

NOISE AND VIBRATION IMPACT ANALYSIS

**SKILLED NURSING FACILITY PROJECT
JURUPA VALLEY, CALIFORNIA**

LSA

May 2025

NOISE AND VIBRATION IMPACT ANALYSIS

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily traffic
APN	Assessor's Parcel Number
CALGreen Code	California Green Building Standards Code
Caltrans	California Department of Transportation <i>Transportation and Construction Vibration Guidance Manual</i>
Caltrans Manual	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
City	City of Jurupa Valley
CNEL	Community Noise Equivalent Level
D	distance from the receiver to a piece of equipment
dB	decibel(s)
dBA	A-weighted decibel(s)
FAR	floor area ratio
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTA Manual	Federal Transit Administration's 2018 <i>Transit Noise and Vibration Impact Assessment Manual</i>
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
JVMC	Jurupa Valley Municipal Code
L ₅₀	median noise level
L _{dn}	day-night average noise level
L _{eq}	equivalent continuous sound level
L _{max}	maximum instantaneous sound level

L_v	vibration velocity
MDR	Medium Density Residential
PPV	peak particle velocity
project	Skilled Nursing Facility Project
R-R	Rural Residential
RMS	root-mean-square
SPL	sound pressure level
SR	State Route
STC	Sound Transmission Class
U.F.	usage factor
V	root-mean-square velocity amplitude
V_{ref}	reference velocity amplitude

INTRODUCTION

This Noise and Vibration Impact Analysis has been prepared to evaluate the potential noise and vibration impacts and reduction measures associated with the Skilled Nursing Facility Project (project) in Jurupa Valley, California. This report is intended to satisfy the City of Jurupa Valley (City) requirement for a project-specific noise impact analysis by examining the impacts of the project site and evaluating noise reduction measures that the project may require.

PROJECT LOCATION AND DESCRIPTION

The project site is located at 6401 33rd Street in Jurupa Valley, California, and consists of two parcels: Parcel A (Assessor's Parcel Number [APN] 177-020-084) is approximately 14.6 acres, and Parcel B (APN 177-020-085) is approximately 3.2 acres. Parcel A (APN 177-020-084) is currently vacant and undeveloped. Parcel B (APN 177-020-0845) is currently developed as a Skilled Nursing Facility, which is to remain (no development is proposed on this parcel). The project site has a General Plan land use designation of Medium Density Residential (MDR) and is zoned Rural Residential (R-R).

The project proposes to subdivide Parcel A (APN 177-020-084) into three parcels (Parcels 2, 3, and 4) and develop approximately 5.95 acres of the total project site. Parcel B (APN 177-020-085) is to remain as "Parcel 1" and is not part of the project site. Parcels 2 and 3 have proposed development. No development is proposed on Parcel 4 at this time, and the parcel will remain vacant and undeveloped.

The project proposes a 42,000-square-foot (sf), one-story skilled nursing facility on Parcel 2. The facility would include 188 parking spaces for staff and visitors, a covered drop-off area, a designated trash enclosure, and a loading zone for logistical operations. Inside the facility, there are accommodations for a total of 99 beds, consisting of 21 private rooms and 39 semi-private rooms. The floor plan incorporates various essential areas such as nursing stations, a reception area, therapy and gym facilities, offices, a kitchen, laundry facilities, and an electrical room. Additionally, an internal courtyard is featured as part of the layout of the facility. The project proposes a 12,000 sf, one-story medical office building on Parcel 3. The medical office building provides 60 parking spaces for patients and staff. Figures 1 and 2 below show the project location and site plan, respectively.

EXISTING LAND USES IN THE PROJECT AREA

The project site is primarily surrounded by residential uses and vacant land. The areas adjacent to the project site include the following uses:

- **Northeast:** Existing vacant land (Parcel 4)
- **Southwest:** Existing vacant land
- **Southeast:** Existing single-family residential uses
- **Northwest:** Existing Jurupa Hills Post Acute Nursing facility (Parcel 1) and single-family residential uses

The nearest sensitive receptor is the existing Jurupa Hills Post Acute Nursing Facility located adjacent to the project site boundary.



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 Project Location

FIGURE 1



0 1000 2000
FEET

SOURCE: Esri Street Map 2025

I:\E\ESL2201.106\GIS\Pro\Skilled Nursing Facility Project\Skilled Nursing Facility Project.aprx (3/26/2025)

