INITIAL STUDY

APPENDIX I: NOISE DATA

Table A

Construction Noise by Phase Without PDFs- Receptors North of the Project Site (NM1)

A	B	C	D	E	F	G	H	I
Equipment Type	# of Equipment	Equipment Lmax at 50 feet, dBA[1, 2]	Distance to Receptor[3]	Equipment Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Noise Level Leq (dBA) at Receptor
Demolition								
Concrete/Industrial Saw	1	89.6	220	20	0.20	-12.9	-7.0	69.7
Rubber Tired Dozers	1	82	220	40	0.40	-12.9	-4.0	65.2
Excavator	3	81	220	40	1.20	-12.9	0.8	68.9
							Log Sum	73.1
Excavation								
Excavator	2	81	220	40	0.80	-12.9	-1.0	67.2
Rubber Tired Dozers	3	82	220	40	1.20	-12.9	0.8	69.9
Tractors/Loaders/Backhoes	4	79	220	25	1.00	-12.9	0.0	66.1
							Log Sum	71.8
Foundation								
Bore/Drill Rig	2	79	220	20	0.40	-12.9	-4.0	62.2
Aerial Lift	2	75	220	20	0.40	-12.9	-4.0	58.2
Forklifts	4	64	220	50	2.00	-12.9	3.0	54.1
Welders	1	73	220	40	0.40	-12.9	-4.0	56.2
Cranes	1	81	220	16	0.16	-12.9	-8.0	60.2
Concrete Pumps	4	81	220	20	0.80	-12.9	-1.0	67.2
							Log Sum	69.6
Building Construction								
Cranes	1	81	220	16	0.16	-12.9	-8.0	60.2
Forklifts	3	64	220	50	1.50	-12.9	1.8	52.9
Generator Sets	1	81	220	40	0.40	-12.9	-4.0	64.2
Welders	1	73	220	40	0.40	-12.9	-4.0	56.2
Tractors/Loaders/Backhoes	3	79	220	25	0.75	-12.9	-1.2	64.9
							Log Sum	68.6
Paving								
Pavers	1	77	220	50	0.50	-12.9	-3.0	61.1
Paving Equipment	1	85	220	20	0.20	-12.9	-7.0	65.1
Rollers	1	80	220	20	0.20	-12.9	-7.0	60.1
							Log Sum	67.5
Architectural Coating								
Aerial Lift	1	75	220	20	0.20	-12.9	-7.0	55.1
Air Compressors	1	78	220	40	0.40	-12.9	-4.0	61.2
							Log Sum	62.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018).

(2) Source: https://www.google.com/url?q=http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/&sa=D&source=hangouts&ust=1545259247311000&usg=AFQjCNHFcKKoEKUjv5VZMOtw_KO977Em1A

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to the structural façade of the nearest sensitive use.

Table A

Construction Noise by Phase Without PDFs- Receptors South of the Project Site (NM2)

A	B	C	D	E	F	G	H	I
Equipment Type	# of Equipment	Equipment Lmax at 50 feet, dBA[1, 2]	Distance to Receptor[3]	Equipment Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Noise Level Leq (dBA) at Receptor
Demolition								
Concrete/Industrial Saw	1	89.6	220	20	0.20	-12.9	-7.0	69.7
Rubber Tired Dozers	1	82	220	40	0.40	-12.9	-4.0	65.2
Excavator	3	81	220	40	1.20	-12.9	0.8	68.9
							Log Sum	73.1
Excavation								
Excavator	2	81	220	40	0.80	-12.9	-1.0	67.2
Rubber Tired Dozers	3	82	220	40	1.20	-12.9	0.8	69.9
Tractors/Loaders/Backhoes	4	79	220	25	1.00	-12.9	0.0	66.1
							Log Sum	71.8
Foundation								
Bore/Drill Rig	2	79	220	20	0.40	-12.9	-4.0	62.2
Aerial Lift	2	75	220	20	0.40	-12.9	-4.0	58.2
Forklifts	4	64	220	50	2.00	-12.9	3.0	54.1
Welders	1	73	220	40	0.40	-12.9	-4.0	56.2
Cranes	1	81	220	16	0.16	-12.9	-8.0	60.2
Concrete Pumps	4	81	220	20	0.80	-12.9	-1.0	67.2
							Log Sum	69.6
Building Construction								
Cranes	1	81	220	16	0.16	-12.9	-8.0	60.2
Forklifts	3	64	220	50	1.50	-12.9	1.8	52.9
Generator Sets	1	81	220	40	0.40	-12.9	-4.0	64.2
Welders	1	73	220	40	0.40	-12.9	-4.0	56.2
Tractors/Loaders/Backhoes	3	79	220	25	0.75	-12.9	-1.2	64.9
							Log Sum	68.6
Paving								
Pavers	1	77	220	50	0.50	-12.9	-3.0	61.1
Paving Equipment	1	85	220	20	0.20	-12.9	-7.0	65.1
Rollers	1	80	220	20	0.20	-12.9	-7.0	60.1
							Log Sum	67.5
Architectural Coating								
Aerial Lift	1	75	220	20	0.20	-12.9	-7.0	55.1
Air Compressors	1	78	220	40	0.40	-12.9	-4.0	61.2
							Log Sum	62.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018).

