

December 5, 2025

Mr. Travis McGill  
ELMT Consulting, Inc.  
2201 N Grand Ave, Ste #10098  
Santa Ana, CA 92711

**Subject: Pioneertown Mane Street Preservation and Improvement Plan– Noise Impact Study, Pioneertown – County of San Bernardino, CA**

Dear Mr. McGill:

MD Acoustics, LLC (MD) is pleased to provide this noise study and recommendations report as it relates to the proposed Pioneertown Mane Street Preservation and Improvement Plan project located at 53585 Mane Street and 53563 Mane Street (APNs: 0594-391-08, 07, 06), in Pioneertown, County of San Bernardino, CA. This study has been prepared based on the comments from the owner regarding operations at the resort. The project was assessed with regard to potential operations and event noise. For your reference, Appendix A contains a glossary of acoustical terms.

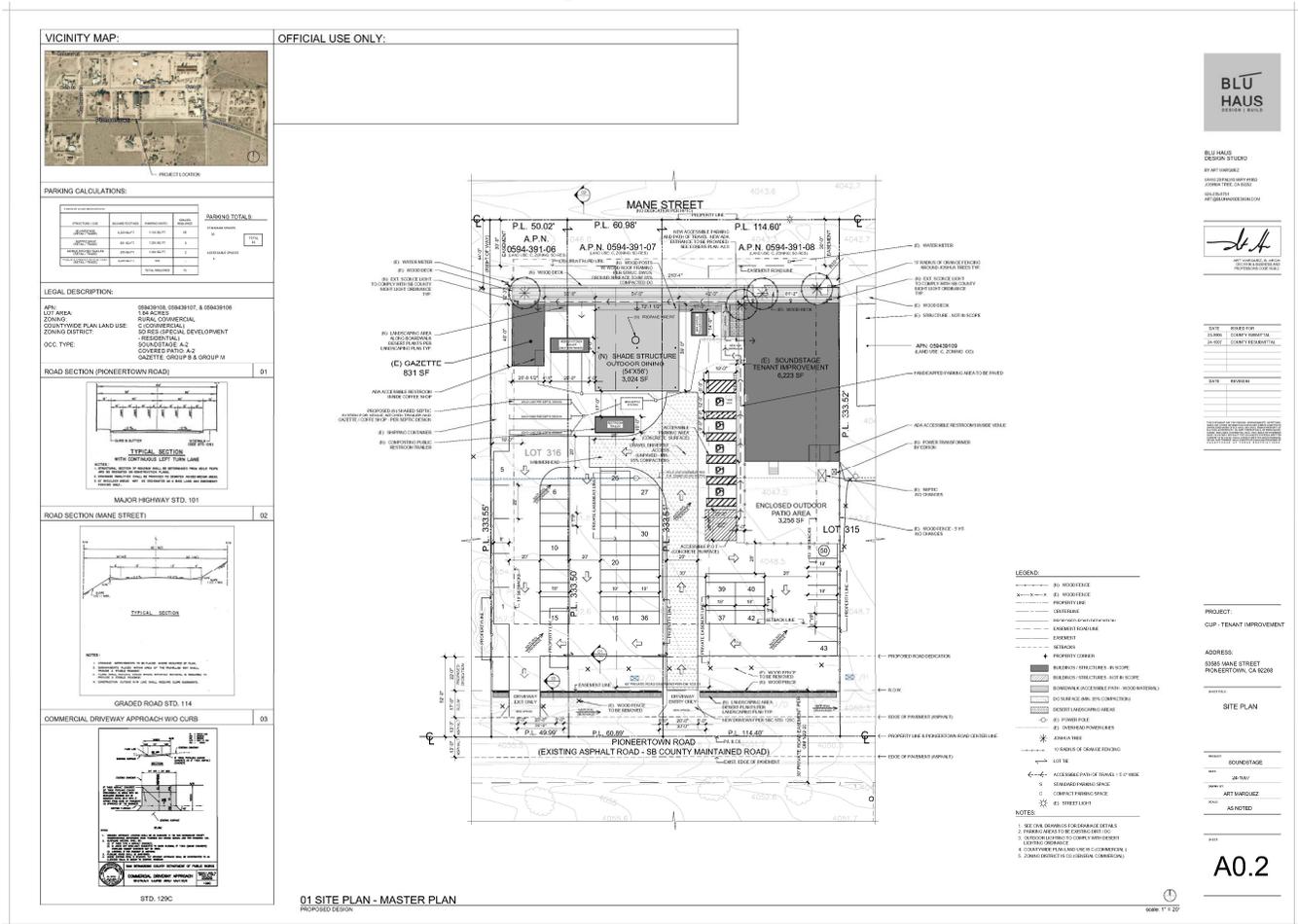
**1.0 Assessment Overview**

This assessment evaluates the Project Noise Levels from the patio and compares the projected noise levels to the local noise regulations. Figure 1 below shows the site location, with a red box around the area under evaluation. MD measured the baseline noise condition and modeled amplified event noise during daytime and nighttime hours.

