	308	663
CNEL:	70	151	326	702

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: w/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,749 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,275 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.46	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.25	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.90	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.4	68.5	66.8	60.7	69.3	69.9
Medium Trucks:	70.4	68.8	62.5	60.9	69.4	69.6
Heavy Trucks:	65.7	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	74.1	72.4	68.4	64.6	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	204	439	947
CNEL:	100	216	466	1,003

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: e/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,913 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,191 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.30	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.41	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-19.06	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.3	68.4	66.6	60.5	69.2	69.8
Medium Trucks:	70.2	68.7	62.3	60.8	69.2	69.5
Heavy Trucks:	65.5	64.1	55.1	56.3	64.7	64.8
Vehicle Noise:	73.9	72.3	68.2	64.4	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	199	429	923
CNEL:	98	211	454	979

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,032 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,303 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.51	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.19	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.84	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.6	66.8	60.8	69.4	70.0
Medium Trucks:	70.4	68.9	62.5	61.0	69.5	69.7
Heavy Trucks:	65.7	64.3	55.3	56.5	64.9	65.0
Vehicle Noise:	74.1	72.5	68.4	64.6	73.1	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	206	443	955
CNEL:	101	218	470	1,012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: w/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,046 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,405 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.70	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.00	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.66	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	70.6	69.1	62.7	61.2	69.6	69.9
Heavy Trucks:	65.9	64.5	55.5	56.7	65.1	65.2
Vehicle Noise:	74.3	72.7	68.6	64.8	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	98	212	456	982
CNEL:	104	224	483	1,041

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: 4th St.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,127 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,813 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.38	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.32	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-17.98	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	69.4	67.7	61.6	70.2	70.9
Medium Trucks:	71.3	69.8	63.4	61.9	70.3	70.6
Heavy Trucks:	66.6	65.2	56.2	57.4	65.8	65.9
Vehicle Noise:	75.0	73.3	69.3	65.5	74.0	74.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	109	235	506	1,091
CNEL:	116	249	536	1,156

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project
Road Name: Inland Empire Bl.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,203 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,620 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.01	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-11.72	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.37	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.5	69.6	67.8	61.8	70.4	71.0
Medium Trucks:	71.5	70.0	63.6	62.1	70.5	70.7
Heavy Trucks:	66.8	65.4	56.3	57.6	65.9	66.1
Vehicle Noise:	75.2	73.5	69.4	65.7	74.2	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	84	180	388	836
CNEL:	89	191	411	885

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — *Project Name:* Merideth
Road Name: Inland Empire Bl. — *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,546 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,655 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.92	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	82.40	-11.63	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	86.40	-20.28	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	71.6	70.0	63.7	62.1	70.6	70.8
Heavy Trucks:	66.9	65.5	56.4	57.7	66.0	66.2
Vehicle Noise:	75.3	73.6	69.5	65.8	74.3	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	183	393	847
CNEL:	90	193	417	898

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 No Project — *Project Name:* Merideth
Road Name: Inland Empire Bl. — *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,492 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,549 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	84.8%	4.9%	10.3%	7.75%
Heavy Trucks:	86.5%	2.7%	10.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.21	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-11.91	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.57	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.1	59.0	67.7	68.3
Medium Trucks:	68.7	67.2	60.8	59.3	67.7	68.0
Heavy Trucks:	64.0	62.6	53.6	54.8	63.2	63.3
Vehicle Noise:	72.4	70.8	66.7	62.9	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	73	158	340	733
CNEL:	78	167	360	777

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project — *Project Name:* Merideth
Road Name: Baker Av. — *Job Number:* 9035
Road Segment: n/o 6th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,816 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	682 vehicles
Vehicle Speed:	40 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:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.36%
Medium Trucks:	4.9%	10.3%	86.5%	7.61%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.38	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-14.18	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-22.83	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	63.6	49.8	59.0	63.5	69.3	69.4
Heavy Trucks:	60.3	49.8	65.1	49.6	59.0	62.2
Vehicle Noise:	67.4	61.9	66.9	64.0	70.4	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	100	217	466
CNEL:	50	109	234	504

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project — *Project Name:* Merideth
Road Name: Vineyard Av. — *Job Number:* 9035
Road Segment: n/o 8th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,099 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,610 vehicles
Vehicle Speed:	45 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.27%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.93	2.64	-1.20	-4.52	0.000	0.000
Medium Trucks:	79.45	-8.81	2.69	-1.20	-4.86	0.000	0.000
Heavy Trucks:	84.25	-17.47	2.69	-1.20	-5.69	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.8	69.9	68.2	62.1	70.7	71.3
Medium Trucks:	72.1	58.2	67.5	72.0	77.8	77.9
Heavy Trucks:	68.3	57.8	73.1	57.6	67.0	70.2
Vehicle Noise:	75.8	70.5	75.1	72.5	78.8	79.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	128	276	596	1,283
CNEL:	138	297	640	1,380

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Vineyard Av.
Road Segment: s/o 8th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,733 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,773 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.26%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.74	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	81.00	-9.01	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-17.66	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.7	70.8	69.0	63.0	71.6	72.2
Medium Trucks:	72.8	58.9	68.1	72.6	78.4	78.5
Heavy Trucks:	68.5	58.0	73.3	57.8	67.2	70.5
Vehicle Noise:	76.5	71.3	75.6	73.2	79.5	80.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	189	408	878	1,892
CNEL:	203	437	941	2,027

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Vineyard Av.
Road Segment: n/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,378 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,038 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.34%
Medium Trucks:	4.9%	10.3%	86.5%	7.62%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.37	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-7.42	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.07	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	69.9	68.1	62.0	70.7	71.3
Medium Trucks:	71.8	57.9	67.1	71.6	77.4	77.5
Heavy Trucks:	67.5	57.0	72.3	56.9	66.2	69.5
Vehicle Noise:	75.5	70.3	74.6	72.2	78.5	79.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	218	470	1,013	2,183
CNEL:	234	504	1,086	2,339

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Vineyard Av.
Road Segment: s/o 4th St.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,802 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,980 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.31%
Medium Trucks:	4.9%	10.3%	86.5%	7.63%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.74	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-6.04	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.64	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.4	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	71.6	57.7	67.0	71.4	77.3	77.4
Heavy Trucks:	67.8	57.4	72.6	57.2	66.6	69.8
Vehicle Noise:	75.4	70.0	74.7	72.0	78.3	78.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	212	458	986	2,125
CNEL:	229	492	1,061	2,286

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Vineyard Av.
Road Segment: s/o Inland Empire Bl.

Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	47,685 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,768 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	90.20%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	2.09%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.50	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-6.18	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-11.85	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	69.2	67.5	61.4	70.0	70.6
Medium Trucks:	71.5	57.6	66.8	71.3	77.1	77.2
Heavy Trucks:	70.6	60.1	75.4	60.0	69.3	72.6
Vehicle Noise:	75.9	70.0	76.6	72.0	78.5	79.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	216	465	1,003	2,161
CNEL:	241	518	1,117	2,406

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Hellman Av.
Road Segment: n/o 4th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,891 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	689 vehicles
Vehicle Speed:	40 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:	33.0 feet
Centerline Dist. to Observer:	33.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.39%
Medium Trucks:	4.9%	10.3%	86.5%	7.57%
Heavy Trucks:	10.8%	91.2%	7.8%	1.03%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	32.833
Medium Trucks:	32.562
Heavy Trucks:	32.589

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.33	2.64	-1.20	*-4.52*	0.000	0.000
Medium Trucks:	77.72	-14.15	2.69	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-22.80	2.69	-1.20	*-5.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.6	62.7	60.9	54.9	63.5	64.1
Medium Trucks:	65.1	51.2	60.4	64.9	70.7	70.8
Heavy Trucks:	61.7	51.2	66.5	51.0	60.4	63.6
Vehicle Noise:	68.8	63.3	68.3	65.5	71.8	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	43	94	202	434
CNEL:	47	101	218	469

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Archibald Av.
Road Segment: s/o Arrow Rte.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,961 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,096 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.30%
Medium Trucks:	4.9%	10.3%	86.5%	7.66%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.68	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-8.09	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.74	1.33	-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	69.3	67.6	61.5	70.1	70.7
Medium Trucks:	71.5	57.6	66.9	71.3	77.1	77.2
Heavy Trucks:	67.6	57.2	72.5	57.0	66.4	69.6
Vehicle Noise:	75.2	69.9	74.5	71.9	78.2	78.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	177	381	820	1,767
CNEL:	190	409	882	1,900

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Archibald Av.
Road Segment: n/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,377 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,538 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.30%
Medium Trucks:	4.9%	10.3%	86.5%	7.65%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.25	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-7.51	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.16	1.33	-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:	71.8	69.9	68.1	62.1	70.7	71.3
Medium Trucks:	72.1	58.2	67.4	71.9	77.7	77.8
Heavy Trucks:	68.2	57.8	73.0	57.6	67.0	70.2
Vehicle Noise:	75.8	70.4	75.1	72.5	78.8	79.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	193	416	896	1,931
CNEL:	208	447	963	2,076

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Archibald Av.
Road Segment: s/o 6th St.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,605 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,661 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	60 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%	91.32%
Medium Trucks:	4.9%	10.3%	86.5%	7.64%
Heavy Trucks:	10.8%	91.2%	7.8%	1.04%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	40.311
Medium Trucks:	40.091
Heavy Trucks:	40.113

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.40	1.30	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	79.45	-7.37	1.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-16.03	1.33	-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:	72.0	70.1	68.3	62.2	70.9	71.5
Medium Trucks:	72.2	58.3	67.6	72.0	77.9	78.0
Heavy Trucks:	68.4	57.9	73.2	57.7	67.1	70.3
Vehicle Noise:	75.9	70.6	75.2	72.6	78.9	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	197	425	916	1,973
CNEL:	212	457	984	2,121

Wednesday, October 15, 2014

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project *Project Name:* Merideth
Road Name: Archibald Av. *Job Number:* 9035
Road Segment: n/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,275 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,828 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.29%
Medium Trucks:	4.9%	10.3%	86.5%	7.65%
Heavy Trucks:	10.8%	91.2%	7.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.15	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-6.62	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.22	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.6	68.9	62.8	71.4	72.0
Medium Trucks:	72.6	58.7	67.9	72.4	78.2	78.3
Heavy Trucks:	68.4	57.9	73.2	57.7	67.1	70.3
Vehicle Noise:	76.3	71.1	75.4	73.0	79.3	79.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	247	531	1,145	2,466
CNEL:	264	570	1,227	2,644

