Appendix E

Noise Technical Modeling

NOISE RECEPTOR & MEASUREMENT LOCATION MAP

Winnetka Project

Imagery via Google

Measurement Report

Report Summary

Meter's File Name	831_Data.043.s	Computer's File Name	831_0001371-20210831 120902-831_Data.043.ldbin
Meter	831 0001371		
Firmware	2.314		
User		Location	1. PRAIRIE ST NORTH OF PROJECT
Job Description	Winnetka Project		
Note			

Start Time	2021-08-31 12:09:02	Duration	0:15:00.0		
End Time	2021-08-31 12:24:02	Run Time	0:15:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	61.0 dB		
LAE	90.5 dB	SEA	--- dB
EA	125.7 µPa²h		
LZ_{peak}	113.2 dB	2021-08-31 12:09:11	
LAS_{max}	76.8 dB	2021-08-31 12:20:06	
LAS_{min}	38.5 dB	2021-08-31 12:22:13	
LA_{eq}	61.0 dB		
LC_{eq}	62.2 dB	LC_{eq} - LA_{eq}	1.2 dB
LAI_{eq}	64.6 dB	LAI_{eq} - LA_{eq}	3.6 dB

Exceedances

Exceedances	Count	Duration
LAS > 65.0 dB	24	0:01:31.9
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
61.0 dB	61.0 dB	0.0 dB	
LDEN	**LDay**	**LEve**	**LNight**
61.0 dB	61.0 dB	--- dB	--- dB

Any Data

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	61.0 dB		62.2 dB		70.9 dB	
$Ls_{(max)}$	76.8 dB	2021-08-31 12:20:06	86.9 dB	2021-08-31 12:09:11	97.4 dB	2021-08-31 12:09:12
$LF_{(max)}$	81.5 dB	2021-08-31 12:09:11	94.8 dB	2021-08-31 12:09:11	102.3 dB	2021-08-31 12:09:11
$LI_{(max)}$	85.8 dB	2021-08-31 12:09:11	98.4 dB	2021-08-31 12:09:11	106.5 dB	2021-08-31 12:09:11
$LS_{(min)}$	38.5 dB	2021-08-31 12:22:13	38.5 dB	2021-08-31 12:21:29	42.6 dB	2021-08-31 12:21:19
$LF_{(min)}$	38.0 dB	2021-08-31 12:22:08	37.7 dB	2021-08-31 12:22:05	39.9 dB	2021-08-31 12:21:34
$LI_{(min)}$	38.1 dB	2021-08-31 12:22:12	38.3 dB	2021-08-31 12:21:25	42.5 dB	2021-08-31 12:11:44
$L_{Peak(max)}$	107.8 dB	2021-08-31 12:09:11	111.6 dB	2021-08-31 12:09:11	113.2 dB	2021-08-31 12:09:11