(2) Source: https://www.google.com/url?q=http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/&sa=D&source=hangouts&ust=1545259247311000&usg=AFQjCNHFcKKoEKUjv5VZMOtw_KO977Em1A

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to the structural façade of the nearest sensitive use.

Table C

Construction Noise by Phase Without PDFs - Residential Receptors West of the Project Site (NM3)

A	B	C	D	E	F	G	H	I
Equipment Type	# of Equipment	Equipment Lmax at 50 feet, dBA[1, 2]	Distance to Receptor[3]	Equipment Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Noise Level Leq (dBA) at Receptor
Demolition								
Concrete/Industrial Saw	1	89.6	435	20	0.20	-18.8	-7.0	63.8
Rubber Tired Dozers	1	82	435	40	0.40	-18.8	-4.0	59.2
Excavator	3	81	435	40	1.20	-18.8	0.8	63.0
							Log Sum	67.2
Excavation								
Excavator	2	81	435	40	0.80	-18.8	-1.0	61.2
Rubber Tired Dozers	3	82	435	40	1.20	-18.8	0.8	64.0
Tractors/Loaders/Backhoes	4	79	435	25	1.00	-18.8	0.0	60.2
							Log Sum	65.8
Foundation								
Bore/Drill Rig	2	79	435	20	0.40	-18.8	-4.0	56.2
Aerial Lift	2	75	435	20	0.40	-18.8	-4.0	52.2
Forklifts	4	64	435	50	2.00	-18.8	3.0	48.2
Welders	1	73	435	40	0.40	-18.8	-4.0	50.2
Cranes	1	81	435	16	0.16	-18.8	-8.0	54.3
Concrete Pumps	4	81	435	20	0.80	-18.8	-1.0	61.2
							Log Sum	63.7
Building Construction								
Cranes	1	81	435	16	0.16	-18.8	-8.0	54.3
Forklifts	3	64	435	50	1.50	-18.8	1.8	47.0
Generator Sets	1	81	435	40	0.40	-18.8	-4.0	58.2
Welders	1	73	435	40	0.40	-18.8	-4.0	50.2
Tractors/Loaders/Backhoes	3	79	435	25	0.75	-18.8	-1.2	59.0
							Log Sum	62.7
Paving								
Pavers	1	77	435	50	0.50	-18.8	-3.0	55.2
Paving Equipment	1	85	435	20	0.20	-18.8	-7.0	59.2
Rollers	1	80	435	20	0.20	-18.8	-7.0	54.2
							Log Sum	61.6
Architectural Coating								
Aerial Lift	1	75	435	20	0.20	-18.8	-7.0	49.2
Air Compressors	1	78	435	40	0.40	-18.8	-4.0	55.2
							Log Sum	56.2

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018).

(2) Source: https://www.google.com/url?q=http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/&sa=D&source=hangouts&ust=1545259247311000&usg=AFQjCNHFcKKoEKUjv5VZMOtw_KO977Em1A

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to the structural façade of the nearest sensitive use.

Table D

Construction Noise by Phase Without PDFs- Receptors Northeast of the Project Site (NM4)

A	B	C	D	E	F	G	H	I
Equipment Type	# of Equipment	Equipment Lmax at 50 feet, dBA[1, 2]	Distance to Receptor[3]	Equipment Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Noise Level Leq (dBA) at Receptor
Demolition								
Concrete/Industrial Saw	1	89.6	635	20	0.20	-22.1	-7.0	60.5
Rubber Tired Dozers	1	82	635	40	0.40	-22.1	-4.0	55.9
Excavator	3	81	635	40	1.20	-22.1	0.8	59.7
							Log Sum	63.9
Excavation								
Excavator	2	81	635	40	0.80	-22.1	-1.0	58.0
Rubber Tired Dozers	3	82	635	40	1.20	-22.1	0.8	60.7
Tractors/Loaders/Backhoes	4	79	635	25	1.00	-22.1	0.0	56.9
							Log Sum	62.6
Foundation								
Bore/Drill Rig	2	79	635	20	0.40	-22.1	-4.0	52.9
Aerial Lift	2	75	635	20	0.40	-22.1	-4.0	48.9
Forklifts	4	64	635	50	2.00	-22.1	3.0	44.9
Welders	1	73	635	40	0.40	-22.1	-4.0	46.9
Cranes	1	81	635	16	0.16	-22.1	-8.0	51.0
Concrete Pumps	4	81	635	20	0.80	-22.1	-1.0	58.0
							Log Sum	60.4
Building Construction								
Cranes	1	81	635	16	0.16	-22.1	-8.0	51.0
Forklifts	3	64	635	50	1.50	-22.1	1.8	43.7
Generator Sets	1	81	635	40	0.40	-22.1	-4.0	54.9
Welders	1	73	635	40	0.40	-22.1	-4.0	46.9
Tractors/Loaders/Backhoes	3	79	635	25	0.75	-22.1	-1.2	55.7
							Log Sum	59.4
Paving								
Pavers	1	77	635	50	0.50	-22.1	-3.0	51.9
Paving Equipment	1	85	635	20	0.20	-22.1	-7.0	55.9
Rollers	1	80	635	20	0.20	-22.1	-7.0	50.9
							Log Sum	58.3
Architectural Coating								
Aerial Lift	1	75	635	20	0.20	-22.1	-7.0	45.9
Air Compressors	1	78	635	40	0.40	-22.1	-4.0	51.9
							Log Sum	52.9