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project *Project Name:* Merideth
Road Name: Archibald Av. *Job Number:* 9035
Road Segment: s/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,127 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,813 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	90.95%
Medium Trucks:	4.9%	10.3%	86.5%	7.73%
Heavy Trucks:	10.8%	91.2%	7.8%	1.32%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.94	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-5.77	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.46	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.3	71.4	69.7	63.6	72.2	72.8
Medium Trucks:	73.4	59.5	68.8	73.3	79.1	79.2
Heavy Trucks:	70.1	59.7	74.9	59.5	68.9	72.1
Vehicle Noise:	77.3	72.0	76.8	73.9	80.2	80.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	283	610	1,315	2,833
CNEL:	306	660	1,421	3,062

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project *Project Name:* Merideth
Road Name: Haven Av. *Job Number:* 9035
Road Segment: n/o Inland Empire Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	65,312 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,531 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	154 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	84.0 feet
Centerline Dist. to Observer:	84.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.20%
Medium Trucks:	4.9%	10.3%	86.5%	7.74%
Heavy Trucks:	10.8%	91.2%	7.8%	1.06%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	33.941
Medium Trucks:	33.679
Heavy Trucks:	33.705

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.91	2.42	-1.20	-4.75	0.000	0.000
Medium Trucks:	79.45	-4.80	2.47	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.45	2.47	-1.20	-5.21	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.6	73.7	71.9	65.9	74.5	75.1
Medium Trucks:	75.9	62.0	71.3	75.8	81.6	81.7
Heavy Trucks:	72.1	61.6	76.9	61.4	70.8	74.0
Vehicle Noise:	79.6	74.2	78.9	76.3	82.6	83.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	585	1,260	2,714	5,846
CNEL:	629	1,354	2,917	6,285

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project *Project Name:* Merideth
Road Name: 4th St. *Job Number:* 9035
Road Segment: w/o Baker Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,708 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,971 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.21%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.71	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-10.02	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-18.54	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.5	63.7	57.6	66.3	66.9
Medium Trucks:	67.6	53.7	63.0	67.5	73.3	73.4
Heavy Trucks:	63.9	53.5	68.7	53.3	62.6	65.9
Vehicle Noise:	71.4	66.0	70.7	68.0	74.4	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	115	248	535	1,152
CNEL:	124	267	576	1,240

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: 4th St.
Road Segment: e/o Baker Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,712 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,471 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.22%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.09%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.43	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.17	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.64	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.6	64.9	58.8	67.4	68.0
Medium Trucks:	68.4	54.5	63.8	68.3	74.1	74.2
Heavy Trucks:	64.0	53.5	68.8	53.3	62.7	65.9
Vehicle Noise:	72.2	67.1	71.1	68.8	75.2	75.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	131	281	606	1,306
CNEL:	140	301	649	1,398

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: 4th St.
Road Segment: w/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,489 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,549 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.24%
Medium Trucks:	4.9%	10.3%	86.5%	7.71%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.96	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.77	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.43	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.0	67.3	61.2	69.8	70.4
Medium Trucks:	70.8	56.9	66.2	70.7	76.5	76.6
Heavy Trucks:	66.2	55.7	71.0	55.5	64.9	68.1
Vehicle Noise:	74.6	69.5	73.4	71.2	77.6	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	188	406	875	1,885
CNEL:	201	434	935	2,013

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: 4th St.
Road Segment: e/o Hellman Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,695 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,370 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.23%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.64	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.09	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.74	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	70.5	56.6	65.9	70.3	76.2	76.3
Heavy Trucks:	65.9	55.4	70.7	55.2	64.6	67.8
Vehicle Noise:	74.2	69.1	73.1	70.9	77.3	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	180	387	834	1,796
CNEL:	192	413	891	1,919

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: 4th St.
Road Segment: e/o Archibald Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,024 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,402 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.70	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-10.02	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.57	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	70.6	56.7	65.9	70.4	76.2	76.3
Heavy Trucks:	66.0	55.6	70.9	55.4	64.8	68.0
Vehicle Noise:	74.3	69.2	73.2	71.0	77.3	77.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	181	391	842	1,815
CNEL:	194	418	901	1,940

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project | *Project Name:* Merideth
Road Name: 4th St. | *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,038 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,504 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	4.9%	10.3%	86.5%	7.73%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.88	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.84	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-18.39	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.8	68.9	67.2	61.1	69.7	70.3
Medium Trucks:	70.8	56.9	66.1	70.6	76.4	76.5
Heavy Trucks:	66.2	55.7	71.0	55.6	64.9	68.2
Vehicle Noise:	74.5	69.4	73.4	71.2	77.5	77.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	187	402	866	1,865
CNEL:	199	430	926	1,995

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project | *Project Name:* Merideth
Road Name: 4th St. | *Job Number:* 9035
Road Segment: e/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,119 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,912 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.19%
Medium Trucks:	4.9%	10.3%	86.5%	7.73%
Heavy Trucks:	10.8%	91.2%	7.8%	1.08%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.53	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-9.19	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-17.75	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.5	69.6	67.8	61.8	70.4	71.0
Medium Trucks:	71.4	57.5	66.8	71.2	77.1	77.2
Heavy Trucks:	66.8	56.4	71.7	56.2	65.6	68.8
Vehicle Noise:	75.2	70.0	74.1	71.8	78.2	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	206	445	958	2,063
CNEL:	221	475	1,024	2,206

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: e/o Archibald Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,478 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,748 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.26%
Medium Trucks:	4.9%	10.3%	86.5%	7.70%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.68	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-11.42	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.07	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	69.9	68.2	62.1	70.7	71.3
Medium Trucks:	71.8	57.9	67.1	71.6	77.4	77.5
Heavy Trucks:	67.1	56.6	71.9	56.5	65.8	69.1
Vehicle Noise:	75.5	70.4	74.4	72.2	78.5	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	162	349	753	1,621
CNEL:	173	373	804	1,732

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project | *Project Name:* Merideth
Road Name: Inland Empire Bl. | *Job Number:* 9035
Road Segment: w/o Haven Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,247 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,725 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.26%
Medium Trucks:	4.9%	10.3%	86.5%	7.69%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.74	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	82.40	-11.48	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-20.13	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.8	69.9	68.1	62.1	70.7	71.3
Medium Trucks:	71.7	57.8	67.1	71.5	77.3	77.5
Heavy Trucks:	67.0	56.6	71.9	56.4	65.8	69.0
Vehicle Noise:	75.4	70.3	74.3	72.1	78.4	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	161	346	746	1,607
CNEL:	172	370	797	1,717

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2035 With Project
Road Name: Inland Empire Bl.
Road Segment: e/o Haven Av.
Project Name: Merideth
Job Number: 9035

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,129 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,613 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	48 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	91.23%
Medium Trucks:	4.9%	10.3%	86.5%	7.72%
Heavy Trucks:	10.8%	91.2%	7.8%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000
Medium Trucks:	2.297
Heavy Trucks:	8.004

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.03	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-11.76	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-20.41	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.9	67.0	65.3	59.2	67.8	68.4
Medium Trucks:	68.8	55.0	64.2	68.7	74.5	74.6
Heavy Trucks:	64.2	53.7	69.0	53.5	62.9	66.1
Vehicle Noise:	72.6	67.5	71.4	69.3	75.6	76.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	139	299	645	1,390
CNEL:	148	320	689	1,485

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APPENDIX 8.1:

ON-SITE TRAFFIC NOISE CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario:	First Floor With Wall	*Project Name:*	Meredith International Centre
Road Name:	Archibald Av.	*Job Number:*	9035
Lot No:	Northeast Residential	*Analyst:*	A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,900 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	77 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	160.0 feet
Centerline Dist. to Observer:	180.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	990.0 feet
Road Elevation:	1,000.0 feet
Barrier Elevation:	990.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	1,000.000
Medium Trucks:	1,002.297
Heavy Trucks:	1,008.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	176.236
Medium Trucks:	176.401
Heavy Trucks:	176.955

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.49	-8.31	-1.20	*0.84*	-9.820	-12.820
Medium Trucks:	78.79	-12.74	-8.32	-1.20	*0.92*	-10.060	-13.060
Heavy Trucks:	83.02	-16.70	-8.34	-1.20	*1.13*	-10.560	-13.560

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.1	64.2	62.4	56.4	65.0	65.6
Medium Trucks:	56.5	55.0	48.7	47.1	55.6	55.8
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	67.0	65.2	62.7	57.4	65.9	66.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.3	54.4	52.6	46.6	55.2	55.8
Medium Trucks:	46.5	45.0	38.6	37.1	45.5	45.8
Heavy Trucks:	46.2	44.8	35.8	37.0	45.4	45.5
Vehicle Noise:	57.1	55.3	52.9	47.4	56.0	56.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
Road Name: Archibald Av.
Lot No: Southeast Residential

Project Name: Meredith International Centre
Job Number: 9035
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,900 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	77 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	395.0 feet
Centerline Dist. to Observer:	415.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	985.0 feet
Road Elevation:	992.0 feet
Barrier Elevation:	985.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	992.000
Medium Trucks:	994.297
Heavy Trucks:	1,000.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	413.797
Medium Trucks:	413.845
Heavy Trucks:	414.021

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	4.49	-13.87	-1.20	*0.66*	-9.180	-12.180
Medium Trucks:	78.79	-12.74	-13.87	-1.20	*0.69*	-9.270	-12.270
Heavy Trucks:	83.02	-16.70	-13.87	-1.20	*0.76*	-9.540	-12.540

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.5	58.6	56.9	50.8	59.4	60.1
Medium Trucks:	51.0	49.5	43.1	41.6	50.0	50.3
Heavy Trucks:	51.2	49.8	40.8	42.0	50.4	50.5
Vehicle Noise:	61.4	59.6	57.2	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.4	49.5	47.7	41.6	50.3	50.9
Medium Trucks:	41.7	40.2	33.8	32.3	40.8	41.0
Heavy Trucks:	41.7	40.3	31.2	32.5	40.9	41.0
Vehicle Noise:	52.2	50.4	48.0	42.6	51.2	51.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario:	First Floor With Wall	*Project Name:*	Meredith International Centre
Road Name:	Inland Empire Blvd.	*Job Number:*	9035
Lot No:	South Residential	*Analyst:*	A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,300 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	91 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	985.0 feet
Road Elevation:	981.0 feet
Barrier Elevation:	985.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	981.000
Medium Trucks:	983.297
Heavy Trucks:	989.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	86.581
Medium Trucks:	86.275
Heavy Trucks:	85.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	2.78	-3.68	-1.20	*0.24*	-7.080	-10.080
Medium Trucks:	78.79	-14.46	-3.66	-1.20	*0.17*	-6.560	-9.560
Heavy Trucks:	83.02	-18.42	-3.63	-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:	69.0	67.1	65.4	59.3	67.9	68.5
Medium Trucks:	59.5	58.0	51.6	50.1	58.5	58.8
Heavy Trucks:	59.8	58.4	49.3	50.6	58.9	59.1
Vehicle Noise:	69.9	68.1	65.6	60.3	68.9	69.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.9	60.0	58.3	52.2	60.8	61.4
Medium Trucks:	52.9	51.4	45.0	43.5	52.0	52.2
Heavy Trucks:	54.4	53.0	43.9	45.2	53.5	53.7
Vehicle Noise:	63.1	61.3	58.6	53.5	62.0	62.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario:	First Floor With Wall	*Project Name:*	Meredith International Centre
Road Name:	I-10 Freeway	*Job Number:*	9035
Lot No:	South Residential	*Analyst:*	A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	269,830	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	26,983	vehicles
Vehicle Speed:	65	mph
Near/Far Lane Distance:	180	feet