Skilled Nursing Facility Project
Project Location

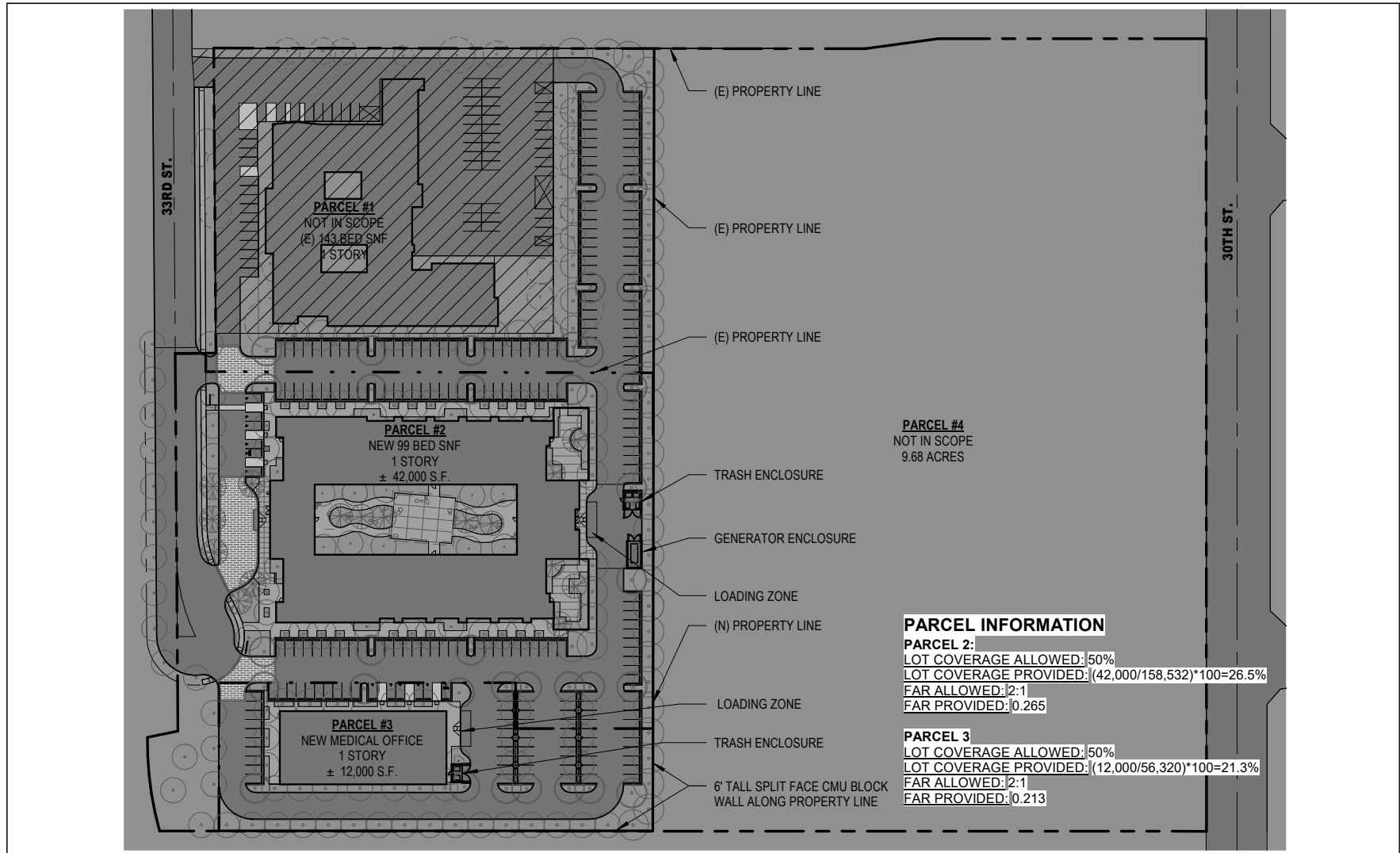


FIGURE 2

LSA



0 60 120

FEET

SOURCE: Taylor Design

Skilled Nursing Facility Project
Site Plan

NOISE AND VIBRATION FUNDAMENTALS

CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a sound wave, which results in the tone's range from high to low. Loudness is the strength of a sound, and it describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity is the average rate of sound energy transmitted through a unit area perpendicular to the direction in which the sound waves are traveling. This characteristic of sound can be precisely measured with instruments. The analysis of the project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

MEASUREMENT OF SOUND

Sound intensity is measured with the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound, similar to the human ear's de-emphasis of these frequencies. Decibels (dB), unlike the linear scale (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source sound levels decrease 4.5 dB for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and

Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on A-weighted decibels. CNEL is the time-weighted average noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City of Jurupa Valley uses the CNEL noise scale for long-term traffic noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max} , which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts, which are increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

PHYSIOLOGICAL EFFECTS OF NOISE

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed areas.

Table A lists definitions of acoustical terms, and Table B shows common sound levels and their sources.

Table A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, hertz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., the number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_{01} , L_{10} , L_{50} , L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max} , L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time. Usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Sources: (1) Technical Noise Supplement (Caltrans 2013); (2) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

Caltrans = California Department of Transportation

FTA = Federal Transit Administration

Table B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near Freeway Auto Traffic	70	Moderately Loud	Reference level
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2022).

FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile-driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet as detailed in the Federal Transit Administration's (FTA) 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where “ L_v ” is the vibration velocity in decibels (VdB), “ V ” is the vibration amplitude, and “ V_{ref} ” is the reference velocity amplitude, or 1×10^{-6} inches per second (in/sec) used in the United States.

REGULATORY SETTING

APPLICABLE NOISE STANDARDS

The applicable noise standards governing the project site include the criteria in the State of California Green Building Standards Code (CALGreen Code), the City's General Plan Noise Element (2017), and the City of Jurupa Valley Municipal Code (JVMC) (2025).

California Code of Regulations

Interior noise levels for residential habitable rooms are regulated by Title 24 of the California Code of Regulations (CCR) California Noise Insulation Standards. Title 24, Chapter 12, Section 1206.4, of the 2019 California Building Code requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room. A habitable room is a room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation (CCR Title 24, Chapter 12, Section 1206.4).

City of Jurupa Valley

General Plan Noise Element

The City of Jurupa Valley General Plan (2017) includes the following noise and vibration policies that are applicable to the proposed project.

Policies.

- NE 1.1 Land Use/Noise Compatibility.** Utilize the Land Use/Noise Compatibility Matrix, Figure 7-3, to determine the compatibility of proposed development, including General Plan amendments, specific plan amendments, village plans, and rezonings, with existing land uses and/or noise exposure due to transportation sources.
- NE 1.3 New or Modified Stationary Noise Sources.** Noise created by new stationary noise sources, or by existing stationary noise sources that undergo modifications that may increase noise levels, shall be mitigated so as not exceed the noise level standards of Figure 7-3. This policy does not apply to noise levels associated with agricultural operations existing in 2017.
- NE 1.4 Acoustical Assessment.** Require an acoustical assessment for proposed General Plan amendments and rezones that exceed the "Normally Acceptable" thresholds of the Land Use/Noise Compatibility Matrix.
- NE 1.6 Protection of Noise Sensitive Uses.** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land uses cannot be relocated, then measures such as building techniques, setbacks, landscaping, and noise walls should be considered.
- NE 1.8 Airport Noise Compatibility.** Ensure that new land use development within Airport Influence Areas complies with airport land use noise compatibility criteria contained in the applicable Airport Land Use Compatibility (ALUC) plan for the area.

- NE 1.9 Acoustic Site Planning and Design.** Incorporate acoustic site planning into the design and placement of new development, particularly large scale, mixed-use, or master-planned development, including building orientation, berming, special noise-resistant walls, window and door assemblies, and other appropriate measures.
- NE 2.2 Commercial Truck Deliveries.** Require commercial or industrial truck delivery hours be limited to least-sensitive times of the day when adjacent to noise sensitive land uses, unless there is no feasible alternative or there are overriding transportation benefits, as determined by the Planning Director.
- NE 2.6 Noise Contours.** Check all proposed development projects for possible location within roadway, railroad, and airport noise contours.
- NE 2.8 Preferred Noise Mitigation Methods.** When approving new development of noise sensitive uses or noise generating uses, the City will require noise mitigation in the order of preference, as listed below, with “1” being most preferred. For example, when mitigating outdoor noise exposure, providing distance between source and recipient is preferred to providing berms and walls. Before approving a less desirable approach, the City approval body must make a finding that more desirable approaches are not effective or that it is not practical to use the preferred approaches consistent with other design criteria based on the General Plan.