**Figure 1: Site Location**



Figure 2: Site Plan



Recommendations are provided to ensure that the project operations meet the County’s noise ordinance. MD traveled to the project site and performed a 1-hour measurement to gather the existing condition. The measurement was performed at the patio, which was used to define the existing noise condition at the site. MD utilized Type 1 sound level meters that meet ANSI S1.4 engineering standards to record second-by-second baseline data.

## 2.0 Local Acoustical Requirements

The County of San Bernardino Development Code establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. Section 83.01.080 states the following:

### (c) Noise Standards for Stationary Noise Sources.

- (1) *Noise Standards.* Table 1 (Table 83-2 in the Development Code) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties.

**Table 1: Noise Standards for Stationary Noise Sources**

Affected Land Uses (Receiving Noise)	Noise Level Limit (Leq dBA)	
	7:00 a.m. - 10:00 p.m.	10:00 p.m. - 7:00 a.m.
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70

(2) Noise Limit Categories. No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

1. The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour.
2. The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour.
3. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour.
4. The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.
5. The noise standard plus 20 dB(A) for any period of time.

The noise level due to the proposed event venue will be compared to the standards provided in Table 1. The noise level at the adjacent property lines must not exceed 55 dBA Leq during daytime hours and 45 dBA Leq during nighttime hours for residential uses and 60 dBA Leq for commercial uses.

Per 83.01.080(g)(3), construction noise is exempt from 7AM to 7PM except Sundays and Federal holidays.

### 3.0 Study Method and Procedure

#### Existing Noise Condition/Baseline

One 1-hour measurement was conducted at the project site on April 10, 2024. The project site is surrounded by Pioneertown commercial uses to the north, west, and east, and the vacant residentially zoned property to the south. The results of the noise measurements are presented in Table 2.

**Table 2: Short-Term Noise Measurement Data (dBA)<sup>1</sup>**

Location	Start Time	Stop Time	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(90)
NM1	3:05 PM	4:05 PM	48.1	59.9	31.2	57	54	46.3	42.1	36.8
Notes: 1. Short-term noise monitoring locations are illustrated in Appendix B.										

Noise data indicate that the existing ambient noise level is approximately 48 dBA Leq(h). This includes all the current activity from Pioneertown. This corresponds to a minimum nighttime level of 38 dBA Leq(h). Figure 3 shows the measurement location. Additional field notes and photographs are provided in Appendix B.

**Figure 3: Measurement Location**



### **Stationary Noise Level Prediction Modeling**

SoundPLAN Acoustic Modeling Software (SP) was utilized to model the operational noise levels from the project site. SP acoustical modeling software is capable of evaluating stationary noise sources (e.g., loudspeakers for live events, DJs, parking lots, crowds, loading/unloading, patios, etc.). SP's software utilizes algorithms (based on inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. In addition, SP can model the noise sources as point sources, line sources, and area sources. SP is typically accurate within  $\pm 3$  dB.

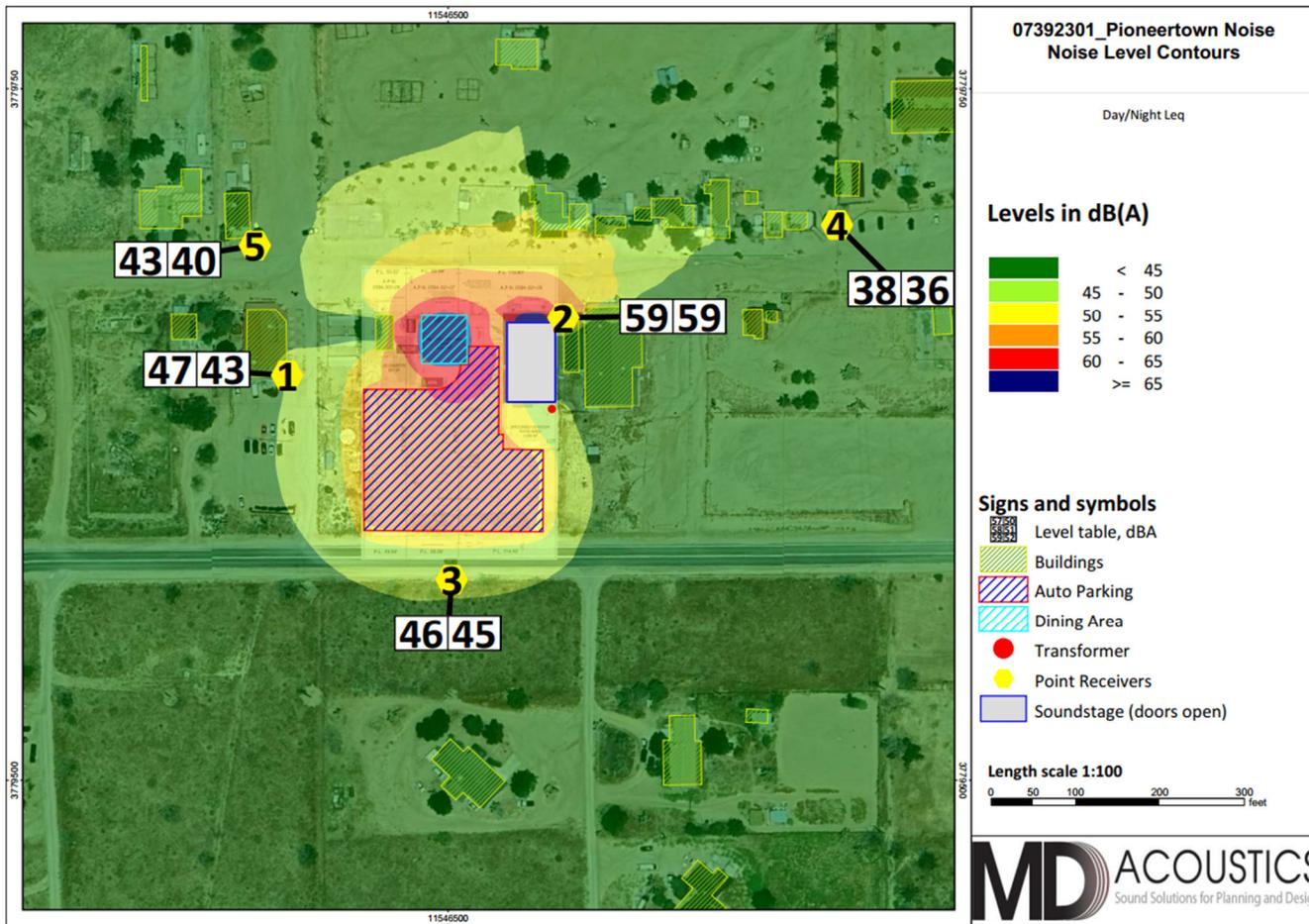
The future worst-case noise level projections were modeled using measured sound level data for the stationary on-site sources. The model incorporates the topography and buildings and shows how sound propagates to the surrounding area.