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018).

(2) Source: https://www.google.com/url?q=http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/&sa=D&source=hangouts&ust=1545259247311000&usg=AFQjCNHFcKKoEKUjv5VZMOtw_KO977Em1A

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to the structural façade of the nearest sensitive use.

Table E						
Noise Levels 50 feet from Roadway Centerline*						
Road Segments	**Existing**		**Existing Plus Project**			**Is the Increase Significant ?**
	ADT	**dB CNEL**	**ADT**	**Total**	**Project-Specific Increase**	
N. Wilton Place						
n/o La Mirada Ave	7,330	66.4	7,540	66.5	0.1	**No**
s/o La Mirada Ave	8,900	67.2	9,080	67.3	0.1	**No**
n/o Santa Monica Blvd	8,530	67.0	8,770	67.1	0.1	**No**
s/o Santa Monica Blvd	11,510	68.3	11,720	68.4	0.1	**No**
N. St. Andrews Place						
n/o Santa Monica Blvd	1,220	58.6	1,760	60.2	1.6	**No**
s/o Santa Monica Blvd	2,450	61.6	2,450	61.6	0.0	**No**
Western Avenue						
n/o Lexington Ave	14,590	69.3	15,410	69.6	0.3	**No**
s/o Lexington Ave	14,920	69.4	14,920	69.4	0.0	**No**
n/o Santa Monica Blvd	12,020	68.5	12,020	68.5	0.0	**No**
s/o Santa Monica Blvd	13,680	69.1	14,090	69.2	0.1	**No**
La Mirada Avenue						
w/o Wilton Pl	590	55.4	1,000	57.7	2.3	**No**
e/o Wilton Pl	520	54.9	520	54.9	0.0	**No**
Lexington Avenue						
w/o 101 fwy off ramps	2,780	62.1	3,020	62.5	0.4	**No**
e/o 101 fwy off ramps	8,110	66.8	8,930	67.2	0.4	**No**
w/o Western Ave	780	56.6	900	57.2	0.6	**No**
Santa Monica Boulevard						
w/o Wilton Pl	13,250	68.9	13,870	69.1	0.2	**No**
e/o Wilton Pl	10,360	67.9	10,360	67.9	0.0	**No**
w/o St. Andrews Pl	19,190	70.5	19,190	70.5	0.0	**No**
e/o St. Andrews Pl	17,330	70.1	19,180	70.5	0.4	**No**
w/o Western Ave	11,930	68.5	12,470	68.7	0.2	**No**
e/o Western Ave	12,130	68.5	13,570	69.0	0.5	**No**
*The uniform distance of 50 feet allows for direct comparisons of potential increases or decreases in noise levels based upon various traffic scenarios; however, at this distance, no specific noise standard necessarily applies						

Table F						
Noise Levels 50 feet from Roadway Centerline*						
Road Segments	**Future No Project**		**Future (2024) with Project**			**Is the Increase Significant ?**
	ADT	**dB CNEL**	**ADT**	**Total**	**Project-Specific Increase**	
N. Wilton Place						
n/o La Mirada Ave	7,910	66.7	8,120	66.8	0.1	**No**
s/o La Mirada Ave	9,510	67.5	9,690	67.6	0.1	**No**
n/o Santa Monica Blvd	9,220	67.3	9,460	67.5	0.2	**No**
s/o Santa Monica Blvd	12,430	68.6	12,640	68.7	0.1	**No**
N. St. Andrews Place						
n/o Santa Monica Blvd	1,290	58.8	1,830	60.3	1.5	**No**
s/o Santa Monica Blvd	2,580	61.8	2,580	61.8	0.0	**No**
Western Avenue						
n/o Lexington Ave	16,000	69.7	16,820	70.0	0.3	**No**
s/o Lexington Ave	16,300	69.8	16,300	69.8	0.0	**No**
n/o Santa Monica Blvd	13,440	69.0	13,440	69.0	0.0	**No**
s/o Santa Monica Blvd	15,260	69.5	15,670	69.7	0.2	**No**
La Mirada Avenue						
w/o Wilton Pl	610	55.6	1,020	57.8	2.2	**No**
e/o Wilton Pl	540	55.0	540	55.0	0.0	**No**
Lexington Avenue						
w/o 101 fwy off ramps	2,950	62.4	3,190	62.7	0.3	**No**