1. Mitigating Noise Generation

- a. Design the site of the noise producing project so that buildings or other solid structures shield neighboring noise-sensitive uses;
- b. Limit the operating times of noise-producing activities;
- c. Provide features, such as wall, with a primary purpose of blocking noise.

2. Mitigating Outdoor Noise Exposure

- a. Provide distance between noise source and recipient;
- b. Provide distance plus planted earthen berms;
- c. Provide distance and planted earthen berms, combined with sound walls;
- d. Provide sound walls only;
- e. Integrate buildings and sound walls to create a continuous noise barrier.

- NE 2.10 Noise Walls.** Noise mitigation walls (sound walls) should be used only when it is shown that other preferred approaches are not effective or that it is not practical to use the preferred approaches consistent with other design criteria in the General Plan. Where noise walls are used, they should be designed to enhance community character, protect significant views, discourage graffiti, and help create an attractive pedestrian-friendly

residential setting through features such as setbacks, changes in vertical and horizontal alignment, detail and texture, public art, walkways or trails, and landscaping. The height of such walls should be minimized, and where sound attenuation requires that a buffer that exceeds 10 feet in height, the sound buffer should consist of a combination of berms and a wall, or two or more retaining wall stepped back to allow intervening landscaping.

- NE 3.1 Noise Analysis.** Require that a noise analysis be conducted by an acoustical specialist for all proposed development projects that have the potential to generate significant noise near a noise-sensitive land use, or on or near land designated for noise sensitive land uses and ensure that recommended mitigation measures are implemented.
- NE 3.4 Construction Equipment.** Require that all construction equipment utilize noise reduction features (i.e., mufflers and engine shrouds) that are at least as effective as those originally installed by the equipment's manufacturer.
- NE 3.5 Construction Noise.** Limit commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.
- NE 4.1 Sensitive Land Uses.** Avoid the placement of sensitive land uses adjacent to or within one-quarter mile of vibration-producing land uses.
- NE 4.2 Vibration Producing Land Uses.** Avoid the placement of vibration producing land uses adjacent to or within one-quarter mile of sensitive receptors.
- NE 4.3 Truck Idling.** Restrict truck idling near sensitive vibration receptors.

City of Jurupa Valley Municipal Code

Section 11.05.040 of the JVMC (City of Jurupa Valley 2025) establishes the maximum permissible noise level that may intrude into a neighbor's property from nontransportation-related stationary noise sources. Table C provides the City's noise level standards based on the land use designation and the time period. No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table C.

Table C: City of Jurupa Valley Noise Level Standards

General Plan Land Use Designation	General Land Use Designation Name	Density	Maximum Decibel Level (dBA)	
			Daytime (7:00 a.m.–10:00 p.m.)	Nighttime (10:00 p.m.–7:00 a.m.)
LDR	Low Density Residential	0.5 acre	55	45
MDR	Medium Density Residential	2–5 acres	55	45
CO	Office Commercial	–	65	55
PF	Public Facility	–	65	45

Source: City of Jurupa Valley Municipal Code (City of Jurupa Valley 2025).
dBA = A-weighted decibels

Section 11.05.020 exempts the following sources from the provisions of this chapter which are applicable to the project:

- (9) Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 - (a) Construction does not occur between the hours of six (6:00) p.m. and six (6:00) a.m. during the months of June through September; and
 - (b) Construction does not occur between the hours of six (6:00) p.m. and seven (7:00) a.m. during the months of October through May;
- (10) Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven (7:00) a.m., and eight (8:00) p.m.;
- (11) Motor vehicles, other than off highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems; or
- (12) Heating and air conditioning equipment.

Federal Transit Administration

Although the City does not have daytime construction noise level limits for activities that occur within the specified hours in Section 11.05.020 to determine potential California Environmental Quality Act (CEQA) noise impacts, construction noise was assessed using criteria from the FTA Manual. Table D shows the FTA's Detailed Assessment Construction Noise Criteria based on the composite noise levels per construction phase.

APPLICABLE VIBRATION STANDARDS

California Department of Transportation

Vibration standards included in the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual* (Caltrans Manual) (2020) are used in this analysis for ground-borne vibration impacts on human annoyance and building damage. The

**Table D: Detailed Assessment Daytime
Construction Noise Criteria**

Land Use	Daytime 8-hour L_{eq} (dBA)
Residential	80
Commercial	85
Industrial	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

dBA = A-weighted decibels

FTA = Federal Transit Administration

L_{eq} = equivalent continuous sound level

criteria for environmental impact from ground-borne vibration are based on the maximum levels for a single event and the RMS vibration level. Table E provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

**Table E: Interpretation of Vibration Criteria for
Detailed Analysis**

Human Response	Vibration Level (RMS in/sec)
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.10
Severe	0.40

Source: *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020).

Caltrans = California Department of Transportation

in/sec = inch/inches per second

RMS = root-mean-square

Table F lists the potential vibration building damage criteria associated with construction activities, as suggested in the Caltrans Manual. Caltrans guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for newer residential structures and modern industrial or commercial buildings and would not result in any construction vibration damage.

Table F: Construction Vibration Damage Criteria

Structure / Condition	PPV (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.08
Fragile buildings	0.10
Historic and some old buildings	0.25
Older residential structures	0.30
New residential structures	0.50
Modern industrial / commercial buildings	0.50

Source: Table 19, *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020).

Caltrans = California Department of Transportation PPV = peak particle velocity

in/sec = inch/inches per second

OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

The primary existing noise sources in the project area include vehicle traffic on State Route (SR) 60 and local roads in the vicinity of the project.

AMBIENT NOISE MEASUREMENTS

Long-Term Noise Measurements

To assess existing noise levels, LSA conducted two long-term noise measurements in the vicinity of the project site. The long-term (24-hour) noise level measurements were conducted on March 18 and 19, 2025, using two Larson Davis Spark 706RC Dosimeters. Table G provides a summary of the measured hourly noise levels from the long-term noise level measurements. Noise measurement sheets are provided in Appendix A. Figure 3 shows the long-term monitoring locations.