Site Data

Barrier Height:	**6.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	985.0	feet
Centerline Dist. to Observer:	1,005.0	feet
Barrier Distance to Observer:	20.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	985.0	feet
Road Elevation:	985.0	feet
Barrier Elevation:	985.0	feet
Road Grade:	0.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.31%
Medium Trucks:	84.8%	4.9%	10.3%	1.95%
Heavy Trucks:	86.5%	2.7%	10.8%	4.74%

Noise Source Elevations (in feet)

Autos:	985.000
Medium Trucks:	987.297
Heavy Trucks:	993.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	1,000.923
Medium Trucks:	1,000.912
Heavy Trucks:	1,000.907

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	10.58	-19.62	-1.20	*0.03*	-5.300	-8.300
Medium Trucks:	81.71	-6.22	-19.62	-1.20	*0.03*	-5.300	-8.300
Heavy Trucks:	85.21	-2.37	-19.62	-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:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	54.7	53.2	46.8	45.2	53.7	53.9
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	67.2	65.5	62.2	57.7	66.2	66.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.0	58.1	56.3	50.3	58.9	59.5
Medium Trucks:	49.4	47.9	41.5	39.9	48.4	48.6
Heavy Trucks:	56.8	55.4	46.4	47.6	56.0	56.1
Vehicle Noise:	61.9	60.2	56.9	52.4	60.9	61.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario:	Second Floor With Wall	*Project Name:*	Meredith International Centre
Road Name:	Archibald Av.	*Job Number:*	9035
Lot No:	Northeast Residential	*Analyst:*	A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,900 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	77 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	160.0 feet
Centerline Dist. to Observer:	180.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	990.0 feet
Road Elevation:	1,000.0 feet
Barrier Elevation:	990.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	1,000.000
Medium Trucks:	1,002.297
Heavy Trucks:	1,008.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	175.880
Medium Trucks:	175.843
Heavy Trucks:	175.880

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	4.49	-8.30	-1.20	*-4.58*	0.000	0.000
Medium Trucks:	78.79	-12.74	-8.30	-1.20	*-4.77*	0.000	0.000
Heavy Trucks:	83.02	-16.70	-8.30	-1.20	*-5.26*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.2	62.5	56.4	65.0	65.6
Medium Trucks:	56.6	55.0	48.7	47.1	55.6	55.8
Heavy Trucks:	56.8	55.4	46.4	47.6	56.0	56.1
Vehicle Noise:	67.0	65.2	62.7	57.4	65.9	66.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.2	62.5	56.4	65.0	65.6
Medium Trucks:	56.6	55.0	48.7	47.1	55.6	55.8
Heavy Trucks:	56.8	55.4	46.4	47.6	56.0	56.1
Vehicle Noise:	67.0	65.2	62.7	57.4	65.9	66.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: Archibald Av.
Lot No: Southeast Residential

Project Name: Meredith International Centre
Job Number: 9035
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	49,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,900 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	77 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	395.0 feet
Centerline Dist. to Observer:	415.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	985.0 feet
Road Elevation:	992.0 feet
Barrier Elevation:	985.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	992.000
Medium Trucks:	994.297
Heavy Trucks:	1,000.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	413.270
Medium Trucks:	413.237
Heavy Trucks:	413.212

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	4.49	-13.86	-1.20	*-4.32*	0.000	0.000
Medium Trucks:	78.79	-12.74	-13.86	-1.20	*-4.40*	0.000	0.000
Heavy Trucks:	83.02	-16.70	-13.86	-1.20	*-4.60*	0.000	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	58.7	56.9	50.8	59.5	60.1
Medium Trucks:	51.0	49.5	43.1	41.6	50.0	50.3
Heavy Trucks:	51.3	49.8	40.8	42.0	50.4	50.5
Vehicle Noise:	61.4	59.6	57.2	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.7	56.9	50.8	59.5	60.1
Medium Trucks:	51.0	49.5	43.1	41.6	50.0	50.3
Heavy Trucks:	51.3	49.8	40.8	42.0	50.4	50.5
Vehicle Noise:	61.4	59.6	57.2	51.8	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario:	Second Floor With Wall	*Project Name:*	Meredith International Centre
Road Name:	Inland Empire Blvd.	*Job Number:*	9035
Lot No:	South Residential	*Analyst:*	A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,300 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	91 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	985.0 feet
Road Elevation:	981.0 feet
Barrier Elevation:	985.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

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

Noise Source Elevations (in feet)

Autos:	981.000
Medium Trucks:	983.297
Heavy Trucks:	989.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	90.850
Medium Trucks:	90.423
Heavy Trucks:	89.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	2.78	-3.99	-1.20	*-0.54*	0.000	0.000
Medium Trucks:	78.79	-14.46	-3.96	-1.20	*-0.67*	0.000	0.000
Heavy Trucks:	83.02	-18.42	-3.90	-1.20	*-1.04*	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:	68.7	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.4
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8
Vehicle Noise:	69.6	67.8	65.3	60.0	68.5	69.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.4
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8
Vehicle Noise:	69.6	67.8	65.3	60.0	68.5	69.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: I-10 Freeway
Lot No: South Residential

Project Name: Meredith International Centre
Job Number: 9035
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	269,830 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	26,983 vehicles
Vehicle Speed:	65 mph
Near/Far Lane Distance:	180 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	985.0 feet
Centerline Dist. to Observer:	1,005.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	985.0 feet
Road Elevation:	985.0 feet
Barrier Elevation:	985.0 feet
Road Grade:	0.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.31%
Medium Trucks:	84.8%	4.9%	10.3%	1.95%
Heavy Trucks:	86.5%	2.7%	10.8%	4.74%

Noise Source Elevations (in feet)

Autos:	985.000
Medium Trucks:	987.297
Heavy Trucks:	993.006

Grade Adjustment: 0.0

Lane Equivalent Distance (in feet)

Autos:	1,001.060
Medium Trucks:	1,001.030
Heavy Trucks:	1,000.980

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	10.58	-19.63	-1.20	*-1.43*	0.000	0.000
Medium Trucks:	81.71	-6.22	-19.63	-1.20	*-1.45*	0.000	0.000
Heavy Trucks:	85.21	-2.37	-19.63	-1.20	*-1.49*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	54.7	53.2	46.8	45.2	53.7	53.9
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	67.2	65.5	62.2	57.7	66.2	66.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	54.7	53.2	46.8	45.2	53.7	53.9
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	67.2	65.5	62.2	57.7	66.2	66.6

APPENDIX 10.1:

REFERENCE NOISE SOURCE PHOTOS

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Reference Noise Source Photos

IMG_0857
33, 51' 31.200000", 117, 54' 48.000000"

IMG_0862
33, 51' 30.600000", 117, 54' 48.600000"

IMG_0863
33, 51' 30.600000", 117, 54' 48.000000"

IMG_0872
33, 51' 33.000000", 117, 54' 42.600000"

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APPENDIX 10.2:

OPERATIONAL NOISE ANALYSIS WORKSHEETS

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R1

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,020.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,020.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,020.0	-44.6	-44.6	-44.6	-44.6	-44.6	-44.6
Shielding (Barrier Attenuation)	1,020.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		17.5	14.3	17.5	22.1	24.9	27.2
60 Minute Hourly Adjustment		**17.5**	**14.3**	**17.5**	**22.1**	**24.9**	**27.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R1

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	538.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	538.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,026.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	538.0	-26.7	-26.7	-26.7	-26.7	-26.7	-26.7
Shielding (Barrier Attenuation)	538.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.4	40.0	43.2	46.6	49.2	53.5
60 Minute Hourly Adjustment		**42.4**	**40.0**	**43.2**	**46.6**	**49.2**	**53.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R2

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	591.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	591.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	591.0	-27.5	-27.5	-27.5	-27.5	-27.5	-27.5
Shielding (Barrier Attenuation)	591.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.6	39.2	42.4	45.8	48.4	52.7
60 Minute Hourly Adjustment		**41.6**	**39.2**	**42.4**	**45.8**	**48.4**	**52.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R3