EcoTierra

CNEL NOISE IMPACT WORKSHEET

(calculations based on the FHWA-RD-77-108 Highway Noise Prediction Model)

PROJECT INFORMATION

Project:	Echelon Studios	**Project #:**	0
City/County:	LA	**Date Entered:**	10/13/2022
Comments:	- -	**Entered By:**	Katie

SITE INFORMATION

Building:	- -	**Land Use(s):**	Residential
Obs. Loc. Ext.:	exterior, adjacent to façade	**Scenario:**	Derived volumes from Virginia w/o Van Ness (2

ROADWAY SEGMENT, VEHICULAR AND OBSERVER CHARACTERISTICS

Roadway:	Virgina Avenue	**Roadway Class:**	Local Street - Standard
Segment:	Between Wilton Pl and St Andrews Pl	**Right of Way:**	60 feet
CL Dist. to Obs.:	32 feet	**Near/Far Lane:**	18 feet
CL Dist. to Wall:	0 feet		
ADT:	1,726	**Travel Speed:**	20 MPH
Pad Elev.:	0.0 feet	**Obs. Height:**	5.0 feet
Roadway Elev.:	0.0 feet	**Roadway Grade:**	0.1%

	Required	Type	Height
Ext. Mitigation:	No	- -	- -

	Autos	Med Trucks	Heavy Trucks
Noise Height: (above roadway)	0.00 feet	2.30 feet	8.01 feet

	Left	Right	Total
Exposure:	90º	90º	180º

	Autos	Med Trucks	Heavy Trucks
Hard/Soft Site:	hard	hard	hard

Veh. Distribution:	Daytime	Evening	Nighttime	Daily
Automobiles	75.50%	14.00%	10.50%	97.42%
Medium Trucks	48.90%	2.20%	48.90%	1.84%
Heavy Trucks	47.30%	5.40%	47.30%	0.74%

Notes: speed estimated, no posted limit

CALCULATED CNEL NOISE IMPACTS

Noise impact under various scenarios:

56.9

Exterior without Topo or Barrier Attenuation

EcoTierra

CNEL NOISE IMPACT WORKSHEET

(calculations based on the FHWA-RD-77-108 Highway Noise Prediction Model)

PROJECT INFORMATION

Project:	Echelon Studio	**Project #:**	0
City/County:	City of Los Angeles	**Date Entered:**	10/13/22
Comments:	- -	**Entered By:**	Katie

SITE INFORMATION

Building:	- -	**Land Use(s):**	Residential
Obs. Loc. Ext.:	exterior, adjacent to façade	**Scenario:**	Operational Delivery Trucks

ROADWAY SEGMENT, VEHICULAR AND OBSERVER CHARACTERISTICS

Roadway:	Virgina Avenue	**Roadway Class:**	Local Street - Standard
Segment:	Btwn Wilton Pl and St Andrews Pl	**Right of Way:**	60 feet
CL Dist. to Obs.:	32 feet	**Near/Far Lane:**	18 feet
CL Dist. to Wall:	0 feet		
ADT:	40	**Travel Speed:**	20 MPH
Pad Elev.:	0.0 feet	**Obs. Height:**	5.0 feet
Roadway Elev.:	0.0 feet	**Roadway Grade:**	0.1%

	Required	Type	Height
Ext. Mitigation:	No	- -	- -

	Autos	Med Trucks	Heavy Trucks
Noise Height: (above roadway)	0.00 feet	2.30 feet	8.01 feet

	Left	Right	Total
Exposure:	90º	90º	180º

	Autos	Med Trucks	Heavy Trucks
Hard/Soft Site:	hard	hard	hard

Veh. Distribution:	Daytime	Evening	Nighttime	Daily
Automobiles	75.50%	14.00%	10.50%	0.00%
Medium Trucks	48.90%	2.20%	48.90%	50.00%
Heavy Trucks	47.30%	5.40%	47.30%	50.00%

Notes:

CALCULATED CNEL NOISE IMPACTS

Noise impact: 56.4 — Exterior without Topo or Barrier Attenuation

VdB Calculations
Based on reference equation 7-3 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185