Table G: Existing Noise Level Measurements

Location Number	Location Description	Daytime Noise Levels ¹ (dBA L _{eq})	Evening Noise Levels ² (dBA L _{eq})	Nighttime Noise Levels ³ (dBA L _{eq})	Average Daily Noise Levels (dBA CNEL)	Primary Noise Sources
LT-1	Southeast of 6401 33 rd Street, on a utility pole, approximately 1,290 feet away from the SR-60 centerline.	49.1–60.2	57.1–58.2	53.1–58.0	63.3	Vehicle traffic on SR-60
LT-2	East of 3160 Apple Avenue, approximately 1,925 feet from the SR-60 centerline.	49.6–58.2	52.1–53.4	45.7–56.9	60.0	Vehicle traffic on SR-60

Source: Compiled by LSA (2025).

¹ Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.

² Evening Noise Levels = noise levels during the hours of 7:00 p.m. to 10:00 p.m.

³ Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.

CNEL = Community Noise Equivalent Level

L_{eq} = equivalent continuous sound level

dBA = A-weighted decibels

SR = State Route

EXISTING AIRCRAFT NOISE

Airport-related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The closest airport to the proposed project site is the Flabob Airport, located approximately 1.75 miles south of the project site. Based on Map FL-3, Noise Compatibility Contours, of Riverside County Airport Land Use Compatibility Plan Policy Document, the project is located outside the 65 dBA CNEL noise contour (County of Riverside 2004). Because the project site is outside the 65 dBA CNEL airport noise contour, the project would not be adversely affected by airport/airfield noise, and it would neither contribute to nor result in adverse airport/airfield noise impacts. No further analysis is required.



FIGURE 3

LSA



0 150 300
FEET

SOURCE: Google Earth 2025

I:\E\ESL2201.106\G\Noise_Locs.ai (3/26/2025)

LEGEND



Project Site Boundary



Long-term Noise Monitoring Location

Skilled Nursing Facility Project
Noise Monitoring Locations

PROJECT IMPACTS

SHORT-TERM CONSTRUCTION NOISE IMPACTS

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (passing trucks at 50 feet would generate up to 84 dBA L_{max}), the effect on longer-term ambient noise levels would be small when compared to the existing average daily traffic (ADT) volume on 33rd Street. Based on the *Focused Traffic Impact Analysis for the Proposed Jurupa Hills Post Acute Expansion Project* (LLG Engineers 2025), the existing ADT on 33rd Street is approximately 500, resulting in a traffic noise level of approximately 47.0 dBA CNEL. During the grading phase, approximately 3,120 acoustically equivalent trips would occur during an average day from worker and delivery activities resulting in a traffic noise increase of approximately 8.6 dBA, as shown in Appendix B. Adding the noise increase due to construction traffic of 8.6 dBA to the existing traffic noise level of 47.0 dBA CNEL would result in a traffic noise level of 55.6 dBA CNEL, which would be below the City's acceptable community noise exposure of 60 dBA CNEL for residential uses. Therefore, short-term construction-related impacts associated with worker commutes and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction, which includes demolition of the existing structures and other site improvements, site preparation, grading, building construction, paving, and architectural coating on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table H lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, taken from the Federal Highway Administration's (FHWA) *FHWA Roadway Construction Noise Model* (FHWA 2006).

In addition to the reference maximum noise level, the usage factor provided in Table H is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10 \log(U.F.) - 20 \log\left(\frac{D}{50}\right)$$

" L_{eq} (equip)" is the L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period,

"E.L." is the noise emission level of the particular piece of equipment at a reference distance of 50 feet,

“U.F.” is the usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time, and

“D” is the distance from the receiver to the piece of equipment.

Table H: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%) ¹	Maximum Noise Level (L _{max}) at 50 ft ²
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006).

Note: Noise levels reported in this table are rounded to the nearest whole number.

¹ Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

² Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the “Big Dig” project.

FHWA = Federal Highway Administration

ft = foot/feet

L_{max} = maximum instantaneous sound level

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq (composite) = 10 * \log_{10} \left(\sum_{1}^n 10^{\frac{Ln}{10}} \right)$$

Using the equations from the methodology above, the reference information in Table I, and the construction equipment list provided, the composite noise levels of each construction phase were

calculated. The project construction composite noise levels at a distance of 50 feet would range from 74 dBA L_{eq} to 88 dBA L_{eq} , with the highest noise levels occurring during the site preparation phase.

Table I: Potential Construction Noise Impacts at Nearest Receptor

Receptor (Location)	Composite Noise Level (dBA L_{eq}) at 50 ft ¹	Distance (ft)	Composite Noise Level (dBA L_{eq})
Jurupa Hills Post Acute – Nursing Facility (Northwest)	88	115	80
Residence (Northwest)		400	70
Residence (Southeast)		450	69

Source: Compiled by LSA (2025).

¹ The composite construction noise level represents the site preparation and paving phases, which are expected to result in the greatest noise level as compared to other phases.

dBA = A-weighted decibels

ft = foot/feet

L_{eq} = equivalent continuous sound level

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq \text{ (at distance } X) = Leq \text{ (at 50 feet)} - 20 * \log_{10} \left(\frac{X}{50} \right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA, and halving the distance would increase noise levels by 6 dBA.

Table I shows the nearest sensitive uses to the project site, their distance from the center of construction activities, and composite noise levels expected during construction. These noise level projections do not consider intervening topography or barriers. Construction equipment calculations are provided in Appendix B.

Although construction noise will vary, it is expected that composite noise levels during construction at the nearest off-site sensitive use (Jurupa Hills Post Acute Nursing Home) to the northwest would reach 80 dBA L_{eq} , and construction noise levels would approach 70 dBA L_{eq} at the nearest residential use to the northwest during daytime hours. These predicted noise levels would only occur when all construction equipment is operating simultaneously and, therefore, are assumed to be rather conservative in nature. Although construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed.

As it relates to off-site uses, construction-related noise impacts would remain below the 80 dBA L_{eq} and 85 dBA L_{eq} 1-hour construction noise level criteria for daytime construction as established by the FTA for residential and commercial land uses, respectively; therefore, the impact would be considered less than significant. Compliance with the JVMC would ensure that construction noise does not disturb the sensitive uses during hours when ambient noise levels are likely to be lower (i.e., at night).

SHORT-TERM CONSTRUCTION VIBRATION IMPACTS

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in RMS and assesses the potential for building damages using vibration levels in PPV (in/sec). This is because vibration levels calculated in RMS are best for characterizing human response to building vibration, and vibration level in PPV is best for characterizing potential for damage.

Table J shows the PPV and RMS values at 25 feet from the construction vibration source. As shown in Table J, bulldozers, and other heavy-tracked construction equipment (expected to be used for this project) generate approximately 0.089 PPV in/sec or 0.062 RMS in/sec of ground-borne vibration when measured at 25 feet, based on the Caltrans Manual. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project construction boundary (assuming the construction equipment would be used at or near the project setback line).