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	809.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	799.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	809.0	-30.2	-30.2	-30.2	-30.2	-30.2	-30.2
Shielding (Barrier Attenuation)	809.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		33.4	31.0	34.2	37.6	40.2	44.5
60 Minute Hourly Adjustment		**33.4**	**31.0**	**34.2**	**37.6**	**40.2**	**44.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R4
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	814.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	804.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,029.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	814.0	-30.3	-30.3	-30.3	-30.3	-30.3	-30.3
Shielding (Barrier Attenuation)	814.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		33.1	30.7	33.9	37.3	39.9	44.2
60 Minute Hourly Adjustment		**33.1**	**30.7**	**33.9**	**37.3**	**39.9**	**44.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R5
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,118.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,118.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,022.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,118.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	1,118.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.1	33.7	36.9	40.3	42.9	47.2
60 Minute Hourly Adjustment		**36.1**	**33.7**	**36.9**	**40.3**	**42.9**	**47.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R6
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,837.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,827.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,837.0	-49.7	-49.7	-49.7	-49.7	-49.7	-49.7
Shielding (Barrier Attenuation)	1,837.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		6.8	3.6	6.8	11.4	14.2	16.5
60 Minute Hourly Adjustment		**6.8**	**3.6**	**6.8**	**11.4**	**14.2**	**16.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R6
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,064.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,054.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,064.0	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6
Shielding (Barrier Attenuation)	1,064.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		30.9	28.5	31.7	35.1	37.7	42.0
60 Minute Hourly Adjustment		**30.9**	**28.5**	**31.7**	**35.1**	**37.7**	**42.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R7
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,397.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,387.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,397.0	-47.3	-47.3	-47.3	-47.3	-47.3	-47.3
Shielding (Barrier Attenuation)	1,397.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		9.2	6.0	9.2	13.8	16.6	18.9
60 Minute Hourly Adjustment		**9.2**	**6.0**	**9.2**	**13.8**	**16.6**	**18.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R7
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,184.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,174.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	2,184.0	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8
Shielding (Barrier Attenuation)	2,184.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		24.8	22.4	25.6	29.0	31.6	35.9
60 Minute Hourly Adjustment		**24.8**	**22.4**	**25.6**	**29.0**	**31.6**	**35.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R8
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	374.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	364.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	374.0	-35.9	-35.9	-35.9	-35.9	-35.9	-35.9
Shielding (Barrier Attenuation)	374.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.2	23.0	26.2	30.8	33.6	35.9
60 Minute Hourly Adjustment		**26.2**	**23.0**	**26.2**	**30.8**	**33.6**	**35.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R8
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,574.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,574.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	2,574.0	-40.3	-40.3	-40.3	-40.3	-40.3	-40.3
Shielding (Barrier Attenuation)	2,574.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.8	26.4	29.6	33.0	35.6	39.9
60 Minute Hourly Adjustment		**28.8**	**26.4**	**29.6**	**33.0**	**35.6**	**39.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R9
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	624.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	614.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	980.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	624.0	-27.9	-27.9	-27.9	-27.9	-27.9	-27.9
Shielding (Barrier Attenuation)	624.0	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8
Raw (Distance + Barrier)		33.4	31.0	34.2	37.6	40.2	44.5
60 Minute Hourly Adjustment		**33.4**	**31.0**	**34.2**	**37.6**	**40.2**	**44.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R9-NorthWest
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	550.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	540.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	990.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	550.0	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8
Shielding (Barrier Attenuation)	550.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
Raw (Distance + Barrier)		34.3	31.9	35.1	38.5	41.1	45.4
60 Minute Hourly Adjustment		**34.3**	**31.9**	**35.1**	**38.5**	**41.1**	**45.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-Southwest
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	87.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	87.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	985.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	975.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	87.0	-23.2	-23.2	-23.2	-23.2	-23.2	-23.2
Shielding (Barrier Attenuation)	87.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.9	35.7	38.9	43.5	46.3	48.6
60 Minute Hourly Adjustment		**38.9**	**35.7**	**38.9**	**43.5**	**46.3**	**48.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-Northeast
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	49.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	39.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	990.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	49.0	-18.2	-18.2	-18.2	-18.2	-18.2	-18.2
Shielding (Barrier Attenuation)	49.0	-5.8	-5.8	-5.8	-5.8	-5.8	-5.8
Raw (Distance + Barrier)		38.1	34.9	38.1	42.7	45.5	47.8
60 Minute Hourly Adjustment		**38.1**	**34.9**	**38.1**	**42.7**	**45.5**	**47.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-East

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	36.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	26.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	985.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	989.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	36.0	-15.6	-15.6	-15.6	-15.6	-15.6	-15.6
Shielding (Barrier Attenuation)	36.0	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
Raw (Distance + Barrier)		39.0	35.8	39.0	43.6	46.4	48.7
60 Minute Hourly Adjustment		**39.0**	**35.8**	**39.0**	**43.6**	**46.4**	**48.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R10

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,610.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	1,600.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,610.0	-48.6	-48.6	-48.6	-48.6	-48.6	-48.6
Shielding (Barrier Attenuation)	1,610.0	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6
Raw (Distance + Barrier)		2.9	-0.3	2.9	7.5	10.3	12.6
60 Minute Hourly Adjustment		**2.9**	**-0.3**	**2.9**	**7.5**	**10.3**	**12.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R10

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,325.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	1,315.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,004.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,325.0	-34.5	-34.5	-34.5	-34.5	-34.5	-34.5
Shielding (Barrier Attenuation)	1,325.0	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6
Raw (Distance + Barrier)		24.0	21.6	24.8	28.2	30.8	35.1
60 Minute Hourly Adjustment		**24.0**	**21.6**	**24.8**	**28.2**	**30.8**	**35.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R11

Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	166.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	156.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	166.0	-28.8	-28.8	-28.8	-28.8	-28.8	-28.8
Shielding (Barrier Attenuation)	166.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		27.6	24.4	27.6	32.2	35.0	37.3
60 Minute Hourly Adjustment		**27.6**	**24.4**	**27.6**	**32.2**	**35.0**	**37.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R11
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	962.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	952.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,018.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	962.0	-31.7	-31.7	-31.7	-31.7	-31.7	-31.7
Shielding (Barrier Attenuation)	962.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		31.9	29.5	32.7	36.1	38.7	43.0
60 Minute Hourly Adjustment		**31.9**	**29.5**	**32.7**	**36.1**	**38.7**	**43.0**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R12
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	251.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	251.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	251.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	251.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.7	26.5	29.7	34.3	37.1	39.4
60 Minute Hourly Adjustment		**29.7**	**26.5**	**29.7**	**34.3**	**37.1**	**39.4**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R12
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	566.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	566.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,018.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	566.0	-27.1	-27.1	-27.1	-27.1	-27.1	-27.1
Shielding (Barrier Attenuation)	566.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.0	39.6	42.8	46.2	48.8	53.1
60 Minute Hourly Adjustment		**42.0**	**39.6**	**42.8**	**46.2**	**48.8**	**53.1**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R1
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,020.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,020.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,020.0	-30.1	-30.1	-30.1	-30.1	-30.1	-30.1
Shielding (Barrier Attenuation)	1,020.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.7	31.0	32.2	33.4	35.4	37.1
60 Minute Hourly Adjustment		**31.7**	**31.0**	**32.2**	**33.4**	**35.4**	**37.1**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R6
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,911.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,911.0	-34.2	-34.2	-34.2	-34.2	-34.2	-34.2
Shielding (Barrier Attenuation)	1,911.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		22.0	21.3	22.5	23.7	25.7	27.4
60 Minute Hourly Adjustment		**22.0**	**21.3**	**22.5**	**23.7**	**25.7**	**27.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R7
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,516.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,506.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,516.0	-32.7	-32.7	-32.7	-32.7	-32.7	-32.7
Shielding (Barrier Attenuation)	1,516.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		23.5	22.8	24.0	25.2	27.2	28.9
60 Minute Hourly Adjustment		**23.5**	**22.8**	**24.0**	**25.2**	**27.2**	**28.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R8
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	403.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	403.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	403.0	-24.1	-24.1	-24.1	-24.1	-24.1	-24.1
Shielding (Barrier Attenuation)	403.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		37.7	37.0	38.2	39.4	41.4	43.1
60 Minute Hourly Adjustment		**37.7**	**37.0**	**38.2**	**39.4**	**41.4**	**43.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R9
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	73.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	63.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	985.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	989.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	73.0	-12.9	-12.9	-12.9	-12.9	-12.9	-12.9
Shielding (Barrier Attenuation)	73.0	-7.6	-7.6	-7.6	-7.6	-7.6	-7.6
Raw (Distance + Barrier)		41.3	40.6	41.8	43.0	45.0	46.7
60 Minute Hourly Adjustment		**41.3**	**40.6**	**41.8**	**43.0**	**45.0**	**46.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R10
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,610.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	1,600.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,610.0	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1
Shielding (Barrier Attenuation)	1,610.0	-10.5	-10.5	-10.5	-10.5	-10.5	-10.5
Raw (Distance + Barrier)		18.2	17.5	18.7	19.9	21.9	23.6
60 Minute Hourly Adjustment		**18.2**	**17.5**	**18.7**	**19.9**	**21.9**	**23.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R11
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	166.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	156.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	166.0	-18.3	-18.3	-18.3	-18.3	-18.3	-18.3
Shielding (Barrier Attenuation)	166.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		37.9	37.2	38.4	39.6	41.6	43.3
60 Minute Hourly Adjustment		**37.9**	**37.2**	**38.4**	**39.6**	**41.6**	**43.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R12
Project Name: Option A-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	251.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	251.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	251.0	-21.0	-21.0	-21.0	-21.0	-21.0	-21.0
Shielding (Barrier Attenuation)	251.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		40.8	40.1	41.3	42.5	44.5	46.2
60 Minute Hourly Adjustment		**40.8**	**40.1**	**41.3**	**42.5**	**44.5**	**46.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R1
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,020.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,020.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,020.0	-44.6	-44.6	-44.6	-44.6	-44.6	-44.6
Shielding (Barrier Attenuation)	1,020.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		17.5	14.3	17.5	22.1	24.9	27.2
60 Minute Hourly Adjustment		**17.5**	**14.3**	**17.5**	**22.1**	**24.9**	**27.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R1
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 538.0 feet
Noise Distance to Barrier: 538.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,026.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	538.0	-26.7	-26.7	-26.7	-26.7	-26.7	-26.7
Shielding (Barrier Attenuation)	538.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.4	40.0	43.2	46.6	49.2	53.5
60 Minute Hourly Adjustment		**42.4**	**40.0**	**43.2**	**46.6**	**49.2**	**53.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R2
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 591.0 feet
Noise Distance to Barrier: 591.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,028.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	591.0	-27.5	-27.5	-27.5	-27.5	-27.5	-27.5
Shielding (Barrier Attenuation)	591.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.6	39.2	42.4	45.8	48.4	52.7
60 Minute Hourly Adjustment		**41.6**	**39.2**	**42.4**	**45.8**	**48.4**	**52.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R3
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 787.0 feet
Noise Distance to Barrier: 777.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,014.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	787.0	-30.0	-30.0	-30.0	-30.0	-30.0	-30.0
Shielding (Barrier Attenuation)	787.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		33.6	31.2	34.4	37.8	40.4	44.7
60 Minute Hourly Adjustment		**33.6**	**31.2**	**34.4**	**37.8**	**40.4**	**44.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R4
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 814.0 feet
Noise Distance to Barrier: 804.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,029.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	814.0	-30.3	-30.3	-30.3	-30.3	-30.3	-30.3
Shielding (Barrier Attenuation)	814.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		33.1	30.7	33.9	37.3	39.9	44.2
60 Minute Hourly Adjustment		**33.1**	**30.7**	**33.9**	**37.3**	**39.9**	**44.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R5
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,118.0 feet
Noise Distance to Barrier: 1,118.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,022.0 feet
Noise Source Elevation: 1,010.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,118.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	1,118.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.1	33.7	36.9	40.3	42.9	47.2
60 Minute Hourly Adjustment		**36.1**	**33.7**	**36.9**	**40.3**	**42.9**	**47.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R6
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,837.0 feet
Noise Distance to Barrier: 1,827.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,000.0 feet
Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,837.0	-49.7	-49.7	-49.7	-49.7	-49.7	-49.7
Shielding (Barrier Attenuation)	1,837.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		6.8	3.6	6.8	11.4	14.2	16.5
60 Minute Hourly Adjustment		**6.8**	**3.6**	**6.8**	**11.4**	**14.2**	**16.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R6
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,064.0 feet
Noise Distance to Barrier: 1,054.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,010.0 feet
Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,064.0	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6
Shielding (Barrier Attenuation)	1,064.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		30.9	28.5	31.7	35.1	37.7	42.0
60 Minute Hourly Adjustment		**30.9**	**28.5**	**31.7**	**35.1**	**37.7**	**42.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R7
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,397.0 feet
Noise Distance to Barrier: 1,387.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,016.0 feet
Noise Source Elevation: 1,000.0 feet
Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,397.0	-47.3	-47.3	-47.3	-47.3	-47.3	-47.3
Shielding (Barrier Attenuation)	1,397.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		9.2	6.0	9.2	13.8	16.6	18.9
60 Minute Hourly Adjustment		**9.2**	**6.0**	**9.2**	**13.8**	**16.6**	**18.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R7