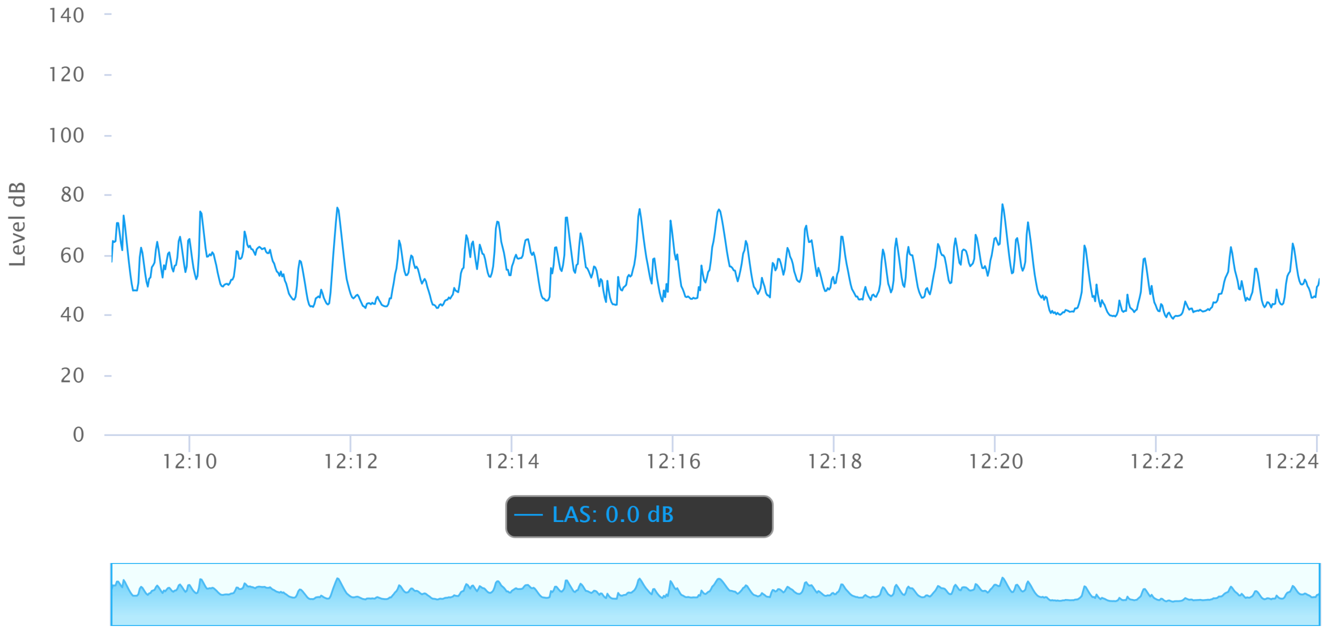
Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	66.6 dB
LAS 10.0	63.8 dB
LAS 33.3	56.7 dB
LAS 50.0	52.7 dB
LAS 66.6	48.0 dB
LAS 90.0	42.7 dB

Time History



Measurement Report

Report Summary

Meter's File Name	831_Data.044.s	Computer's File Name	831_0001371-20210831 122733-831_Data.044.ldbin
Meter	831 0001371		
Firmware	2.314		
User		Location	2. NEAR THE 24 RESIDENCES
Job Description	Winnetka Project		
Note			

Start Time	2021-08-31 12:27:33	Duration	0:15:00.0		
End Time	2021-08-31 12:42:33	Run Time	0:15:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	60.9 dB		
LAE	90.5 dB	SEA	--- dB
EA	123.5 µPa²h		
LZ_{peak}	90.9 dB	2021-08-31 12:33:58	
LAS_{max}	76.4 dB	2021-08-31 12:33:59	
LAS_{min}	46.6 dB	2021-08-31 12:29:28	
LA_{eq}	60.9 dB		
LC_{eq}	59.4 dB	LC_{eq} - LA_{eq}	-1.5 dB
LAI_{eq}	62.6 dB	LAI_{eq} - LA_{eq}	1.7 dB

Exceedances

Exceedances	Count	Duration
LAS > 65.0 dB	16	0:01:58.9
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
60.9 dB	60.9 dB	0.0 dB	
LDEN	**LDay**	**LEve**	**LNight**
60.9 dB	60.9 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.9 dB		59.4 dB		62.3 dB	
$Ls_{(max)}$	76.4 dB	2021-08-31 12:33:59	74.7 dB	2021-08-31 12:33:59	75.8 dB	2021-08-31 12:33:59
$LF_{(max)}$	78.6 dB	2021-08-31 12:33:59	77.0 dB	2021-08-31 12:33:59	78.2 dB	2021-08-31 12:33:59
$LI_{(max)}$	79.7 dB	2021-08-31 12:33:58	78.0 dB	2021-08-31 12:33:58	79.1 dB	2021-08-31 12:31:59
$LS_{(min)}$	46.6 dB	2021-08-31 12:29:28	45.1 dB	2021-08-31 12:29:28	48.9 dB	2021-08-31 12:29:27
$LF_{(min)}$	45.1 dB	2021-08-31 12:29:28	43.8 dB	2021-08-31 12:29:28	45.8 dB	2021-08-31 12:29:26
$LI_{(min)}$	45.5 dB	2021-08-31 12:29:28	44.2 dB	2021-08-31 12:29:28	48.3 dB	2021-08-31 12:29:26
$L_{Peak(max)}$	90.9 dB	2021-08-31 12:33:58	89.6 dB	2021-08-31 12:33:58	90.9 dB	2021-08-31 12:33:58