Table J: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L _v at 25 ft	
	PPV (in/sec)	RMS (in/sec) ¹
Pile Driver (Impact), Typical	0.644	0.451
Pile Driver (Sonic), Typical	0.170	0.119
Vibratory Roller	0.210	0.147
Hoe Ram	0.089	0.062
Large Bulldozer²	0.089	0.062
Caisson Drilling	0.089	0.062
Loaded Trucks²	0.076	0.053
Jackhammer	0.035	0.025
Small Bulldozer	0.003	0.002

Source: *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020).

¹ RMS vibration velocity is 70 percent of maximum PPV.

² Equipment shown in **bold** is expected to be representative of the equipment used on site.

Caltrans = California Department of Transportation

ft = foot/feet

in/sec = inch/inches per second

L_v = vibration velocity in decibels

PPV = peak particle velocity

RMS = root-mean-square

The formula for vibration transmission is provided below, and Tables K and L, below, provide a summary of off-site construction vibration levels. The material dampening coefficient, 'n', ranges between 1.1 and 1.5 depending on soil type and distance from equipment.

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^n$$

Table K: Potential Construction Vibration Annoyance Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (RMS in/sec) at 25 ft ¹	Distance (ft) ²	Vibration Level (RMS in/sec)
Jurupa Hills Post Acute – Nursing Facility (Northwest)	0.062	115	0.006
Residence (Northwest)		400	0.001
Residence (Southeast)		450	0.001

Source: Compiled by LSA (2025).

¹ The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.

² The assessment distance is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses.

ft = foot/feet

in/sec = inches per second

RMS = root-mean-square

Table L: Potential Construction Vibration Damage Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft ¹	Distance (ft)	Vibration Level (PPV)
Jurupa Hills Post Acute – Nursing Facility (Northwest)	0.089	10	0.352
Residence (Northwest)		10	0.352
Residence (Southeast)		60	0.024

Source: Compiled by LSA (2025).

¹ The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.

² The assessment distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.

ft = foot/feet

PPV = peak particle velocity

As previously shown in Table F, the threshold at which vibration levels would result in annoyance would be 0.04 in/sec RMS. Based on the information provided in Table L, vibration levels are expected to approach 0.006 in/sec RMS at the closest receptors and would not exceed the annoyance thresholds.

As discussed above, the standards indicate that the construction vibration damage criterion is 0.5 in/sec in PPV. Based on the information provided in Table L, the closest structures to external construction activities are the residential uses and the Nursing Home building to the northwest. Using the reference data from Table J and the equation above, it is expected that vibration levels generated by dump trucks and other large equipment would generate ground-borne vibration levels of up to 0.352 PPV (in/sec) at the closest structures to the project site. This vibration level would not exceed the 0.5 in/sec PPV threshold considered safe for newer residential structures and modern industrial or commercial buildings, which would result in a less than significant impact. Vibration levels at all other buildings would be lower. Therefore, construction would not result in any vibration damage, and impacts would be less than significant.

LONG-TERM OFF-SITE TRAFFIC NOISE IMPACTS

Traffic noise is the major noise source in the project area. Other sources of noise in the project area would be low or intermittent and would not contribute to or reach the levels of noise generated by traffic. The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to evaluate highway traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values.

The without and with project scenario traffic volumes were obtained from the *Focused Traffic Impact Analysis for the Proposed Jurupa Hills Post Acute Expansion Project* (LLG Engineers 2025). Appendix C provides the specific assumptions used in developing these noise levels and model printouts. Table M provides the traffic noise levels for the existing, opening year (2027), and cumulative horizon year with and without project scenarios. These noise levels represent worst-case scenarios, which assume that no shielding is provided between the traffic and the locations where the noise contours are drawn.

As shown in Table M, project-related traffic noise would generate the greatest increase of 4.2 dBA along 33rd Street, resulting in a noise level of 51.1 dBA CNEL, which would be below the City's acceptable community noise exposure of 60 dBA CNEL for residential uses. For all other roadway segments, the noise increase would be less than 3 dBA CNEL which is considered a barely perceptible increase. Therefore, project-related traffic would have a less than significant impact on off-site sensitive receptors, and no mitigation is required.

LONG-TERM TRAFFIC-RELATED VIBRATION IMPACTS

The proposed project would not result in vibration impacts related to on-site stationary source operations because the proposed stationary equipment, which includes sources such as roof-top mechanical equipment and loading dock activities, would not generate perceptible vibration levels. In addition, the proposed project would not result in vibration impacts from project-related traffic on site or on the adjacent roadways because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Based on a reference vibration level of 0.076 in/sec PPV, structures greater than 20 feet from the roadways along which project vehicles would be traveling would experience vibration levels below the standard of 0.3 in/sec PPV. Therefore, vibration levels generated from project-related traffic on site or on the adjacent roadways would be less than significant, and no mitigation is required.

Table M: Traffic Noise Levels Without and With Proposed Project – Existing, Opening Year 2027, Horizon Year

Roadway Segment	Existing		Existing – With Project			Year 2027 – No Project		Year 2027 – With Project			Horizon Year – No Project		Horizon Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Existing Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Year 2027 Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Year 2027 Conditions (dBA)
Apple Avenue North of 33 rd Street	180	43.0	180	43.0	0.0	180	43.0	180	43.0	0.0	180	43.0	180	43.0	0.0
33 rd Street East of Apple Avenue	440	46.9	1,160	51.1	4.2	450	47.0	1,170	51.1	4.1	570	48.0	1,290	51.5	3.5
33 rd Street Between Apple Avenue and Florine Avenue	500	47.4	1,220	51.3	3.9	510	47.5	1,230	51.3	3.8	630	48.4	1,350	51.7	3.3
Florine Avenue South of 33 rd Street	920	50.1	1,350	51.7	1.6	960	50.3	1,390	51.9	1.6	1,020	50.5	1,450	52.0	1.5
Florine Avenue Between 33 rd Street and 30 th Street	690	48.8	980	50.3	1.5	710	48.9	1,000	50.4	1.5	890	49.9	1,180	51.2	1.3
Florine Avenue North of 30 th Street	80	39.5	80	39.5	0.0	80	39.5	80	39.5	0.0	80	39.5	80	39.5	0.0
30 th Street West of Florine Avenue	1,570	52.1	1,860	52.9	0.8	1,630	52.3	1,920	53.0	0.7	2,200	53.6	2,490	54.1	0.5
30 th Street East of Florine Avenue	1,210	51.0	1,210	51.0	0.0	1,260	51.2	1,260	51.2	0.0	1,770	52.7	1,770	52.7	0.0

Source: Compiled by LSA (2025).