The model includes SoundPLAN defaults for a night club, dance café with very loud music at 92 dBA Lw on the sound stage, with the doors of the soundstage open at all times. The transformer was modeled as a 25-50kVa transformer running constantly at 40 dBA at 8 feet. The outdoor dining area was modeled for daytime only, as the SoundPLAN defaults for a normal beer garden at 66 dBA per square meter, with the outdoor dining area at maximum capacity. Parking was modeled with SoundPLAN defaults, assuming one parking movement per hour for up to 55 spaces. See Appendix C for the modeling inputs and outputs.

#### 4.0 Findings and Recommendations

MD evaluated the projected project noise and compared it to the existing condition and development code. Receptor 1 represents the commercially zoned bar to the west. Receptor 2 represents the commercially zoned bowling alley to the east. Receptor 3 represents the unoccupied residentially zoned land to the south. Further south of receptor 3 is an occupied residential property. Receptor 4 represents the commercially zoned motel to the northeast. Receptor 5 represents the commercially zoned church to the northwest.

Figure 4: Noise Contours



**Table 3: Worst-case Predicted Day/Night Operational Leq Noise Level**

Receptor <sup>1</sup>	Day/Night Existing Ambient Noise Level (dBA, Leq) <sup>2</sup>	Day/Night Project Noise Level (dBA, Leq) <sup>3</sup>	Day/Night Total Combined Noise Level (dBA, Leq)	Day/Night Exterior Noise Limit (dBA, Leq)	Day/Night Change in Noise Level as Result of Project
1	48/38	47/43	51/44	60/60	3/6
2	48/38	59/59	59/59	60/60	11/21
3	48/38	46/45	50/45	55/45	2/7
4	48/38	38/36	48/40	60/60	0/2
5	48/38	43/40	49/42	60/60	1/4

Notes:  
<sup>1</sup> Receptors 1, 2, 4, and 5 represent adjacent commercial properties. Receptor 3 represents an adjacent vacant residential property.  
<sup>2</sup> See Appendix A for the ambient noise measurement.  
<sup>3</sup> See Figure 4 for the operational noise level projections at said receptors.

All projected noise levels meet the County code for daytime and nighttime noise limits. The commercial noise level is the loudest just east of the soundstage doors, up to 59 dBA Leq during day and night hours. The residentially zoned properties will be up to 46 dBA Leq during the day and 45 dBA Leq at night.

**5.0 Conclusions**

MD is pleased to provide this noise study and recommendations for the proposed Pioneertown Mane Street Preservation and Improvement Plan project located at 53585 Mane Street and 53563 Mane Street.

If you have any questions regarding this analysis, please call our office at (805) 426-4477.

Sincerely,  
 MD Acoustics, LLC



Claire Pincock, INCE-USA  
 Sr. Acoustical Consultant

**Appendix A**  
Glossary of Acoustical Terms

## **Glossary of Terms**

**A-Weighted Sound Level:** The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

**Ambient Noise Level:** The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

**C-Weighted Sound Level:** The sound pressure level in decibels as measured on a sound level meter using the C-weighted filter network. The C-weighting filter greatly de-emphasizes very high frequency components of the sound and slightly de-emphasizes the very low frequency components. A numerical method of rating human judgment of loudness.