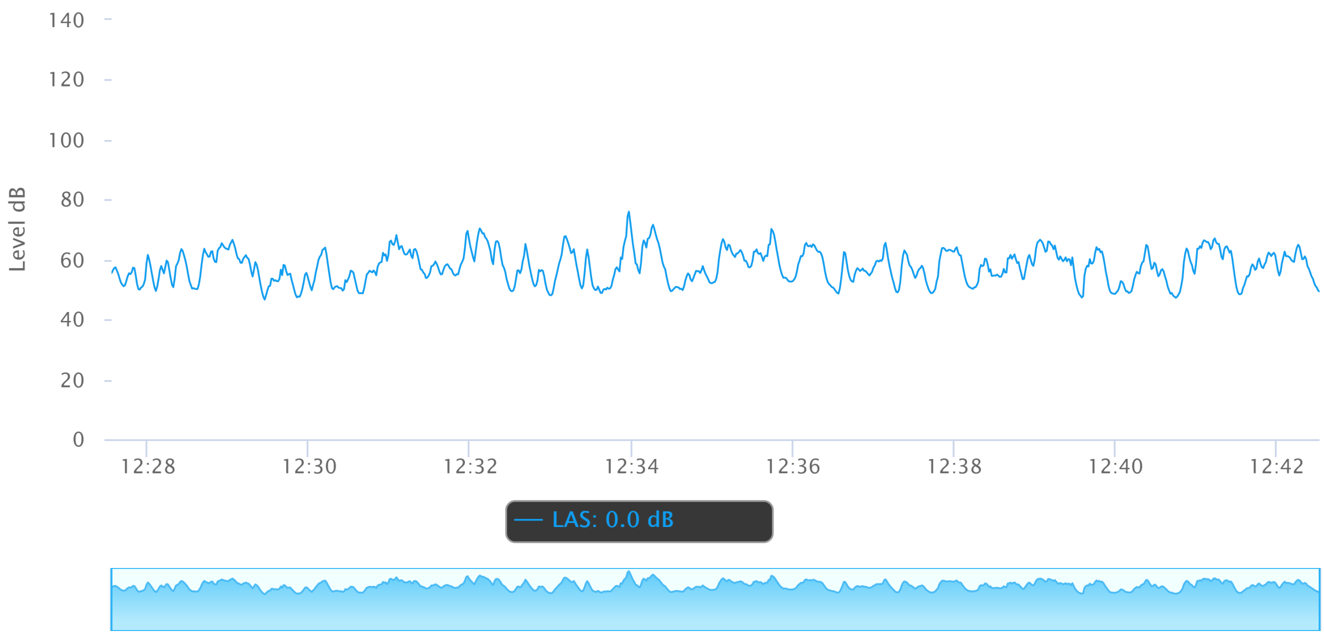
Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	66.1 dB
LAS 10.0	64.7 dB
LAS 33.3	60.3 dB
LAS 50.0	57.3 dB
LAS 66.6	54.9 dB
LAS 90.0	50.2 dB

Time History



The 24 Residences: Scenario 1

Ambient Noise Level:	60.9 dBA Leq
Distance:	n/a feet

UNMITIGATED

Building 1 Grading - Unmitigated

Equipment Noise Levels

Equipment	Noise Level at Receptor - dBA Leq	Usage %	Adjusted Noise Level - dBA Leq
Grader at 875ft	53.6	0.4	49.6
Bulldozer at 875ft	55.1	0.4	51.1
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	53.4