Lv (distance) = *Lv (ref)* - *30*log (D/25)* **72 VdB threshold**

Unmitigated
large bulldozer or caisson drill rig @ 60 feet

Lv 75.59

vibratory roller @ 70 feet

Lv 80.59

Loaded trucks @ 90 feet

Lv 69.31

Loaded trucks @ 50 feet

Lv 76.97

Mitigated
large bulldozer or caisson drill rig @ 80 feet

Lv 71.85

Vibratory roller @ 136 feet No vibratory roller to be used for parking/loading area

Lv 71.93

GROUNDBORNE VIBRATION ANALYSIS			
Project:	Echelon Studios		Date: 12/23/22
Source:	Large Bulldozer or Caisson Drill		
Scenario:	Unmitigated		
Location:	Project Site		
Address:	Historic Residential 70 feet to the south		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	70.00	Distance from Equipment to Façade of Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equation 7-2 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185.			
RESULTS			
PPV =	0.019	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	Echelon Studios		Date: 12/23/22
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Project Site		
Address:	Historic Residential 70 feet to the south		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	70.00	Distance from Equipment to Façade of Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equation 7-2 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185.			
RESULTS			
PPV =	0.045	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	Echelon Studios		Date: 12/23/22
Source:	Loaded trucks		
Scenario:	Unmitigated		
Location:	Project Site		
Address:	Adjacent land uses along haul route		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	4	Loaded Trucks	INPUT SECTION IN GREEN
PPVref =	0.076	Reference PPV (in/sec) at 25 ft.	
D =	50.00	Distance from Equipment to Façade of Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equation 7-2 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185.			
RESULTS			
PPV =	0.027	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	Echelon Studios		Date: 12/23/22
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Project Site		
Address:	Fiesta Mexicana 5547 Santa Monica Blvd		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	60.00	Distance from Equipment to Façade of Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equation 7-2 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185.			
RESULTS			
PPV =	0.024	IN/SEC	OUTPUT IN BLUE

KWAQN

Office
7404 Kingsley Way,
Riverside, CA

15-Minute Noise Measurement Datasheet

Project: Echelon Studios

Site Address/Location: 5601-5673 W Santa Monica Blvd. Los Angeles, CA 90038

Date: 8/18/2022

Field Tech/Engineer: Ian Edward Gallagher

General Location: 5601-5673 W Santa Monica Blvd. Los Angeles, CA 90038

Sound Meter: Larson Davis Sound Track LxT1 **SN:** 3099

Settings: A-weighted, slow, 10-sec, 15-minute interval

Meteorological Con.: 81 deg F, 7 mph wind, 47% humidity, clear skies, sunshine.

Site ID: NM-1, 2, 3 & 4.

Site Observations:

Main noise sources are from vehicular traffic travelling along Virginia Ave, N Wilton Pl, Santa Monica Blvd, N St Andrews Pl & other surrounding roads . The local buildings reflect & refract much of the sound. Other noise sources include bird song, residential ambiance,wind chimes,music being played from various residences, businesses, pedestrians. Air traffic consisting of helicopters, light propeller aircraft and commercial jet liners. Leaf rustle from nearby palmtrees due to 7 mph breeze.

Site Topo: Urban. Mixture of various businesses with multifamily residences.

Ground Type: Hard (urban) site conditions, acoustically refractive, absorptive but mostly reflective.

NM locations, latitude , longitude :