**Community Noise Equivalent Level (CNEL):** The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

**Decibel (dB):** A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

**dB(A):** A-weighted sound level (see definition above).

**dB(C):** C-weighted sound level (see definition above).

**dB(Z):** Z-weighted sound level (see definition of dB above).

**Equivalent Sound Level (LEQ):** The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

**Habitable Room:** Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

**Human Sensitivity to Sound:** In general, the healthy human ear can hear between 20 Hz to 20,000 Hz. Frequencies below 125 Hz are typically associated with low frequencies or bass. Frequencies between 125 Hz and 5,000 Hz are typically associated with mid-range tones. Finally, frequencies between 5,000 and 20,000Hz are typically associated with higher range tones.

The human ear is sensitive to changes in noise levels, depending on the frequency. Generally speaking, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (A-weighted scale) and perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. At lower and higher frequencies, the ear can become less sensitive depending on a number of factors. Table 1 provides a brief summary of how humans perceive changes in noise levels.

**Table 1: Change in Noise Level Characteristics<sup>1</sup>**

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

[https://www.fhwa.dot.gov/Environment/noise/regulations\\_and\\_guidance/polguide/polguide02.cfm](https://www.fhwa.dot.gov/Environment/noise/regulations_and_guidance/polguide/polguide02.cfm)

**L(n):** The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90 and L99, etc.

**Noise:** Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

**Percent Noise Levels:** See L(n).

**Sound Level (Noise Level):** The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

**Sound Level Meter:** An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

**Single Event Noise Exposure Level (SENEL):** The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

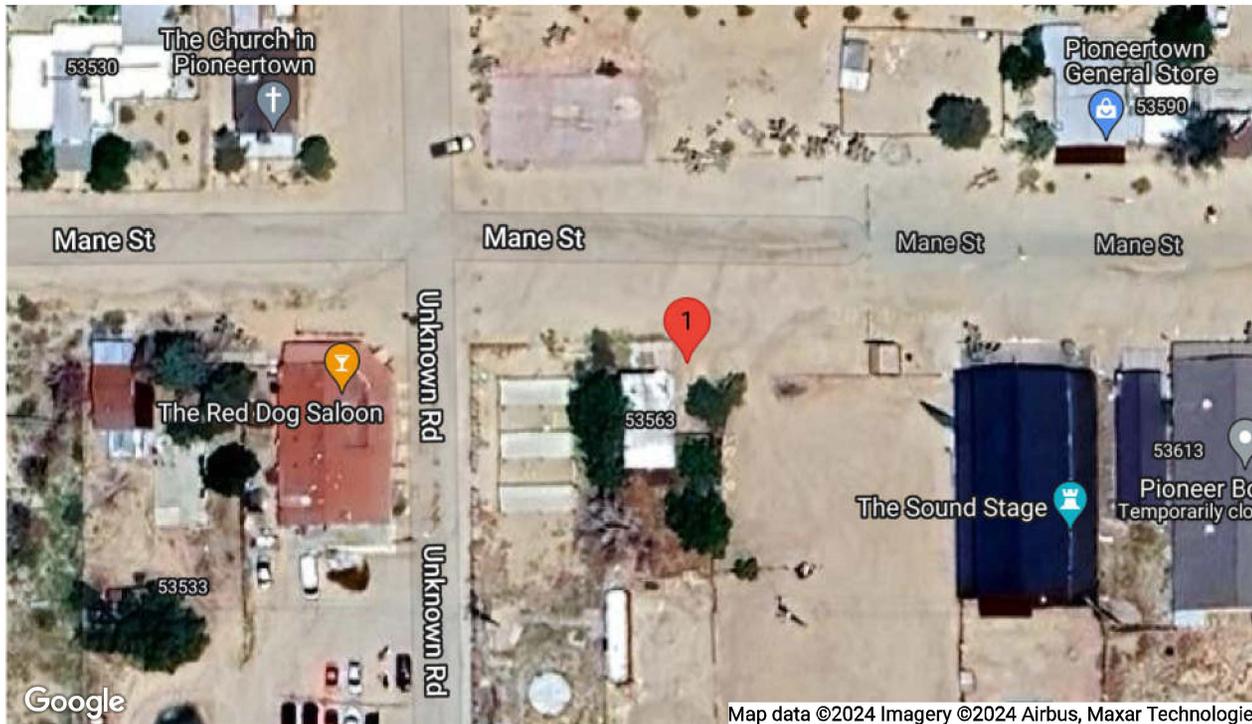
**Appendix B**  
Field Sheets

### 1-Hour Noise Measurement Datasheet

**Project Name:** Pioneertown Noise  
**Project: #/Name:** 0739-2023-001  
**Site Address/Location:** 53585 Mane Street  
**Date:** 04/10/2024  
**Field Tech/Engineer:**

**Site Observations:**  
73F clear skies, winds 2 MPH. Small Shops, with Tourists walking in small groups, music from the Saloon and farm animals. Please note at one point a bird fight broke out in the tree above the meter, I did not note of the time.