Note: Shaded cells indicate roadway segments adjacent to the project site.

ADT = average daily traffic

dBA = A-weighted decibels

ft = foot/feet

CNEL= Community Noise Exposure Level

LONG-TERM STATIONARY NOISE IMPACTS TO OFF-SITE RECEPTOR

Adjacent off-site land uses would be potentially exposed to stationary-source noise impacts from rooftop heating, ventilation, and air conditioning (HVAC) equipment and parking lot activities. However, Section 11.05.020 of the JVMC exempts motor vehicles and heating and air conditioning equipment from meeting the City's noise level standards. Furthermore, the proposed 6-foot-tall block wall along the eastern and northern property line would provide shielding from noise at the project site. Therefore, impacts related to operation of the proposed project would be less than significant. No mitigation is required.

ON-SITE LAND USE COMPATIBILITY ANALYSIS

The proposed project is in an area where parcels to the east and west are currently in use. For this reason, this analysis relies on the existing measured noise levels as well as future predicted noise levels to provide the most accurate description of the noise environment related to traffic noise impacts.

As described in the City's Noise Element of the General Plan (2017), an exterior noise level of up to 70 dBA CNEL is considered acceptable for hospitals and nursing homes, while interior spaces shall meet a noise level of 45 dBA CNEL.

ON-SITE EXTERIOR NOISE IMPACTS

Based on the monitoring results shown in Table H, existing traffic noise levels at the project site range from 60.0 dBA CNEL near the western project boundary to 63.3 dBA CNEL near the eastern project boundary.

The main amenity area where humans will spend time includes the central courtyard at Parcel 2. After distance attenuation and shielding from the proposed buildings and fencing, the noise levels at the amenity would remain below the acceptable level of 70 dBA CNEL, and no mitigation measures would be required.

ON-SITE INTERIOR NOISE IMPACTS

In addition to the exterior noise level standards, the project must demonstrate compliance with the interior noise standard of 45 dBA CNEL. The traffic noise levels at Parcel 2 would approach 63.3 dBA CNEL at the southern façade of the proposed building closest to SR-60.

Based on the United States Environmental Protection Agency's (USEPA) Protective Noise Levels (1974), with windows and doors open, interior noise levels at the units along the northern and eastern boundaries would be 62.4 dBA (i.e., $63.3 \text{ dBA} - 12 \text{ dBA} = 51.3 \text{ dBA}$), which would exceed the 45 dBA L_{dn} interior noise standard. The proposed project includes an HVAC system that would allow windows to remain closed. Based on reference information from transmission loss test reports for Greenworld Windows (2018), the necessary reduction can be achieved with standard building construction along with standard windows in the range of Sound Transmission Class 25 would yield an interior noise level below 45 dBA CNEL.

Once final plans are available to detail the exterior wall construction and a window manufacturer has been chosen, a Final Acoustical Report would be required to confirm the reduction capability of the exterior façades and to identify any specific upgrades necessary to achieve an interior noise level of 45 dBA CNEL or below.

REFERENCES

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APPENDIX A

NOISE MONITORING DATA

Noise Measurement Survey – 24 HR

Project Number: ESL2201.106

Test Personnel: Corey Knips

Project Name: Skilled Nursing Facility

Equipment: LD Spark 706RC (SN: 17814)

Site Number: LT-1 Start Date: 3/18/2025 Time: From 4:00 p.m. To 4:00 p.m.

Site Location: Southeast of 6401 33rd Street, Riverside, CA. On utility pole, approximately
1,290 feet from the SR-60 centerline.

Primary Noise Sources: Traffic on State Route (SR) 60.

Comments: _____

Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Date	Noise Level (dBA)		
		L _{eq}	L _{max}	L _{min}
4:00 PM	3/18/2025	57.4	75.2	51.1
5:00 PM	3/18/2025	55.7	69.0	51.1
6:00 PM	3/18/2025	58.4	68.2	54.3
7:00 PM	3/18/2025	57.1	65.3	53.4
8:00 PM	3/18/2025	58.2	69.7	53.4
9:00 PM	3/18/2025	57.2	69.9	45.2
10:00 PM	3/18/2025	55.3	66.1	49.6
11:00 PM	3/18/2025	56.7	68.8	47.7
12:00 AM	3/19/2025	54.2	63.1	45.6
1:00 AM	3/19/2025	58.0	72.4	44.6
2:00 AM	3/19/2025	53.1	68.9	45.1
3:00 AM	3/19/2025	56.7	64.5	48.0
4:00 AM	3/19/2025	55.9	62.3	50.0
5:00 AM	3/19/2025	57.6	66.3	50.9
6:00 AM	3/19/2025	58.0	64.0	53.2
7:00 AM	3/19/2025	58.9	65.2	55.1
8:00 AM	3/19/2025	58.5	74.3	50.0
9:00 AM	3/19/2025	57.2	72.4	49.3
10:00 AM	3/19/2025	53.9	70.0	45.5
11:00 AM	3/19/2025	56.5	77.5	42.6
12:00 PM	3/19/2025	60.2	77.1	43.2
1:00 PM	3/19/2025	53.6	69.8	43.3
2:00 PM	3/19/2025	50.1	67.5	41.2
3:00 PM	3/19/2025	49.1	64.6	41.3