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,184.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,174.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	2,184.0	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8
Shielding (Barrier Attenuation)	2,184.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		24.8	22.4	25.6	29.0	31.6	35.9
60 Minute Hourly Adjustment		**24.8**	**22.4**	**25.6**	**29.0**	**31.6**	**35.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R8

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	374.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	364.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	374.0	-35.9	-35.9	-35.9	-35.9	-35.9	-35.9
Shielding (Barrier Attenuation)	374.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.2	23.0	26.2	30.8	33.6	35.9
60 Minute Hourly Adjustment		**26.2**	**23.0**	**26.2**	**30.8**	**33.6**	**35.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R8

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,574.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,574.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	2,574.0	-40.3	-40.3	-40.3	-40.3	-40.3	-40.3
Shielding (Barrier Attenuation)	2,574.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.8	26.4	29.6	33.0	35.6	39.9
60 Minute Hourly Adjustment		**28.8**	**26.4**	**29.6**	**33.0**	**35.6**	**39.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R9

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	624.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	614.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	980.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	624.0	-27.9	-27.9	-27.9	-27.9	-27.9	-27.9
Shielding (Barrier Attenuation)	624.0	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8
Raw (Distance + Barrier)		33.4	31.0	34.2	37.6	40.2	44.5
60 Minute Hourly Adjustment		**33.4**	**31.0**	**34.2**	**37.6**	**40.2**	**44.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R9-Northwest
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 550.0 feet
Noise Distance to Barrier: 540.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 990.0 feet
Noise Source Elevation: 994.0 feet
Barrier Height: **8.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	550.0	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8
Shielding (Barrier Attenuation)	550.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
Raw (Distance + Barrier)		34.3	31.9	35.1	38.5	41.1	45.4
60 Minute Hourly Adjustment		**34.3**	**31.9**	**35.1**	**38.5**	**41.1**	**45.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-Southwest
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 87.0 feet
Noise Distance to Barrier: 87.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 985.0 feet
Noise Source Elevation: 975.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	87.0	-23.2	-23.2	-23.2	-23.2	-23.2	-23.2
Shielding (Barrier Attenuation)	87.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.9	35.7	38.9	43.5	46.3	48.6
60 Minute Hourly Adjustment		**38.9**	**35.7**	**38.9**	**43.5**	**46.3**	**48.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-NorthEast
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 49.0 feet
Noise Distance to Barrier: 39.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 990.0 feet
Noise Source Elevation: 1,000.0 feet
Barrier Height: **8.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	49.0	-18.2	-18.2	-18.2	-18.2	-18.2	-18.2
Shielding (Barrier Attenuation)	49.0	-5.8	-5.8	-5.8	-5.8	-5.8	-5.8
Raw (Distance + Barrier)		38.1	34.9	38.1	42.7	45.5	47.8
60 Minute Hourly Adjustment		**38.1**	**34.9**	**38.1**	**42.7**	**45.5**	**47.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R9-East
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 36.0 feet
Noise Distance to Barrier: 26.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 985.0 feet
Noise Source Elevation: 989.0 feet
Barrier Height: **8.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	36.0	-15.6	-15.6	-15.6	-15.6	-15.6	-15.6
Shielding (Barrier Attenuation)	36.0	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
Raw (Distance + Barrier)		39.0	35.8	39.0	43.6	46.4	48.7
60 Minute Hourly Adjustment		**39.0**	**35.8**	**39.0**	**43.6**	**46.4**	**48.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R10
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,610.0 feet
Noise Distance to Barrier: 1,600.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 997.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **10.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	1,610.0	-48.6	-48.6	-48.6	-48.6	-48.6	-48.6
Shielding (Barrier Attenuation)	1,610.0	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6
Raw (Distance + Barrier)		2.9	-0.3	2.9	7.5	10.3	12.6
60 Minute Hourly Adjustment		**2.9**	**-0.3**	**2.9**	**7.5**	**10.3**	**12.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R10
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,325.0 feet
Noise Distance to Barrier: 1,315.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 997.0 feet
Noise Source Elevation: 1,004.0 feet

Barrier Height: **10.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	1,325.0	-34.5	-34.5	-34.5	-34.5	-34.5	-34.5
Shielding (Barrier Attenuation)	1,325.0	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6
Raw (Distance + Barrier)		24.0	21.6	24.8	28.2	30.8	35.1
60 Minute Hourly Adjustment		**24.0**	**21.6**	**24.8**	**28.2**	**30.8**	**35.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R11
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 166.0 feet
Noise Distance to Barrier: 156.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 4.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,019.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	166.0	-28.8	-28.8	-28.8	-28.8	-28.8	-28.8
Shielding (Barrier Attenuation)	166.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		27.6	24.4	27.6	32.2	35.0	37.3
60 Minute Hourly Adjustment		**27.6**	**24.4**	**27.6**	**32.2**	**35.0**	**37.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R11
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 962.0 feet
Noise Distance to Barrier: 952.0 feet
Barrier Distance to Observer: 10.0 feet
Noise Height: 8.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,018.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	962.0	-31.7	-31.7	-31.7	-31.7	-31.7	-31.7
Shielding (Barrier Attenuation)	962.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		31.9	29.5	32.7	36.1	38.7	43.0
60 Minute Hourly Adjustment		**31.9**	**29.5**	**32.7**	**36.1**	**38.7**	**43.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Drive-Thru Speakerphones
Observer Location: R12
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	251.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	251.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	4.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	62.1	58.9	62.1	66.7	69.5	71.8
Distance Attenuation	251.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	251.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.7	26.5	29.7	34.3	37.1	39.4
60 Minute Hourly Adjustment		**29.7**	**26.5**	**29.7**	**34.3**	**37.1**	**39.4**

Thursday, October 16, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R12
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	566.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	566.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,018.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	566.0	-27.1	-27.1	-27.1	-27.1	-27.1	-27.1
Shielding (Barrier Attenuation)	566.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.0	39.6	42.8	46.2	48.8	53.1
60 Minute Hourly Adjustment		**42.0**	**39.6**	**42.8**	**46.2**	**48.8**	**53.1**

Thursday, October 16, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R13
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	351.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	341.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,012.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	351.0	-22.9	-22.9	-22.9	-22.9	-22.9	-22.9
Shielding (Barrier Attenuation)	351.0	-8.2	-8.2	-8.2	-8.2	-8.2	-8.2
Raw (Distance + Barrier)		38.0	35.6	38.8	42.2	44.8	49.1
60 Minute Hourly Adjustment		**38.0**	**35.6**	**38.8**	**42.2**	**44.8**	**49.1**

Thursday, October 16, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Typical Distribution/Warehouse A
Observer Location: R13-Southeast
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	263.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	253.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	8.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,012.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	25.0	69.1	66.7	69.9	73.3	75.9	80.2
Distance Attenuation	263.0	-20.4	-20.4	-20.4	-20.4	-20.4	-20.4
Shielding (Barrier Attenuation)	263.0	-8.2	-8.2	-8.2	-8.2	-8.2	-8.2
Raw (Distance + Barrier)		40.5	38.1	41.3	44.7	47.3	51.6
60 Minute Hourly Adjustment		**40.5**	**38.1**	**41.3**	**44.7**	**47.3**	**51.6**

Thursday, October 16, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R1
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,020.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,020.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,020.0	-30.1	-30.1	-30.1	-30.1	-30.1	-30.1
Shielding (Barrier Attenuation)	1,020.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.7	31.0	32.2	33.4	35.4	37.1
60 Minute Hourly Adjustment		**31.7**	**31.0**	**32.2**	**33.4**	**35.4**	**37.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R6
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,911.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,911.0	-34.2	-34.2	-34.2	-34.2	-34.2	-34.2
Shielding (Barrier Attenuation)	1,911.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		22.0	21.3	22.5	23.7	25.7	27.4
60 Minute Hourly Adjustment		**22.0**	**21.3**	**22.5**	**23.7**	**25.7**	**27.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R7
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,516.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,506.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,516.0	-32.7	-32.7	-32.7	-32.7	-32.7	-32.7
Shielding (Barrier Attenuation)	1,516.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		23.5	22.8	24.0	25.2	27.2	28.9
60 Minute Hourly Adjustment		**23.5**	**22.8**	**24.0**	**25.2**	**27.2**	**28.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R8
Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	403.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	403.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	403.0	-24.1	-24.1	-24.1	-24.1	-24.1	-24.1
Shielding (Barrier Attenuation)	403.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		37.7	37.0	38.2	39.4	41.4	43.1
60 Minute Hourly Adjustment		**37.7**	**37.0**	**38.2**	**39.4**	**41.4**	**43.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R9

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	73.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	63.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	985.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	989.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	73.0	-12.9	-12.9	-12.9	-12.9	-12.9	-12.9
Shielding (Barrier Attenuation)	73.0	-7.6	-7.6	-7.6	-7.6	-7.6	-7.6
Raw (Distance + Barrier)		41.3	40.6	41.8	43.0	45.0	46.7
60 Minute Hourly Adjustment		**41.3**	**40.6**	**41.8**	**43.0**	**45.0**	**46.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R10