**Sound Meter:** XL2, NT1                      **SN:** A2A-08562-E0  
**Settings:** A-weighted, slow, 1-sec, 1-hour interval  
**Site Id:** NM1



**1-Hour Noise Measurement Datasheet - Cont.**

**Project Name:** Pioneertown Noise  
**Site Address/Location:** 53585 Mane Street  
**Site Id:** NM1

Figure 1: NM1



Figure 2: NM1



Figure 3: NM1

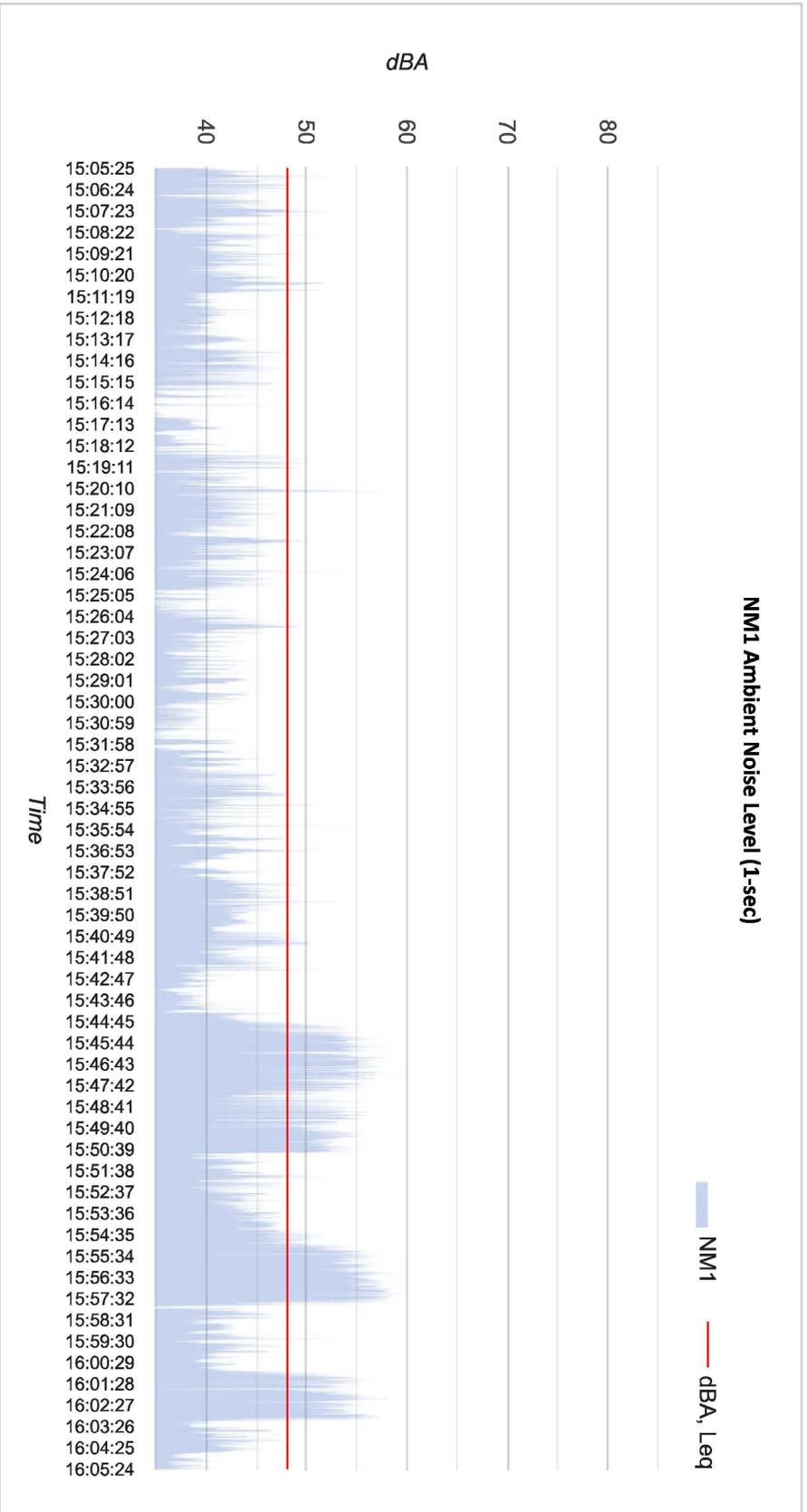


Table 1: Baseline Noise Measurement Summary

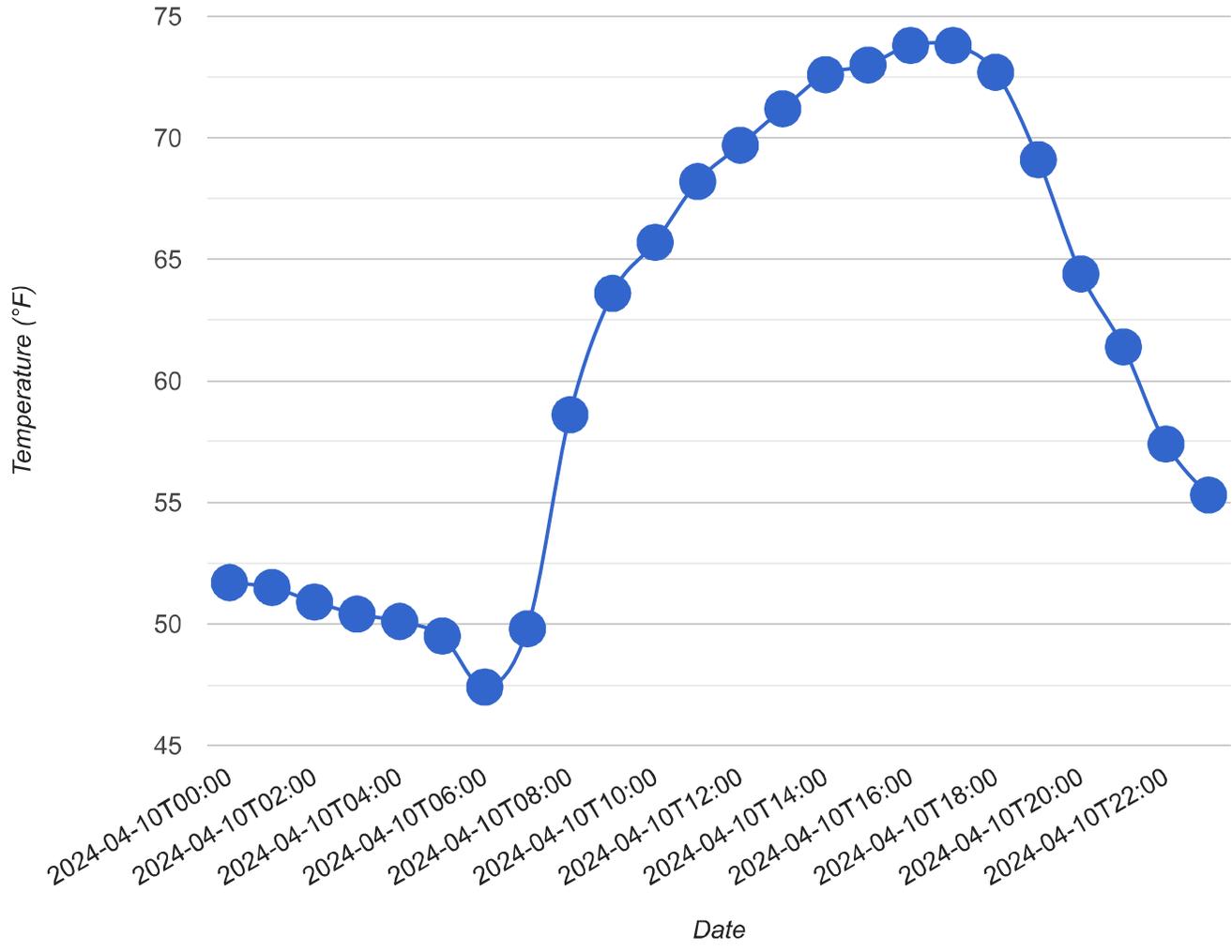
Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
NM1	3:05 PM	4:05 PM	48.1	59.9	31.2	57	54	46.3	42.1	36.8

1-Hour Noise Measurement Datasheet - Cont.