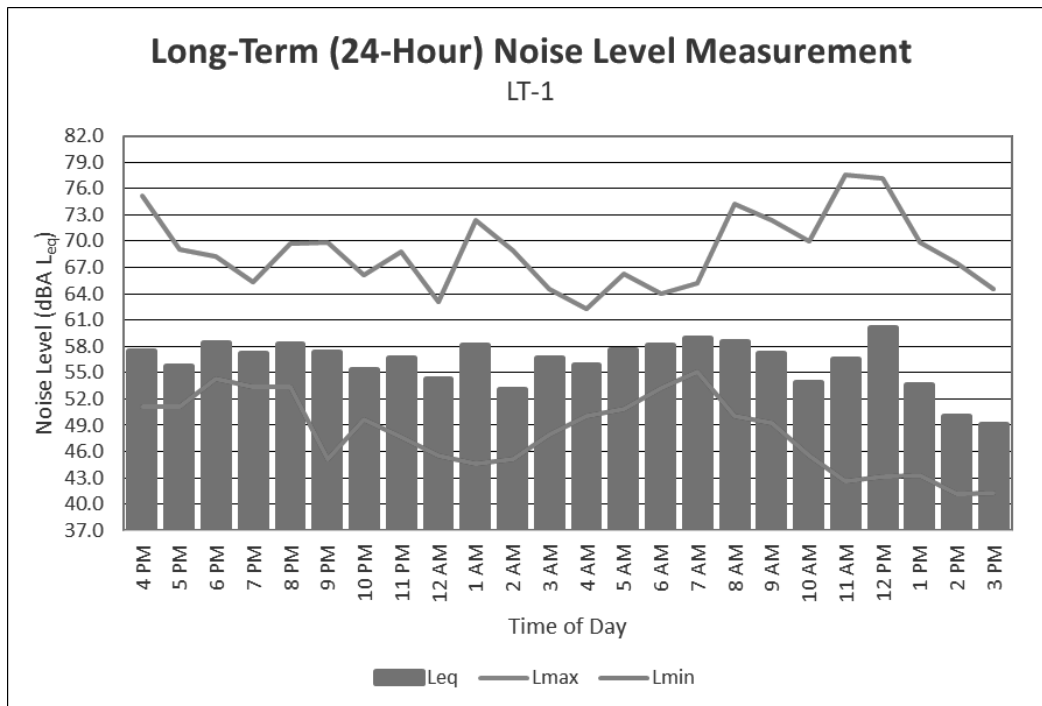
Source: Compiled by LSA Associates, Inc. (2025).

dBA = A-weighted decibel

L_{eq} = equivalent continuous sound level

L_{max} = maximum instantaneous noise level

L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: ESL2201.106

Test Personnel: Corey Knips

Project Name: Skilled Nursing Facility

Equipment: LD Spark 706RC (SN: 18571)

Site Number: LT-2 Start Date: 3/18/2025 Time: From 4:00 p.m. To 4:00 p.m.

Site Location: East of 3160 Apple Avenue, Riverside, CA. On utility pole, approximately 1,925 feet from the SR-60 centerline.

Primary Noise Sources: Traffic on State Route (SR) 60

Comments: _____

Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Date	Noise Level (dBA)		
		L _{eq}	L _{max}	L _{min}
10:00 AM	4:00 PM	3/18/2025	52.2	66.3
11:00 AM	5:00 PM	3/18/2025	51.8	68.9
12:00 PM	6:00 PM	3/18/2025	53.1	65.5
1:00 PM	7:00 PM	3/18/2025	52.1	58.5
2:00 PM	8:00 PM	3/18/2025	52.2	63.2
3:00 PM	9:00 PM	3/18/2025	53.4	67.1
4:00 PM	10:00 PM	3/18/2025	53.5	64.2
5:00 PM	11:00 PM	3/18/2025	52.6	61.5
6:00 PM	12:00 AM	3/19/2025	50.5	62.2
7:00 PM	1:00 AM	3/19/2025	45.7	61.7
8:00 PM	2:00 AM	3/19/2025	47.1	59.4
9:00 PM	3:00 AM	3/19/2025	54.2	65.4
10:00 PM	4:00 AM	3/19/2025	54.0	65.3
11:00 PM	5:00 AM	3/19/2025	54.8	64.3
12:00 AM	6:00 AM	3/19/2025	56.9	72.2
1:00 AM	7:00 AM	3/19/2025	58.2	78.1
2:00 AM	8:00 AM	3/19/2025	54.7	72.0
3:00 AM	9:00 AM	3/19/2025	56.6	71.4
4:00 AM	10:00 AM	3/19/2025	56.2	72.9
5:00 AM	11:00 AM	3/19/2025	53.0	79.8
6:00 AM	12:00 PM	3/19/2025	49.6	72.0
7:00 AM	1:00 PM	3/19/2025	50.1	71.3
8:00 AM	2:00 PM	3/19/2025	50.9	70.6
9:00 AM	3:00 PM	3/19/2025	50.5	66.1

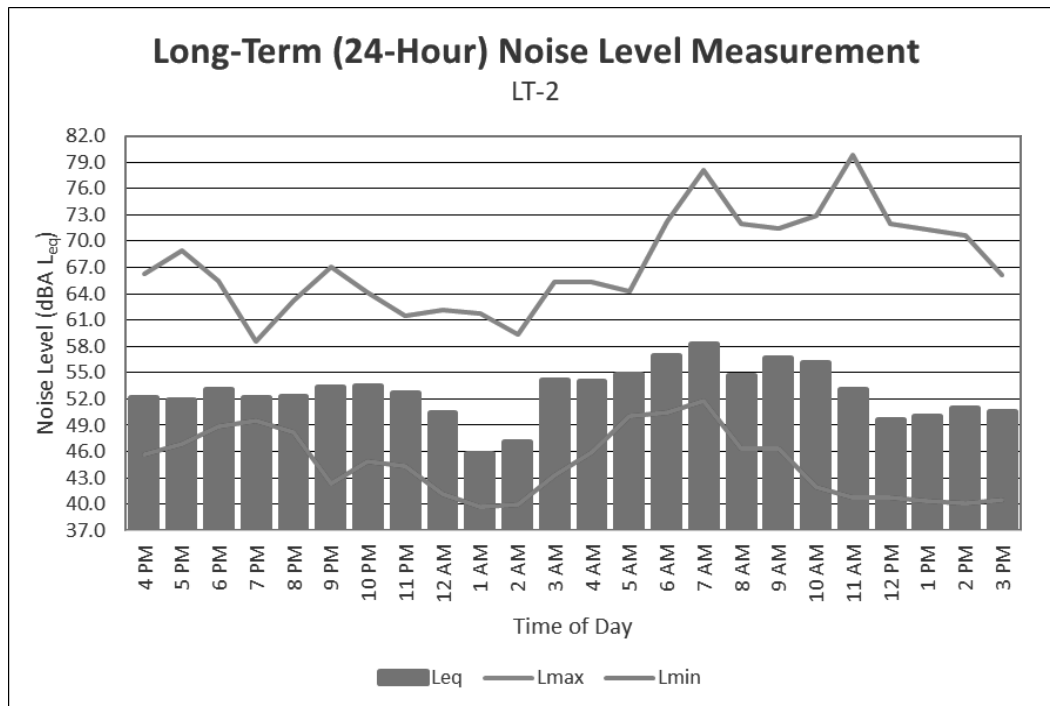
Source: Compiled by LSA Associates, Inc. (2025).