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,610.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	1,600.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	1,610.0	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1
Shielding (Barrier Attenuation)	1,610.0	-10.5	-10.5	-10.5	-10.5	-10.5	-10.5
Raw (Distance + Barrier)		18.2	17.5	18.7	19.9	21.9	23.6
60 Minute Hourly Adjustment		**18.2**	**17.5**	**18.7**	**19.9**	**21.9**	**23.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R11

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	166.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	156.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	166.0	-18.3	-18.3	-18.3	-18.3	-18.3	-18.3
Shielding (Barrier Attenuation)	166.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		37.9	37.2	38.4	39.6	41.6	43.3
60 Minute Hourly Adjustment		**37.9**	**37.2**	**38.4**	**39.6**	**41.6**	**43.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: Parking Lot Activity
Observer Location: R12

Project Name: Option B-Meredith Internat
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	251.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	251.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,019.0 feet		

Drop Off Coefficient: 15.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	61.8	61.1	62.3	63.5	65.5	67.2
Distance Attenuation	251.0	-21.0	-21.0	-21.0	-21.0	-21.0	-21.0
Shielding (Barrier Attenuation)	251.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		40.8	40.1	41.3	42.5	44.5	46.2
60 Minute Hourly Adjustment		**40.8**	**40.1**	**41.3**	**42.5**	**44.5**	**46.2**

APPENDIX 11.1:

RCNM EQUIPMENT DATABASE

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U.S. Department
of Transportation

**Federal Highway
Administration**

FHWA
Roadway Construction Noise Model
User's Guide

FHWA-HEP-05-054
DOT-VNTSC-FHWA-05-01

Final Report
January 2006

Prepared for
U.S. Department of Transportation
Federal Highway Administration
Office of Natural and Human Environment
Washington, DC 20590

Prepared by
U.S. Department of Transportation
Research and Innovative Technology Administration
John A. Volpe National Transportation Systems Center
Acoustics Facility
Cambridge, MA 02142

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors					
filename: EQUIPLST.xls					
revised: 7/26/05		Acoustical	Spec 721.560	Actual Measured	No. of Actual
	Impact	Use Factor	Lmax @ 50ft	Lmax @ 50ft	Data Samples
Equipment Description	Device ?	(%)	(dBA, slow)	(dBA, slow)	(Count)
				(samples averaged)	
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5

APPENDIX 11.2:

CONSTRUCTION NOISE CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R1

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	102.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	102.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	102.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2
Shielding (Barrier Attenuation)	102.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		86.4	-6.2	-6.2	-6.2	-6.2	-6.2
60 Minute Hourly Adjustment		**86.4**	**-6.2**	**-6.2**	**-6.2**	**-6.2**	**-6.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R1

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	102.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	102.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	102.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2
Shielding (Barrier Attenuation)	102.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		79.4	-6.2	-6.2	-6.2	-6.2	-6.2
60 Minute Hourly Adjustment		**79.4**	**-6.2**	**-6.2**	**-6.2**	**-6.2**	**-6.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R1

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	102.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	102.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	102.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2
Shielding (Barrier Attenuation)	102.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		75.6	-6.2	-6.2	-6.2	-6.2	-6.2
60 Minute Hourly Adjustment		**75.6**	**-6.2**	**-6.2**	**-6.2**	**-6.2**	**-6.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R1

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	102.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	102.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	102.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2
Shielding (Barrier Attenuation)	102.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		77.7	-6.2	-6.2	-6.2	-6.2	-6.2
60 Minute Hourly Adjustment		**77.7**	**-6.2**	**-6.2**	**-6.2**	**-6.2**	**-6.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R2

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	83.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	83.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	83.0	-4.4	-4.4	-4.4	-4.4	-4.4	-4.4
Shielding (Barrier Attenuation)	83.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		88.2	-4.4	-4.4	-4.4	-4.4	-4.4
60 Minute Hourly Adjustment		**88.2**	**-4.4**	**-4.4**	**-4.4**	**-4.4**	**-4.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R2

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	83.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	83.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	83.0	-4.4	-4.4	-4.4	-4.4	-4.4	-4.4
Shielding (Barrier Attenuation)	83.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		81.2	-4.4	-4.4	-4.4	-4.4	-4.4
60 Minute Hourly Adjustment		**81.2**	**-4.4**	**-4.4**	**-4.4**	**-4.4**	**-4.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R2

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	83.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	83.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	83.0	-4.4	-4.4	-4.4	-4.4	-4.4	-4.4
Shielding (Barrier Attenuation)	83.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		77.4	-4.4	-4.4	-4.4	-4.4	-4.4
60 Minute Hourly Adjustment		**77.4**	**-4.4**	**-4.4**	**-4.4**	**-4.4**	**-4.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R2

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	83.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	83.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,028.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	83.0	-4.4	-4.4	-4.4	-4.4	-4.4	-4.4
Shielding (Barrier Attenuation)	83.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		79.5	-4.4	-4.4	-4.4	-4.4	-4.4
60 Minute Hourly Adjustment		**79.5**	**-4.4**	**-4.4**	**-4.4**	**-4.4**	**-4.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R3

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	78.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	68.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,020.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	78.0	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Shielding (Barrier Attenuation)	78.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		83.1	-9.5	-9.5	-9.5	-9.5	-9.5
60 Minute Hourly Adjustment		**83.1**	**-9.5**	**-9.5**	**-9.5**	**-9.5**	**-9.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R3

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	78.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	68.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,020.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	78.0	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Shielding (Barrier Attenuation)	78.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		76.1	-9.5	-9.5	-9.5	-9.5	-9.5
60 Minute Hourly Adjustment		**76.1**	**-9.5**	**-9.5**	**-9.5**	**-9.5**	**-9.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R3

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	78.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	68.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,020.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	78.0	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Shielding (Barrier Attenuation)	78.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		72.3	-9.5	-9.5	-9.5	-9.5	-9.5
60 Minute Hourly Adjustment		**72.3**	**-9.5**	**-9.5**	**-9.5**	**-9.5**	**-9.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R3

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	78.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	68.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,020.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	78.0	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Shielding (Barrier Attenuation)	78.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		74.4	-9.5	-9.5	-9.5	-9.5	-9.5
60 Minute Hourly Adjustment		**74.4**	**-9.5**	**-9.5**	**-9.5**	**-9.5**	**-9.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R4

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	180.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	170.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,029.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	180.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	180.0	-6.6	-6.6	-6.6	-6.6	-6.6	-6.6
Raw (Distance + Barrier)		74.9	-17.7	-17.7	-17.7	-17.7	-17.7
60 Minute Hourly Adjustment		**74.9**	**-17.7**	**-17.7**	**-17.7**	**-17.7**	**-17.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R4

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	180.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	170.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,029.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	180.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	180.0	-6.6	-6.6	-6.6	-6.6	-6.6	-6.6
Raw (Distance + Barrier)		67.9	-17.7	-17.7	-17.7	-17.7	-17.7
60 Minute Hourly Adjustment		**67.9**	**-17.7**	**-17.7**	**-17.7**	**-17.7**	**-17.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R4

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	180.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	170.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,029.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	180.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	180.0	-6.6	-6.6	-6.6	-6.6	-6.6	-6.6
Raw (Distance + Barrier)		64.1	-17.7	-17.7	-17.7	-17.7	-17.7
60 Minute Hourly Adjustment		**64.1**	**-17.7**	**-17.7**	**-17.7**	**-17.7**	**-17.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R4

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	180.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	170.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,029.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,014.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	180.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	180.0	-6.6	-6.6	-6.6	-6.6	-6.6	-6.6
Raw (Distance + Barrier)		66.2	-17.7	-17.7	-17.7	-17.7	-17.7
60 Minute Hourly Adjustment		**66.2**	**-17.7**	**-17.7**	**-17.7**	**-17.7**	**-17.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R5
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 895.0 feet
Noise Distance to Barrier: 895.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,022.0 feet
Noise Source Elevation: 1,012.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	895.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	895.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		67.5	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**67.5**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R5
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 895.0 feet
Noise Distance to Barrier: 895.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,022.0 feet
Noise Source Elevation: 1,012.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	895.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	895.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		60.5	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**60.5**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R5
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 895.0 feet
Noise Distance to Barrier: 895.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,022.0 feet
Noise Source Elevation: 1,012.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	895.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	895.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		56.7	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**56.7**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R5
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 895.0 feet
Noise Distance to Barrier: 895.0 feet
Barrier Distance to Observer: 0.0 feet
Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet
Observer Elevation: 1,022.0 feet
Noise Source Elevation: 1,012.0 feet
Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0
Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No
Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	895.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	895.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		58.8	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**58.8**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R6
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	959.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	949.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	959.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	959.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		61.2	-31.4	-31.4	-31.4	-31.4	-31.4
60 Minute Hourly Adjustment		**61.2**	**-31.4**	**-31.4**	**-31.4**	**-31.4**	**-31.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R6
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	959.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	949.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	959.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	959.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		54.2	-31.4	-31.4	-31.4	-31.4	-31.4
60 Minute Hourly Adjustment		**54.2**	**-31.4**	**-31.4**	**-31.4**	**-31.4**	**-31.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R6
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	959.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	949.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	959.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	959.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		50.4	-31.4	-31.4	-31.4	-31.4	-31.4
60 Minute Hourly Adjustment		**50.4**	**-31.4**	**-31.4**	**-31.4**	**-31.4**	**-31.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R6
Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	959.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	949.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,000.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	959.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	959.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		52.5	-31.4	-31.4	-31.4	-31.4	-31.4
60 Minute Hourly Adjustment		**52.5**	**-31.4**	**-31.4**	**-31.4**	**-31.4**	**-31.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R7

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,073.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,063.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	998.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,073.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,073.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		54.6	-38.0	-38.0	-38.0	-38.0	-38.0
60 Minute Hourly Adjustment		**54.6**	**-38.0**	**-38.0**	**-38.0**	**-38.0**	**-38.0**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R7

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,073.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,063.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	998.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,073.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,073.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		47.6	-38.0	-38.0	-38.0	-38.0	-38.0
60 Minute Hourly Adjustment		**47.6**	**-38.0**	**-38.0**	**-38.0**	**-38.0**	**-38.0**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R7

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,073.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,063.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	998.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,073.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,073.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		43.8	-38.0	-38.0	-38.0	-38.0	-38.0
60 Minute Hourly Adjustment		**43.8**	**-38.0**	**-38.0**	**-38.0**	**-38.0**	**-38.0**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R7

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,073.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,063.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	998.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,073.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,073.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		45.9	-38.0	-38.0	-38.0	-38.0	-38.0
60 Minute Hourly Adjustment		**45.9**	**-38.0**	**-38.0**	**-38.0**	**-38.0**	**-38.0**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R8