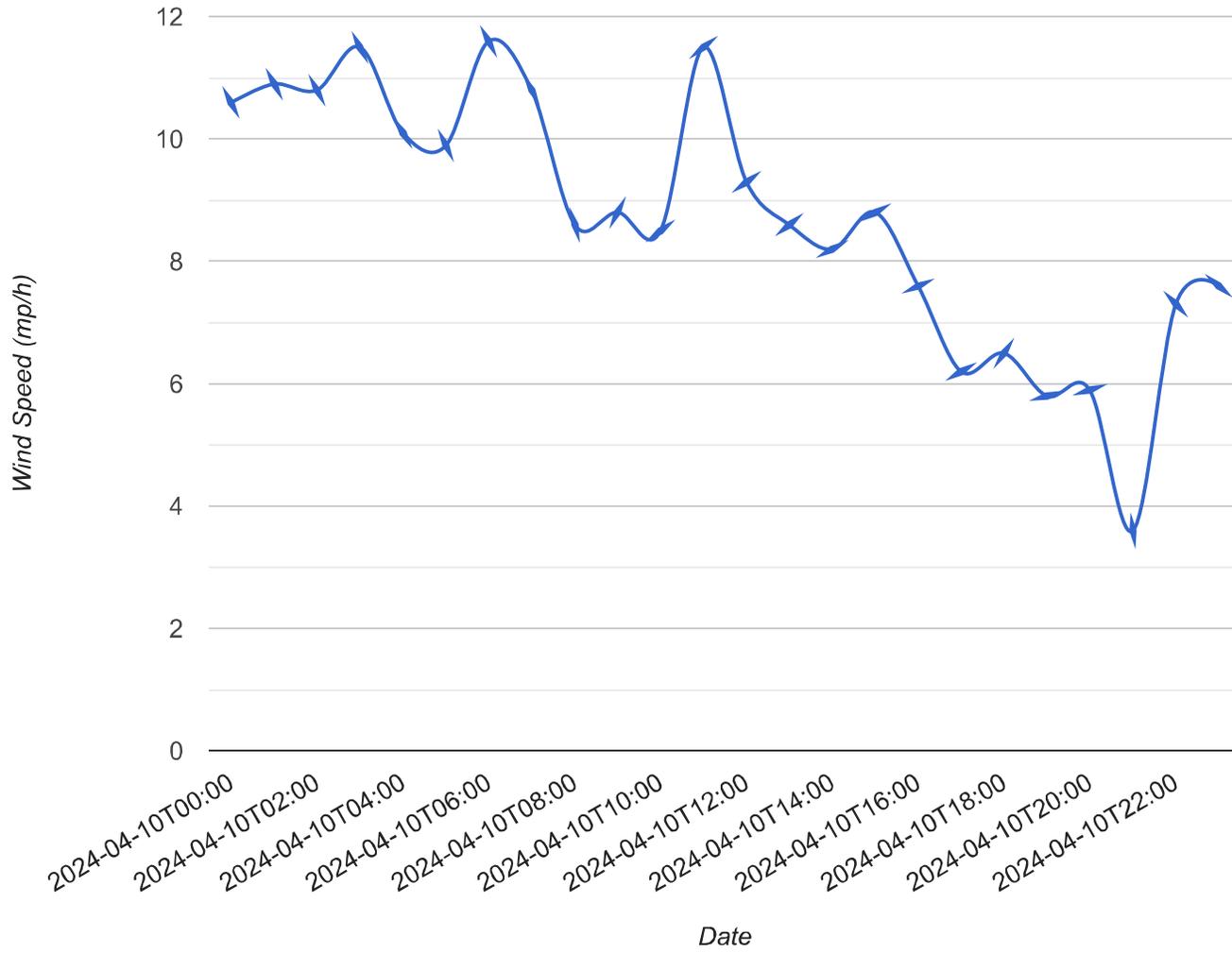
<b>Project Name:</b>	Pioneertown Noise	<b>Site Topo:</b>	Buildings 1-2 stories tall site	<b>Noise Source(s) w/ Distance:</b>	Tourists, traffic, and Saloon Noise
<b>Site Address/Location:</b>	53585 Mane Street	<b>Meteorological Cond.:</b>	73F Clear Skys Winds 0-2MPH		
<b>Site Id:</b>	NM1	<b>Ground Type:</b>	Sandy soil and clay		



**Weather forecast for 2024-04-10**



### Wind speed and directions for 2024-04-10



Source: Global Forecast System (GFS) weather forecast model

**Appendix C**  
SoundPLAN Inputs/Outputs

**Pioneertown Noise  
Contribution level - 001 - Pioneer Town: Outdoor SP**

**9**

Source	Source ty	Leq,d dB(A)	Leq, n dB(A)	
<b>Receiver R1 FI G Leq,d 47 dB(A) Leq, n 43 dB(A)</b>				
Outdoor Dining	Area	44.9		
Auto Parking	PLot	43.3	43.3	
Industrial building, room 1-Transmissive area 01	Area	19.1	19.1	
Transformer	Point	7.3	7.3	
<b>Receiver R2 FI G Leq,d 59 dB(A) Leq, n 59 dB(A)</b>				
Industrial building, room 1-Transmissive area 01	Area	59.3	59.3	
Outdoor Dining	Area	43.2		
Auto Parking	PLot	29.3	29.3	
Transformer	Point	10.1	10.1	
<b>Receiver R3 FI G Leq,d 46 dB(A) Leq, n 45 dB(A)</b>				
Auto Parking	PLot	45.4	45.4	
Outdoor Dining	Area	39.5		
Industrial building, room 1-Transmissive area 01	Area	22.0	22.0	
Transformer	Point	10.3	10.3	
<b>Receiver R4 FI G Leq,d 38 dB(A) Leq, n 36 dB(A)</b>				
Industrial building, room 1-Transmissive area 01	Area	35.5	35.5	
Outdoor Dining	Area	33.9		
Auto Parking	PLot	24.2	24.2	
Transformer	Point	-3.2	-3.2	
<b>Receiver R5 FI G Leq,d 43 dB(A) Leq, n 40 dB(A)</b>				
Outdoor Dining	Area	39.6		
Industrial building, room 1-Transmissive area 01	Area	38.9	38.9	
Auto Parking	PLot	35.1	35.1	
Transformer	Point	-9.5	-9.5	

