

Appendix G: Noise Supporting Information

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Project Number: _____

Sheet ____ of ____

Project Name: _____

Test Personnel: _____

NOISE MEASUREMENT SURVEY

Site Number: _____ Date: _____ Time: From _____ To _____

Site Location: _____

Primary Noise Sources: _____

Measurement Results

	dBA
L _{eq}	
L _{max}	
L _{min}	
L _{peak}	
L ₅	
L ₁₀	
L ₅₀	
L ₉₀	
L _{dn}	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA

Comments: _____

Equipment: _____

Measured Difference: _____ dBA

Settings: A-Weighted ☐ Other ☐ _____

Slow ☐ Fast ☐

Windscreen ☐

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
Comments:				



Photos Taken:

Photo Number	Location/Description

Traffic Description:

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts

Diagram/Further Comments:



LARSON DAVIS

A PCB DIVISION

SoundExpert 821 Summary:2024-10-29 09:50:38

User:

Location:

Job Description:

Notes:

Meter General Information

	Model	Serial
Meter	SoundExpert 821	40400
Preamplifier	PRM821	
Microphone	377B02	
Unique File Id	00C:00009DD0:671A6CC7:00000512	

Overall Measurement

Start Date & Time	2024-10-24 15:50:31		
Stop Date & Time	2024-10-25 16:35:32		
Run Time	24:45:01.00		
Pre-Calibration			
Date/Time	2024-10-24 15:48:44		
Calibrator Level	114.00 dB		
Meter Sensitivity	-25.65 dB re 1V/Pa		
Post-Calibration			
Date/Time	---		
Calibrator Level	---		
Meter Sensitivity	---		
Sensitivity Delta	---		
	A	C	Z
Lweq	65.5	72.0	75.8
Lwpk	121.5 dB	138.7 dB	142.7 dB
	2024-10-24 15:50:49	2024-10-24 15:50:49	2024-10-24 15:50:49
LwSmin	37.1 dB	52.1 dB	57.1 dB
	2024-10-25 13:09:26	2024-10-24 17:16:29	2024-10-25 01:38:50
LwFmin	36.6 dB	50.0 dB	54.6 dB
	2024-10-25 13:09:25	2024-10-24 17:16:28	2024-10-24 17:16:28
Lwlmin	37.8 dB	54.6 dB	60.0 dB
	2024-10-25 13:09:26	2024-10-24 17:16:29	2024-10-25 01:26:07
LwSmax	93.3 dB	114.9 dB	121.5 dB
	2024-10-24 15:50:49	2024-10-24 15:50:49	2024-10-24 15:50:49
LwFmax	101.6 dB	123.4 dB	128.8 dB
	2024-10-24 15:50:49	2024-10-24 15:50:49	2024-10-24 15:50:49
Lwlmax	106.1 dB	127.4 dB	132.9 dB
	2024-10-24 15:50:49	2024-10-24 15:50:49	2024-10-24 15:50:49

w = frequency weighting (A, C or Z)

Community Noise	LDN	LDay (07:00-22:00)	LNight (22:00-07:00)	
	66.7 dB	67.3 dB	55.4 dB	
	LDEN	LDay (07:00-19:00)	LEve (19:00-22:00)	LNight (22:00-07:00)
	67.0 dB	68.0 dB	61.3 dB	55.4 dB
LCeq - LAeq	6.4 dB			
LAeq	69.0 dB			
Overload Count	0			
Overload Duration	00:00:00			
	A	C	Z	
Under Range Peak	50.0 dB	50.0 dB	62.0 dB	
Under Range Limit	24.0 dB	27.0 dB	37.0 dB	
Noise Floor	17.0 dB	18.0 dB	25.0 dB	

Ln Percentiles

LAS 5.0	69.8 dB
LAS 10.0	66.0 dB
LAS 33.3	59.4 dB
LAS 50.0	56.7 dB
LAS 66.6	54.7 dB
LAS 90.0	50.9 dB