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,444.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,444.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,444.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8
Shielding (Barrier Attenuation)	2,444.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		58.8	-33.8	-33.8	-33.8	-33.8	-33.8
60 Minute Hourly Adjustment		**58.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R8

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,444.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,444.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,444.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8
Shielding (Barrier Attenuation)	2,444.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.8	-33.8	-33.8	-33.8	-33.8	-33.8
60 Minute Hourly Adjustment		**51.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R8

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,444.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,444.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,444.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8
Shielding (Barrier Attenuation)	2,444.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		48.0	-33.8	-33.8	-33.8	-33.8	-33.8
60 Minute Hourly Adjustment		**48.0**	**-33.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R8

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,444.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,444.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	994.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,444.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8
Shielding (Barrier Attenuation)	2,444.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.1	-33.8	-33.8	-33.8	-33.8	-33.8
60 Minute Hourly Adjustment		**50.1**	**-33.8**	**-33.8**	**-33.8**	**-33.8**	**-33.8**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R10

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	892.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	882.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	892.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	892.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		56.9	-35.7	-35.7	-35.7	-35.7	-35.7
60 Minute Hourly Adjustment		**56.9**	**-35.7**	**-35.7**	**-35.7**	**-35.7**	**-35.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R10

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	892.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	882.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	892.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	892.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		49.9	-35.7	-35.7	-35.7	-35.7	-35.7
60 Minute Hourly Adjustment		**49.9**	**-35.7**	**-35.7**	**-35.7**	**-35.7**	**-35.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R10

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	892.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	882.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	892.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	892.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		46.1	-35.7	-35.7	-35.7	-35.7	-35.7
60 Minute Hourly Adjustment		**46.1**	**-35.7**	**-35.7**	**-35.7**	**-35.7**	**-35.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R10

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	892.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	882.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	892.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	892.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		48.2	-35.7	-35.7	-35.7	-35.7	-35.7
60 Minute Hourly Adjustment		**48.2**	**-35.7**	**-35.7**	**-35.7**	**-35.7**	**-35.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R11

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	669.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	659.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	669.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5
Shielding (Barrier Attenuation)	669.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		64.4	-28.2	-28.2	-28.2	-28.2	-28.2
60 Minute Hourly Adjustment		**64.4**	**-28.2**	**-28.2**	**-28.2**	**-28.2**	**-28.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R11

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	669.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	659.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	669.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5
Shielding (Barrier Attenuation)	669.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		57.4	-28.2	-28.2	-28.2	-28.2	-28.2
60 Minute Hourly Adjustment		**57.4**	**-28.2**	**-28.2**	**-28.2**	**-28.2**	**-28.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R11

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	669.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	659.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	669.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5
Shielding (Barrier Attenuation)	669.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		53.6	-28.2	-28.2	-28.2	-28.2	-28.2
60 Minute Hourly Adjustment		**53.6**	**-28.2**	**-28.2**	**-28.2**	**-28.2**	**-28.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R11

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	669.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	659.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	669.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5
Shielding (Barrier Attenuation)	669.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		55.7	-28.2	-28.2	-28.2	-28.2	-28.2
60 Minute Hourly Adjustment		**55.7**	**-28.2**	**-28.2**	**-28.2**	**-28.2**	**-28.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R12

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	51.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	51.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,022.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	51.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Shielding (Barrier Attenuation)	51.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		92.4	-0.2	-0.2	-0.2	-0.2	-0.2
60 Minute Hourly Adjustment		**92.4**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R12

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	51.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	51.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,022.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	51.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Shielding (Barrier Attenuation)	51.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		85.4	-0.2	-0.2	-0.2	-0.2	-0.2
60 Minute Hourly Adjustment		**85.4**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R12

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	51.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	51.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,022.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	51.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Shielding (Barrier Attenuation)	51.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		81.6	-0.2	-0.2	-0.2	-0.2	-0.2
60 Minute Hourly Adjustment		**81.6**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R12

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	51.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	51.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,026.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,022.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	51.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Shielding (Barrier Attenuation)	51.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		83.7	-0.2	-0.2	-0.2	-0.2	-0.2
60 Minute Hourly Adjustment		**83.7**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R13

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	50.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	92.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Shielding (Barrier Attenuation)	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		92.6	0.0	0.0	0.0	0.0	0.0
60 Minute Hourly Adjustment		**92.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R13

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	50.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.6	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Shielding (Barrier Attenuation)	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		85.6	0.0	0.0	0.0	0.0	0.0
60 Minute Hourly Adjustment		**85.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R13

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	50.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Shielding (Barrier Attenuation)	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		81.8	0.0	0.0	0.0	0.0	0.0
60 Minute Hourly Adjustment		**81.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R13

Project Name: PA1-Meredith International
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	50.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	83.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Shielding (Barrier Attenuation)	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		83.9	0.0	0.0	0.0	0.0	0.0
60 Minute Hourly Adjustment		**83.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R1

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,008.0 feet
Noise Distance to Barrier: 1,008.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS							
Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,008.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
Shielding (Barrier Attenuation)	1,008.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		59.0	-26.1	-26.1	-26.1	-26.1	-26.1
60 Minute Hourly Adjustment		**59.0**	**-26.1**	**-26.1**	**-26.1**	**-26.1**	**-26.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R1

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,008.0 feet
Noise Distance to Barrier: 1,008.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS							
Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,008.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
Shielding (Barrier Attenuation)	1,008.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		55.2	-26.1	-26.1	-26.1	-26.1	-26.1
60 Minute Hourly Adjustment		**55.2**	**-26.1**	**-26.1**	**-26.1**	**-26.1**	**-26.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R1

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,008.0 feet
Noise Distance to Barrier: 1,008.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS							
Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,008.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
Shielding (Barrier Attenuation)	1,008.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		47.9	-26.1	-26.1	-26.1	-26.1	-26.1
60 Minute Hourly Adjustment		**47.9**	**-26.1**	**-26.1**	**-26.1**	**-26.1**	**-26.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R1

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 1,008.0 feet
Noise Distance to Barrier: 1,008.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,030.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS							
Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,008.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
Shielding (Barrier Attenuation)	1,008.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		54.8	-26.1	-26.1	-26.1	-26.1	-26.1
60 Minute Hourly Adjustment		**54.8**	**-26.1**	**-26.1**	**-26.1**	**-26.1**	**-26.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R2

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,714.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,714.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,714.0	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7
Shielding (Barrier Attenuation)	1,714.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		54.4	-30.7	-30.7	-30.7	-30.7	-30.7
60 Minute Hourly Adjustment		**54.4**	**-30.7**	**-30.7**	**-30.7**	**-30.7**	**-30.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R2

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,714.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,714.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,714.0	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7
Shielding (Barrier Attenuation)	1,714.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.6	-30.7	-30.7	-30.7	-30.7	-30.7
60 Minute Hourly Adjustment		**50.6**	**-30.7**	**-30.7**	**-30.7**	**-30.7**	**-30.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R2

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,714.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,714.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,714.0	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7
Shielding (Barrier Attenuation)	1,714.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.3	-30.7	-30.7	-30.7	-30.7	-30.7
60 Minute Hourly Adjustment		**43.3**	**-30.7**	**-30.7**	**-30.7**	**-30.7**	**-30.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R2

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,714.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,714.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,030.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,010.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,714.0	-30.7	-30.7	-30.7	-30.7	-30.7	-30.7
Shielding (Barrier Attenuation)	1,714.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.2	-30.7	-30.7	-30.7	-30.7	-30.7
60 Minute Hourly Adjustment		**50.2**	**-30.7**	**-30.7**	**-30.7**	**-30.7**	**-30.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R3

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,185.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,175.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,005.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,185.0	-32.8	-32.8	-32.8	-32.8	-32.8	-32.8
Shielding (Barrier Attenuation)	2,185.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		46.7	-38.4	-38.4	-38.4	-38.4	-38.4
60 Minute Hourly Adjustment		**46.7**	**-38.4**	**-38.4**	**-38.4**	**-38.4**	**-38.4**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R3

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,185.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,175.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,005.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,185.0	-32.8	-32.8	-32.8	-32.8	-32.8	-32.8
Shielding (Barrier Attenuation)	2,185.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		42.9	-38.4	-38.4	-38.4	-38.4	-38.4
60 Minute Hourly Adjustment		**42.9**	**-38.4**	**-38.4**	**-38.4**	**-38.4**	**-38.4**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R3

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,785.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,175.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	610.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,005.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,785.0	-34.9	-34.9	-34.9	-34.9	-34.9	-34.9
Shielding (Barrier Attenuation)	2,785.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		33.9	-40.1	-40.1	-40.1	-40.1	-40.1
60 Minute Hourly Adjustment		**33.9**	**-40.1**	**-40.1**	**-40.1**	**-40.1**	**-40.1**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R3

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,185.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	2,175.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,005.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,185.0	-32.8	-32.8	-32.8	-32.8	-32.8	-32.8
Shielding (Barrier Attenuation)	2,185.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		42.5	-38.4	-38.4	-38.4	-38.4	-38.4
60 Minute Hourly Adjustment		**42.5**	**-38.4**	**-38.4**	**-38.4**	**-38.4**	**-38.4**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R4

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,076.0 feet
Noise Distance to Barrier: 2,066.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,029.0 feet
Noise Source Elevation: 990.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,076.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,076.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		47.0	-38.1	-38.1	-38.1	-38.1	-38.1
60 Minute Hourly Adjustment		**47.0**	**-38.1**	**-38.1**	**-38.1**	**-38.1**	**-38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R4

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,076.0 feet
Noise Distance to Barrier: 2,066.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,029.0 feet
Noise Source Elevation: 990.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,076.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,076.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		43.2	-38.1	-38.1	-38.1	-38.1	-38.1
60 Minute Hourly Adjustment		**43.2**	**-38.1**	**-38.1**	**-38.1**	**-38.1**	**-38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R4

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,076.0 feet
Noise Distance to Barrier: 2,066.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,029.0 feet
Noise Source Elevation: 990.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,076.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,076.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		35.9	-38.1	-38.1	-38.1	-38.1	-38.1
60 Minute Hourly Adjustment		**35.9**	**-38.1**	**-38.1**	**-38.1**	**-38.1**	**-38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R4

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,076.0 feet
Noise Distance to Barrier: 2,066.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,029.0 feet
Noise Source Elevation: 990.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	2,076.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	2,076.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		42.8	-38.1	-38.1	-38.1	-38.1	-38.1
60 Minute Hourly Adjustment		**42.8**	**-38.1**	**-38.1**	**-38.1**	**-38.1**	**-38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R5