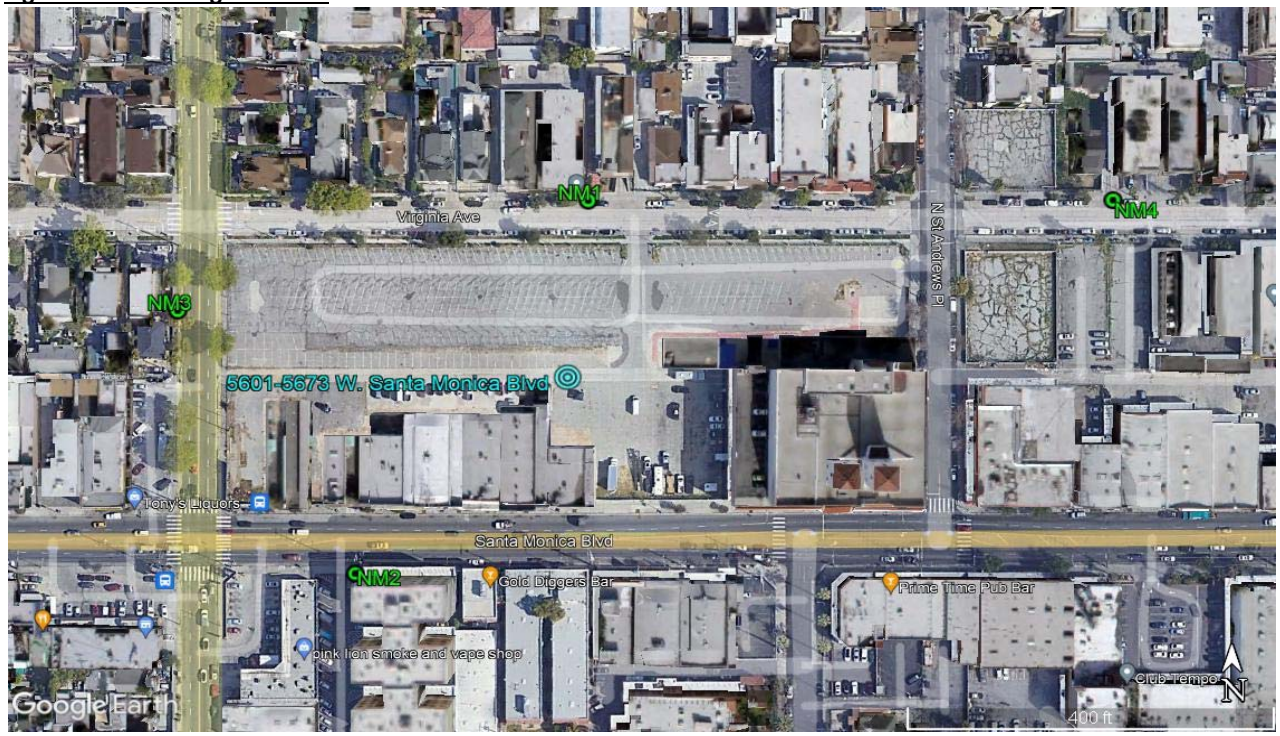
NM1 Meter: 34° 5'30.68"N 118°18'43.83"W

NM2 Meter: 34° 5'26.40"N 118°18'46.85"W

NM3 Meter: 34° 5'29.42"N 118°18'49.15"W

NM4 Meter: 34° 5'30.69"N 118°18'37.04"W

Figure 1: Monitoring Locations



KWAQN

Office
7404 Kingsley Way,
Riverside, CA

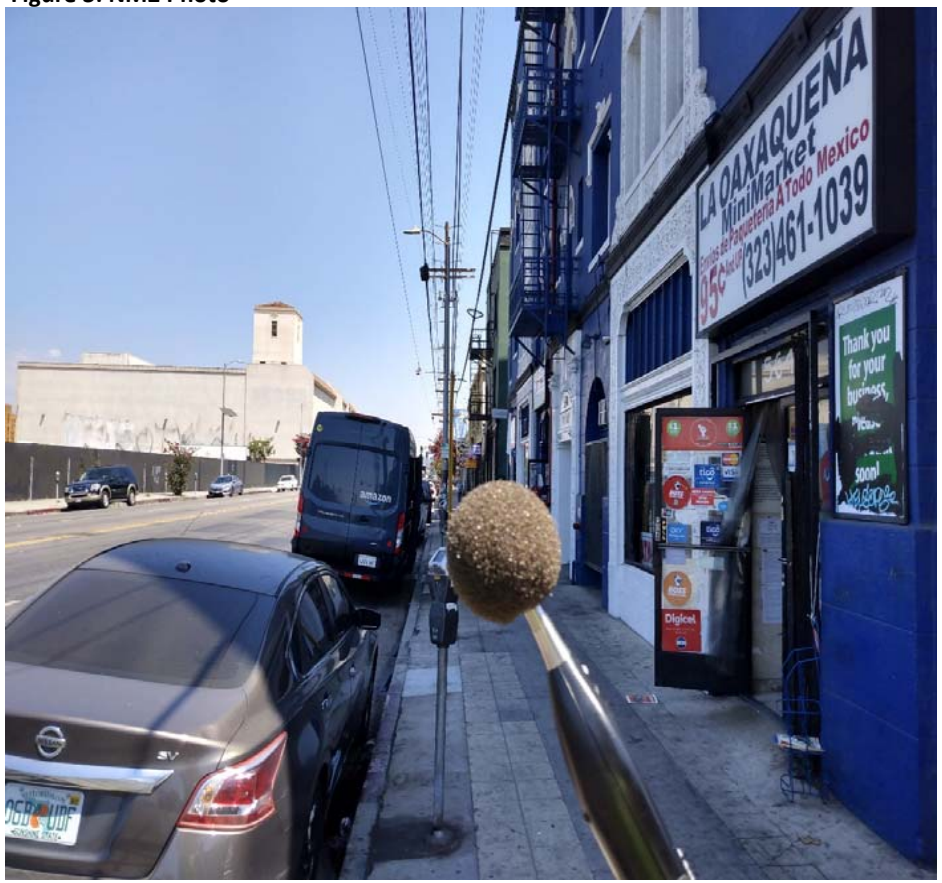
15-Minute Noise Measurement Datasheet - Cont.

Project: Echelon Studios
Site Address/Location: 5601-5673 W Santa Monica Blvd. Los Angeles, CA 90038
Site ID: NM-1, 2, 3 & 4.