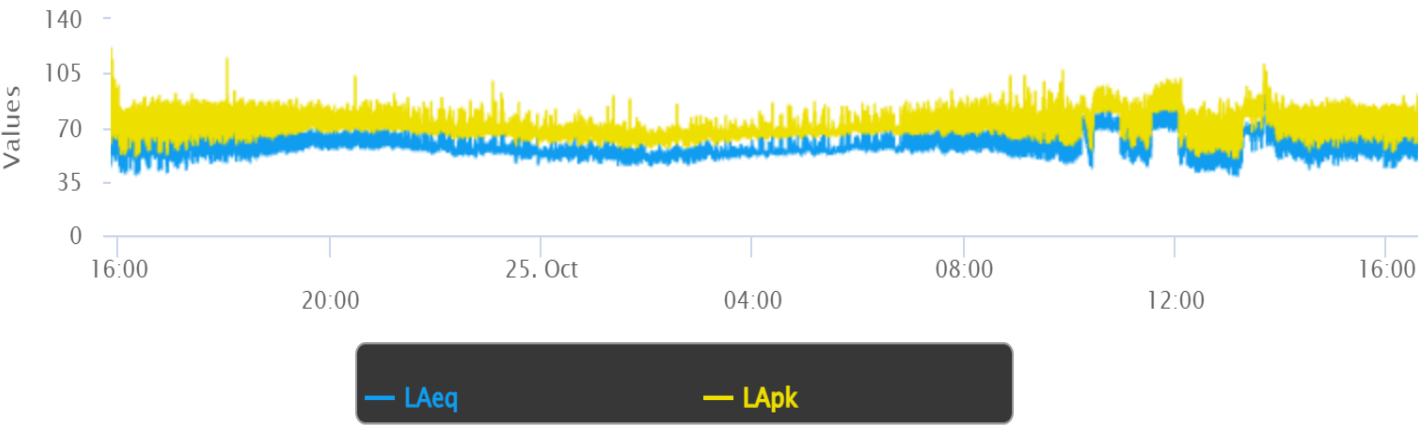
Exceedances

	Count	Duration
LAS > 85 dB	9	212
LAS > 95 dB	0	0
LCpk > 135 dB	1	1
LCpk > 137 dB	1	1
LCpk > 140 dB	0	0

Sound Exposure

SELA	115.0 dB
EA (Pa²s)	127.2 Pa²s
EA,8 h (Pa²s)	41.1 Pa²s
EA,40 h (Pa²s)	205.5 Pa²s
EA (Pa²h)	0.0 Pa²h
EA,8 h (Pa²h)	0.0 Pa²h
EA,40 h (Pa²h)	0.1 Pa²h

Time History



Mobile Construction Activity Noise Calculation

Receptor:		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 50 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy
No.	Equipment Description	Lmax						Lmax	Leq	
1	Grader	85	1	40	100	1	0	79.0	72.0	15811388.3
2	Excavator	85	1	40	150	1	0	75.5	66.7	4684855.793
3	Dozer	85	1	40	150	1	0	75.5	66.7	4684855.793
4	Front End Loader	80	1	40	200	1	0	68.0	58.0	625000
5	Backhoe	80	1	40	200	1	0	68.0	58.0	625000
6										
7										
8										
9										
10										
Notes:								Lmax[4]	79	Leq 74

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures

[4] Calculated Lmax is the Loudest value.

Residential-Grade Mechanical Equipment

Receptor:	Nearest Residential Receptor	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 3 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy
No.	Equipment Description	Lmax						Lmax	Leq	
1	Residential grade mechanical ventilation equipment	70	1	80	160	1	0	35.5	17.2	52.734375
2	Residential grade mechanical ventilation equipment	70	1	80	275	1	0	30.8	10.2	10.38617581
3										
4										
5										
6										
7										
8										
9										
10										
Notes:									Leq	18

[1] Percentage of time activity occurs each hour
[2] Soft ground terrain between project site and receptor.
[3] Shielding due to structural/soundwall shielding