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,901.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,022.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,901.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6
Shielding (Barrier Attenuation)	1,901.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		53.5	-31.6	-31.6	-31.6	-31.6	-31.6
60 Minute Hourly Adjustment		**53.5**	**-31.6**	**-31.6**	**-31.6**	**-31.6**	**-31.6**

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STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R5

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,901.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,022.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,901.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6
Shielding (Barrier Attenuation)	1,901.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.7	-31.6	-31.6	-31.6	-31.6	-31.6
60 Minute Hourly Adjustment		**49.7**	**-31.6**	**-31.6**	**-31.6**	**-31.6**	**-31.6**

Wednesday, October 15, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R5

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,901.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,022.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,901.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6
Shielding (Barrier Attenuation)	1,901.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.4	-31.6	-31.6	-31.6	-31.6	-31.6
60 Minute Hourly Adjustment		**42.4**	**-31.6**	**-31.6**	**-31.6**	**-31.6**	**-31.6**

Wednesday, October 15, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R5

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,901.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,901.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,022.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,901.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6
Shielding (Barrier Attenuation)	1,901.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.3	-31.6	-31.6	-31.6	-31.6	-31.6
60 Minute Hourly Adjustment		**49.3**	**-31.6**	**-31.6**	**-31.6**	**-31.6**	**-31.6**

Wednesday, October 15, 2014

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R6

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,347.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,337.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,347.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,347.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		50.8	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**50.8**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R6

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,347.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,337.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,347.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,347.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		47.0	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**47.0**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R6

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,347.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,337.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,347.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,347.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		39.7	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**39.7**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R6

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,347.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,337.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,020.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,347.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,347.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		46.6	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**46.6**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R7
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,353.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,343.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,353.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,353.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		50.8	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**50.8**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R7
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,353.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,343.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,353.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,353.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		47.0	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**47.0**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R7
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,353.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,343.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,353.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,353.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		39.7	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**39.7**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R7
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,353.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	1,343.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	1,016.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,353.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	1,353.0	-5.7	-5.7	-5.7	-5.7	-5.7	-5.7
Raw (Distance + Barrier)		46.6	-34.3	-34.3	-34.3	-34.3	-34.3
60 Minute Hourly Adjustment		**46.6**	**-34.3**	**-34.3**	**-34.3**	**-34.3**	**-34.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R8

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	420.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	420.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	420.0	-18.5	-18.5	-18.5	-18.5	-18.5	-18.5
Shielding (Barrier Attenuation)	420.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		66.6	-18.5	-18.5	-18.5	-18.5	-18.5
60 Minute Hourly Adjustment		**66.6**	**-18.5**	**-18.5**	**-18.5**	**-18.5**	**-18.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R8

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	420.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	420.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	420.0	-18.5	-18.5	-18.5	-18.5	-18.5	-18.5
Shielding (Barrier Attenuation)	420.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		62.8	-18.5	-18.5	-18.5	-18.5	-18.5
60 Minute Hourly Adjustment		**62.8**	**-18.5**	**-18.5**	**-18.5**	**-18.5**	**-18.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R8

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	420.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	420.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	420.0	-18.5	-18.5	-18.5	-18.5	-18.5	-18.5
Shielding (Barrier Attenuation)	420.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		55.5	-18.5	-18.5	-18.5	-18.5	-18.5
60 Minute Hourly Adjustment		**55.5**	**-18.5**	**-18.5**	**-18.5**	**-18.5**	**-18.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R8

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	420.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	420.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,002.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		
Drop Off Coefficient:	20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)		

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	420.0	-18.5	-18.5	-18.5	-18.5	-18.5	-18.5
Shielding (Barrier Attenuation)	420.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		62.4	-18.5	-18.5	-18.5	-18.5	-18.5
60 Minute Hourly Adjustment		**62.4**	**-18.5**	**-18.5**	**-18.5**	**-18.5**	**-18.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R10
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	235.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	225.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	235.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	235.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Raw (Distance + Barrier)		60.7	-24.4	-24.4	-24.4	-24.4	-24.4
60 Minute Hourly Adjustment		**60.7**	**-24.4**	**-24.4**	**-24.4**	**-24.4**	**-24.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R10
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	235.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	225.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	235.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	235.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Raw (Distance + Barrier)		56.9	-24.4	-24.4	-24.4	-24.4	-24.4
60 Minute Hourly Adjustment		**56.9**	**-24.4**	**-24.4**	**-24.4**	**-24.4**	**-24.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R10
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	235.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	225.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	235.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	235.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Raw (Distance + Barrier)		49.6	-24.4	-24.4	-24.4	-24.4	-24.4
60 Minute Hourly Adjustment		**49.6**	**-24.4**	**-24.4**	**-24.4**	**-24.4**	**-24.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R10
Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	235.0 feet	***Barrier Height:***	**10.0 feet**
Noise Distance to Barrier:	225.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	10.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	Yes
Observer Elevation:	997.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	990.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	235.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	235.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Raw (Distance + Barrier)		56.5	-24.4	-24.4	-24.4	-24.4	-24.4
60 Minute Hourly Adjustment		**56.5**	**-24.4**	**-24.4**	**-24.4**	**-24.4**	**-24.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R11

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 141.0 feet
Noise Distance to Barrier: 131.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	141.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	141.0	-6.4	-6.4	-6.4	-6.4	-6.4	-6.4
Raw (Distance + Barrier)		69.7	-15.4	-15.4	-15.4	-15.4	-15.4
60 Minute Hourly Adjustment		**69.7**	**-15.4**	**-15.4**	**-15.4**	**-15.4**	**-15.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R11

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 141.0 feet
Noise Distance to Barrier: 131.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	141.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	141.0	-6.4	-6.4	-6.4	-6.4	-6.4	-6.4
Raw (Distance + Barrier)		65.9	-15.4	-15.4	-15.4	-15.4	-15.4
60 Minute Hourly Adjustment		**65.9**	**-15.4**	**-15.4**	**-15.4**	**-15.4**	**-15.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R11

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 141.0 feet
Noise Distance to Barrier: 131.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	141.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	141.0	-6.4	-6.4	-6.4	-6.4	-6.4	-6.4
Raw (Distance + Barrier)		58.6	-15.4	-15.4	-15.4	-15.4	-15.4
60 Minute Hourly Adjustment		**58.6**	**-15.4**	**-15.4**	**-15.4**	**-15.4**	**-15.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R11

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 141.0 feet
Noise Distance to Barrier: 131.0 feet
Barrier Distance to Observer: 10.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,020.0 feet
Noise Source Elevation: 1,010.0 feet

Barrier Height: **6.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: Yes
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	141.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	141.0	-6.4	-6.4	-6.4	-6.4	-6.4	-6.4
Raw (Distance + Barrier)		65.5	-15.4	-15.4	-15.4	-15.4	-15.4
60 Minute Hourly Adjustment		**65.5**	**-15.4**	**-15.4**	**-15.4**	**-15.4**	**-15.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R12

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 224.0 feet
Noise Distance to Barrier: 224.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,026.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0
Shielding (Barrier Attenuation)	224.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		72.1	-13.0	-13.0	-13.0	-13.0	-13.0
60 Minute Hourly Adjustment		**72.1**	**-13.0**	**-13.0**	**-13.0**	**-13.0**	**-13.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R12

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 224.0 feet
Noise Distance to Barrier: 224.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,026.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0
Shielding (Barrier Attenuation)	224.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		68.3	-13.0	-13.0	-13.0	-13.0	-13.0
60 Minute Hourly Adjustment		**68.3**	**-13.0**	**-13.0**	**-13.0**	**-13.0**	**-13.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R12

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 224.0 feet
Noise Distance to Barrier: 224.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,026.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0
Shielding (Barrier Attenuation)	224.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		61.0	-13.0	-13.0	-13.0	-13.0	-13.0
60 Minute Hourly Adjustment		**61.0**	**-13.0**	**-13.0**	**-13.0**	**-13.0**	**-13.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R12

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 224.0 feet
Noise Distance to Barrier: 224.0 feet
Barrier Distance to Observer: 0.0 feet

Noise Height: 5.0 feet
Observer Height (Above Pad): 5.0 feet

Observer Elevation: 1,026.0 feet
Noise Source Elevation: 1,015.0 feet

Barrier Height: **0.0 feet**
Barrier Type (0-Wall, 1-Berm): 0.0

Barrier Breaks Line of Sight: No
Wall Located at Noise Source Elevation: No

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-13.0	-13.0	-13.0	-13.0	-13.0	-13.0
Shielding (Barrier Attenuation)	224.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		67.9	-13.0	-13.0	-13.0	-13.0	-13.0
60 Minute Hourly Adjustment		**67.9**	**-13.0**	**-13.0**	**-13.0**	**-13.0**	**-13.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 1-Grading
Observer Location: R13

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,999.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,999.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	85.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,999.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	1,999.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		53.1	-32.0	-32.0	-32.0	-32.0	-32.0
60 Minute Hourly Adjustment		**53.1**	**-32.0**	**-32.0**	**-32.0**	**-32.0**	**-32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 2-Building Construction
Observer Location: R13

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,999.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,999.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	81.3	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,999.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	1,999.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.3	-32.0	-32.0	-32.0	-32.0	-32.0
60 Minute Hourly Adjustment		**49.3**	**-32.0**	**-32.0**	**-32.0**	**-32.0**	**-32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 3-Architectural Coating
Observer Location: R13

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,999.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,999.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	74.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,999.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	1,999.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		42.0	-32.0	-32.0	-32.0	-32.0	-32.0
60 Minute Hourly Adjustment		**42.0**	**-32.0**	**-32.0**	**-32.0**	**-32.0**	**-32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

Source: 4-Paving
Observer Location: R13

Project Name: PA2-4-Meredith Internatio
Job Number: 9035
Analyst: A.Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,999.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,999.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0.0
Barrier Distance to Observer:	0.0 feet		
Noise Height:	5.0 feet		
Observer Height (Above Pad):	5.0 feet	*Barrier Breaks Line of Sight:*	No
Observer Elevation:	1,015.0 feet	*Wall Located at Noise Source Elevation:*	No
Noise Source Elevation:	1,015.0 feet		

Drop Off Coefficient: 20.0 (20 = 6 dBA per doubling of distance, 15 = 4.5 dBA per doubling of distance)

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	80.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,999.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	1,999.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		48.9	-32.0	-32.0	-32.0	-32.0	-32.0
60 Minute Hourly Adjustment		**48.9**	**-32.0**	**-32.0**	**-32.0**	**-32.0**	**-32.0**