Figure 2: NM1 Photo

NM1 looking NW towards multifamily residence 5637 Virginia Avenue, Los Angeles.

Figure 3: NM2 Photo



NM2 looking SSE down Santa Monica Blvd (left), blue building 5642 Santa Monica Blvd, Los Angeles.

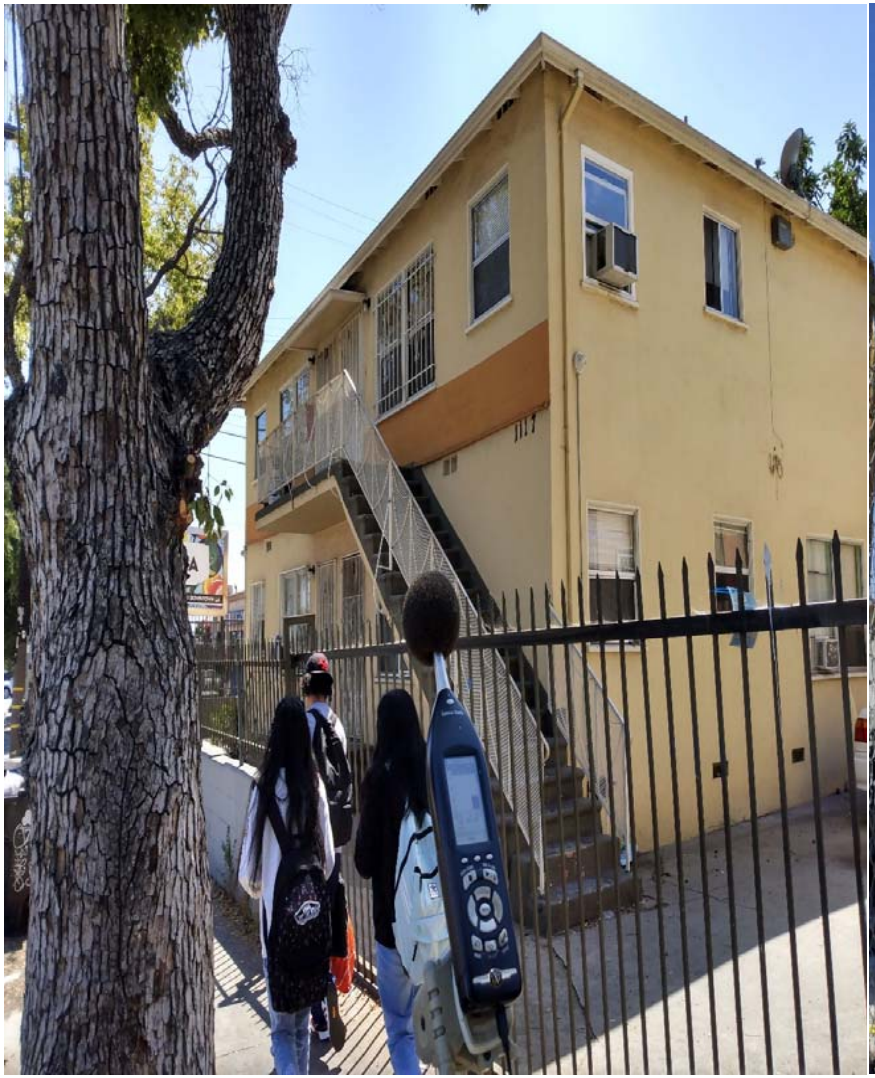
KWAQN

Office
7404 Kingsley Way,
Riverside, CA

15-Minute Noise Measurement Datasheet - Cont.