## Pioneertown Noise

### Octave spectra of the sources in dB(A) - 001 - Pioneer Town: Outdoor SP

**3**

Name	Source type	I or A m,m <sup>2</sup>	Li dB(A)	Rw dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Day histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)
Auto Parking	PLot	3176.88			54.6	89.6	0.0	0.0		0	100%/24h	Typical spectrum	72.9	84.5	77.0	81.5	81.6	82.0	79.3
Industrial building, room 1-Transmissive area 01	Area	69.84	72.4	0.0	69.4	87.8	0.0	0.0		3	100%/24h	219_Transmissive area 01_	57.8	67.8	74.6	80.3	82.2	82.0	80.4
Outdoor Dining	Area	286.54			66.0	90.6	0.0	0.0		0	Day only	Beer garden, normal				90.6			
Transformer	Point				57.0	57.0	0.0	0.0		0	100%/24h			57.0					

**SCOPE**

This design standard provides minimum separation distances between padmount transformers and window openings in adjacent buildings to ensure that the sound level at the window opening is within the sound level guidelines established by the City and County of San Diego, or other AHJ for the premise.

**DEFINITIONS**

- **Window Opening** – An opening in the building’s exterior wall (such as a window that will open or a sliding glass door) that permits transformer noise to radiate inward to an occupied space such as a living room, bedroom, office, etc.
- **AHJ** - Authority Having Jurisdiction for codes/ordinances at the premise.

**CRITERIA**

Table 1 provides the minimum separation required between a transformer and a window/door opening. The distance is dependent upon allowable noise, expressed in decibels (dB), established in Table 2.

TABLE 1: TRANSFORMER SEPARATION (V)								
ULTIMATE TRANSFORMER			ALLOWABLE NOISE PERMITTED (ONE-HOUR AVERAGE SOUND LEVEL – DECIBELS)					
			40	45	50	55	60	
SIZE	TYPE	PRIMARY CONNECTION	DISTANCE (FT)					
25–50 kVA	1 Phase	2.4, 6.9 kV	8	5	3	-	-	-
75–100 kVA	1 Phase	2.4, 6.9 kV	11	7	4	3	-	-
25–50 kVA	1 Phase	4, 12 kV	8	5	3	-	-	-
75–100 kVA	1 Phase	4, 12 kV	12	7	4	3	-	-
167 kVA	1 Phase	12 kV	19	11	5	4	3	3
250kVA <sup>(III)</sup>	1 Phase	12 kV	21	12	7	5	3	3
75 kVA	3 Phase	4, 12 kV	18	11	7	4	3	3
150 kVA	3 Phase	4, 12 kV	28	16	9	6	4	4
225-300 kVA	3 Phase	4, 12 kV	30	17	9	6	4	4
500 kVA	3 Phase	4, 12 kV	34	20	12	7	4	4
750 kVA	3 Phase	12 kV	43	25	14	8	5	5
1000 kVA	3 Phase	12 kV	50	29	17	10	6	6
1500 kVA	3 Phase	12 kV	64	36	21	12	7	7
2000 kVA	3 Phase	12 kV	77	43	25	14	9	9
2500 kVA	3 Phase	12 kV	86	49	28	16	9	9
3000 kVA	3 Phase	12 kV	104	59	34	19	11	11

TABLE 2: ALLOWABLE NOISE PERMITTED	
LAND USE ZONING CLASSIFICATION	NOISE <sup>(I)</sup>
Single-Family Residential	40 dB
Multi-Family Residential (Up to a Maximum Density of 1:2000)	45 dB
All Other Residential	50 dB
Commercial	60 dB
Industrial or Agricultural (Any time of the day)	75 dB <sup>(II)</sup>

- (I) Per Article 9.5: Noise Abatement and Control, Division 4: Limits, San Diego Municipal Code (12-2019), based on most restrictive time of day. For AHJ with ordinances that differ from Table 2, their requirements shall apply.
- (II) All SDG&E distribution transformers meet the 75dB requirement at normal distances per Design Manual.
- (III) Deviation request required for 250kVA one phase padmount. Special order item.

© 1998 - 2025 San Diego Gas & Electric Company. All rights reserved. Removal of this copyright notice without permission is not permitted under law.

REV	CHANGE	DR	BY	DSN	APV	DATE	REV	CHANGE	DR	BY	DSN	APV	DATE
C	Editorial Changes	EPC	KNM	FRC	CZH	12/06/2021	F						
B	Editorial Changes		SL	JE	MDJ	08/25/2017	E						
A	Table Updates		SL	JE	MDJ	02/25/2017	D	DM Major Revisions	YZZ	CWB	FRC	KRG	04/07/2025

<p><b>SHEET</b> 1 of 2</p>	Indicates Latest Revision	X	Completely Revised	New Page	Information Removed	<p>DM5612.1</p>
	SDG&E ELECTRIC DISTRIBUTION DESIGN MANUAL					
	TRANSFORMER NOISE CRITERIA					