dBA = A-weighted decibel

L_{eq} = equivalent continuous sound level

L_{max} = maximum instantaneous noise level

L_{min} = minimum measured sound level



APPENDIX B

CONSTRUCTION NOISE LEVEL CALCULATIONS

Construction Calculations

Phase: Demolition

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Concrete Saw	1	90	20	50	0.5	90	83
Excavator	3	81	40	50	0.5	81	82
Dozer	2	82	40	50	0.5	82	81
Combined at 50 feet						91	87
Combined at Receptor 115 feet						84	80

Phase: Site Preparation

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Tractor	4	84	40	50	0.5	84	86
Dozer	3	82	40	50	0.5	82	83
Combined at 50 feet						86	88
Combined at Receptor 115 feet						79	80
Combined at Receptor 400 feet						68	70
Combined at Receptor 450 feet						67	69

Phase: Grading

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Grader	1	85	40	50	0.5	85	81
Dozer	1	82	40	50	0.5	82	78
Tractor	3	84	40	50	0.5	84	85
Excavator	1	81	40	50	0.5	81	77
Combined at 50 feet						89	87
Combined at Receptor 115 feet						82	80
Combined at Receptor 400 feet						71	69
Combined at Receptor 450 feet						70	68

Phase: Building Construction

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Man Lift	3	75	20	50	0.5	75	73
Crane	1	81	16	50	0.5	81	73
Generator	1	81	50	50	0.5	81	78
Tractor	3	84	40	50	0.5	84	85
Welder / Torch	1	74	40	50	0.5	74	70
Combined at 50 feet						87	86
Combined at Receptor 115 feet						80	79

Phase: Paving

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Paver	2	77	50	50	0.5	77	77
Roller	2	80	20	50	0.5	80	76
Drum Mixer	2	80	50	50	0.5	80	80
All Other Equipment > 5 HP	2	85	50	50	0.5	85	85
Combined at 50 feet						88	87
Combined at Receptor 115 feet						80	80

Phase: Architectural Coating

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
						Lmax	Leq
Compressor (air)	1	78	40	50	0.5	78	74
Combined at 50 feet						78	74
Combined at Receptor 115 feet						71	67

Sources: RCNM

¹- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Construction Traffic Noise Calculator

Construction Phase	One-Way Worker Trip/Day	One Way Vendor Trip/Day	One Way Hauling Trip Number	Total
Demolition	15	0	36.6	51.6
Site Preparation	17.5	0	0	17.5
Grading	15	0	78	93
Building Construction	75.1	12.5	0	87.6
Paving	20	0	0	20
Architectural Coating	15	0	0	15
Maximum	93			

Roadway Speed Existing Volume MT Factor HT Factor
 33rd St 25 500 12.6 39.8

	Worker Trip/Day	Vendor Trip/Day	Hauling Trip Number	Total	Overlap?
Demolition	15	0	1,457	1472	
Site Preparation	18	0	0	18	
Grading	15	0	3,105	3120	
Building Construction	76	328	0	404	
Paving	20	0	0	20	
Architectural Coating	15	0	0	15	

Overlap? **N**
 Total Equivalent Vehicles **3,120**
Noise Increase (dBA) **8.6**

Chosen Phase **Building Construction**
 Total Equivalent Vehicles **404**
Noise Increase (dBA) **2.6**

Phase Number	Phase Name	Number of Days
1	Demolition	5
2	Site Preparation	5
3	Grading	15
4	Building Construction	300
5	Paving	10
6	Architectural Coating	20

Speed	MT Factor	HT Factor
25	12.6	39.8
30	8.9	26.3
35	7.1	19.1
40	5.8	15.1
45	5	12.9
50	4.5	11.5
	4.1	10.4
55	3.7	9.6
60	3.5	8.9
65	10.8	23

APPENDIX C

FHWA TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Apple Avenue North of 33rd Street
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street East of Apple Avenue
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 440 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 46.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue

NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 500 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 47.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue South of 33rd Street
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 920 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 690 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 48.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue North of 30th Street
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street West of Florine Avenue
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1570 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street East of Florine Avenue
NOTES: Skilled Nursing Facility Project - Existing

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1210 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Apple Avenue North of 33rd Street
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street East of Apple Avenue
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1160 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue

NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1220 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue South of 33rd Street
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1350 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street

NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 980 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue North of 30th Street
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street West of Florine Avenue
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1860 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Existing With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street East of Florine Avenue
NOTES: Skilled Nursing Facility Project - Existing With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1210 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Apple Avenue North of 33rd Street
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street East of Apple Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 450 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 46.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue

NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 510 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 47.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue South of 33rd Street
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 960 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street

NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 710 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 48.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue North of 30th Street
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street West of Florine Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1630 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 Without Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street East of Florine Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1260 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Apple Avenue North of 33rd Street
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street East of Apple Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1170 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue

NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1230 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue South of 33rd Street
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1390 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street

NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1000 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue North of 30th Street
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street West of Florine Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1920 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

TABLE Year 2027 With Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street East of Florine Avenue
NOTES: Skilled Nursing Facility Project - Year 2027 With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1260 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-01

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Apple Avenue North of 33rd Street
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without
Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-02

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street East of Apple Avenue
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without
Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 570 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 47.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-03

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 630 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 48.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-04

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue South of 33rd Street
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1020 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 50.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-05

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without
Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 890 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 49.93

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-06

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: Florine Avenue North of 30th Street
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without
Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-07

TABLE Cumulative Horizon Year Without

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street West of Florine Avenue
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2200 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

Project-08

TABLE Cumulative Horizon Year Without
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025
ROADWAY SEGMENT: 30th Street East of Florine Avenue
NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year Without
Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1770 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	0.0

01

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Apple Avenue North of 33rd Street

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 180 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 42.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

02

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street East of Apple Avenue

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1290 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 33rd Street Between Apple Avenue and Florine Avenue

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1350 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue South of 33rd Street

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1450 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

05

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue Between 33rd Street and 30th Street

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1180 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: Florine Avenue North of 30th Street

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 15 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 39.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 30th Street West of Florine Avenue

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2490 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	58.5

TABLE Cumulative Horizon Year With Project-

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 05/15/2025

ROADWAY SEGMENT: 30th Street East of Florine Avenue

NOTES: Skilled Nursing Facility Project - Cumulative Horizon Year With Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1770 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 20 SITE CHARACTERISTICS: HARD

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 52.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	0.0