Noise Impact

Equipment Noise Level	53.4 dBA Leq
Total Shielding (existing buildings)	0 dBA
Ground Factor	0
Distance (n/a per calculations)	50 ft
Unmitigated Construction Noise Level	**53.4 dBA Leq**

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Building 2 Panel Installation - Unmitigated

Equipment Noise Levels

Equipment	Noise Level at Receptor - dBA Leq	Usage %	Adjusted Noise Level - dBA Leq
Truck-Mounted Crane at 500ft	54.2	0.16	46.2
Loader at 500ft	52.4	0.4	48.4
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	50.5

Noise Impact

Combined Equipment Noise Level	50.5 dBA Leq
Total Shielding (existing buildings)	0 dBA
Ground Factor	0
Distance (n/a per calculations)	50 ft
Unmitigated Construction Noise Level	**50.5 dBA Leq**

Building 3 Steelwork - Unmitigated

Equipment Noise Levels

Equipment	Noise Level at Receptor - dBA Leq	Usage %	Adjusted Noise Level - dBA Leq
Truck-Mounted Crane at 500ft	54.2	0.16	46.2
Loader at 500ft	52.4	0.4	48.4
Welding Tools at 500ft	51.2	0.4	47.2
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	53.4

Noise Impact

Combined Equipment Noise Level	53.4	dBA Leq
Total Shielding (existing buildings)	0	dBA
Ground Factor	0	
Distance (n/a per calculations)	50	ft
Unmitigated Construction Noise Level	**53.4**	**dBA Leq**

Combined Noise Impact - Unmitigated

Building 1 Grading Noise Level	53.4	dBA Leq
Building 2 Panel Installation Noise Level	50.5	dBA Leq
Building 3 Steelwork Noise Level	53.4	dBA Leq
Combined Equipment Noise Level	57.4	dBA Leq
Ambient Noise Level	60.9	dBA
New Noise Level	62.5	dBA Leq
Unmitigated Noise Increase	**1.6**	**dBA**

The 24 Residences: Scenario 2

Ambient Noise Level:	60.9 dBA Leq
Distance:	n/a feet

UNMITIGATED

Building 2 Grading - Unmitigated

Equipment Noise Levels

Equipment	Noise Level at Receptor - dBA Leq	Usage %	Adjusted Noise Level - dBA Leq
Grader at 500ft	58.5	0.4	54.5
Bulldozer at 500ft	60.0	0.4	56.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	58.3

Noise Impact

Equipment Noise Level	58.3 dBA Leq
Total Shielding (existing buildings)	0 dBA
Ground Factor	0
Distance (n/a per calculations)	50 ft
Unmitigated Construction Noise Level	**58.3 dBA Leq**

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Building 3 Concrete Pouring - Unmitigated

Equipment Noise Levels

Equipment	Noise Level at Receptor - dBA Leq	Usage %	Adjusted Noise Level - dBA Leq
Concrete Mixing Truck at 500ft	61.1	0.4	57.1
Concrete Pump Truck at 500ft	63.5	0.4	59.5
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	61.5

Noise Impact

Combined Equipment Noise Level	61.5 dBA Leq
Total Shielding (existing buildings)	0 dBA
Ground Factor	0
Distance (n/a per calculations)	50 ft
Unmitigated Construction Noise Level	**61.5 dBA Leq**

Combined Noise Impact - Unmitigated

Building 2 Grading Noise Level	58.3 dBA Leq
Building 3 Concrete Pouring Noise Level	61.5 dBA Leq
Combined Equipment Noise Level	63.2 dBA Leq
Ambient Noise Level	60.9 dBA
New Noise Level	65.2 dBA Leq
Unmitigated Noise Increase	**4.3 dBA**