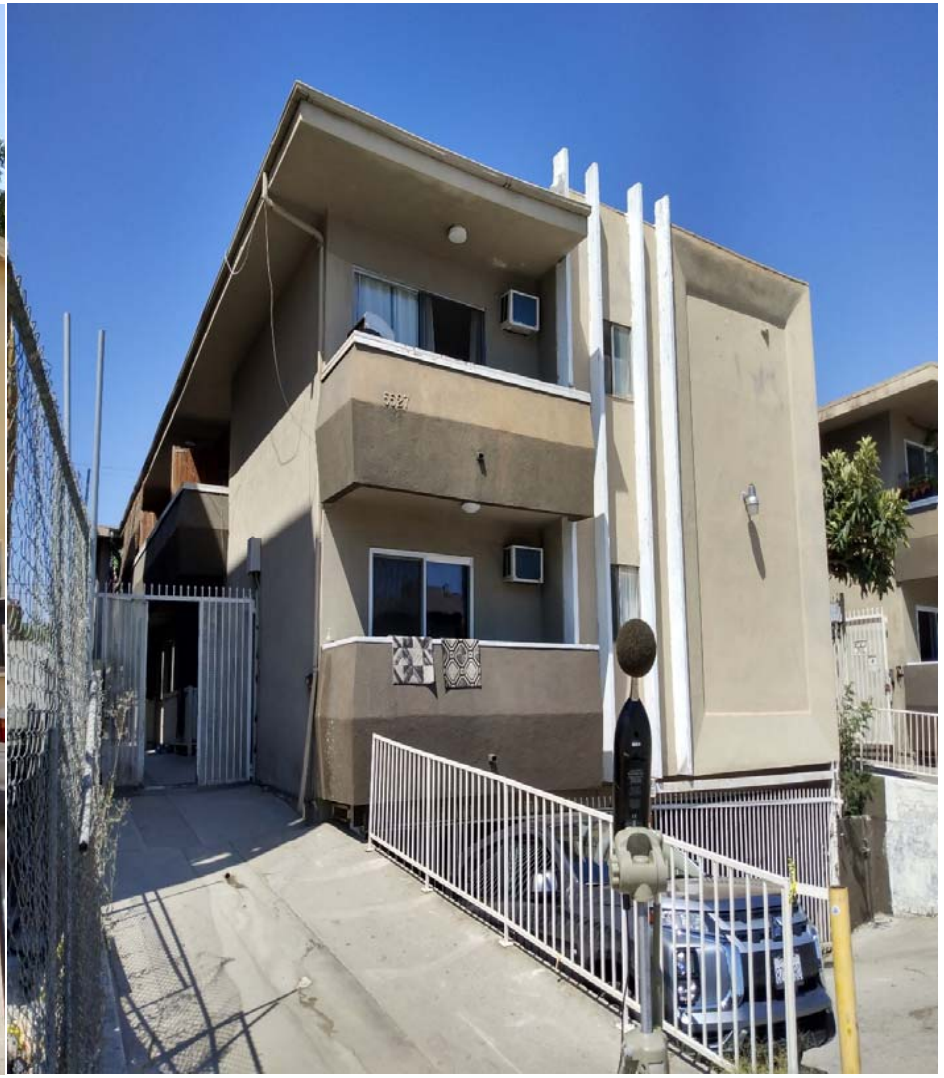
Project: Echelon Studios
Site Address/Location: 5601-5673 W Santa Monica Blvd. Los Angeles, CA 90038
Site ID: NM-1, 2, 3 & 4.

Figure 4: NM3 Photo



NM3 looking SSW towards multifamily residence 1117 N Wilton Pl, Los Angeles.

Figure 5: NM4 Photo



NM4 looking NNE towards multifamily residence 5527 Virginia Ave, Los Angeles.

KWAQN

Office
7404 Kingsley Way,
Riverside, CA

15-Minute Noise Measurement Datasheet - Cont.

Project: Echelon Studios
Site Address/Location: 5601-5673 W Santa Monica Blvd. Los Angeles, CA 90038
Site ID: NM-1, 2, 3 & 4.

Table 1: Noise Measurement Summary

Location	Start	Stop	Leq/ dB	Lmax/ dB	Lmin/ dB	L2/ dB	L8/ dB	L25/ dB	L50/ dB	L90/ dB
NM 1	1:20 PM	1:35 PM	59.6	71.6	49.7	68.7	64.6	58.6	54.3	51.0
NM 2	1:53 PM	2:08 PM	71.4	82.1	55.3	78.6	75.6	72.8	68.9	60.0
NM 3	2:20 PM	2:35 PM	66.8	84.2	55.2	72.5	69.8	67.4	64.6	58.5
NM 4	2:48 PM	3:03 PM	57.7	72.3	48.6	66.5	61.3	56.8	53.8	50.7

Measurement Report

Report Summary

Meter's File Name	LxT_Data.042.s	Computer's File Name	LxT_0003099-20220818 132028-LxT_Data.042.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM1 34° 5'30.68"N 118°18'43.83"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	KWAQN Project: Echelon Studios, 5601-5673 W Santa Monica Blvd		
Start Time	2022-08-18 13:20:28	Duration	0:15:00.0
End Time	2022-08-18 13:35:28	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	59.6 dB		
LAE	89.1 dB	SEA	--- dB
EA	91.2 µPa²h	LAFTM5	64.2 dB
EA8	2.9 mPa²h		
EA40	14.6 mPa²h		
LA_{peak}	91.3 dB	2022-08-18 13:26:07	
LAS_{max}	71.6 dB	2022-08-18 13:26:07	
LAS_{min}	49.7 dB	2022-08-18 13:25:15	
LA_{eq}	59.6 dB		
LC_{eq}	71.9 dB	LC_{eq} - LA_{eq}	12.3 dB
LAI_{eq}	62.0 dB	LAI_{eq} - LA_{eq}	2.4 dB

Exceedances	Count	Duration
LAS > 65.0 dB	12	0:01:21.10
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

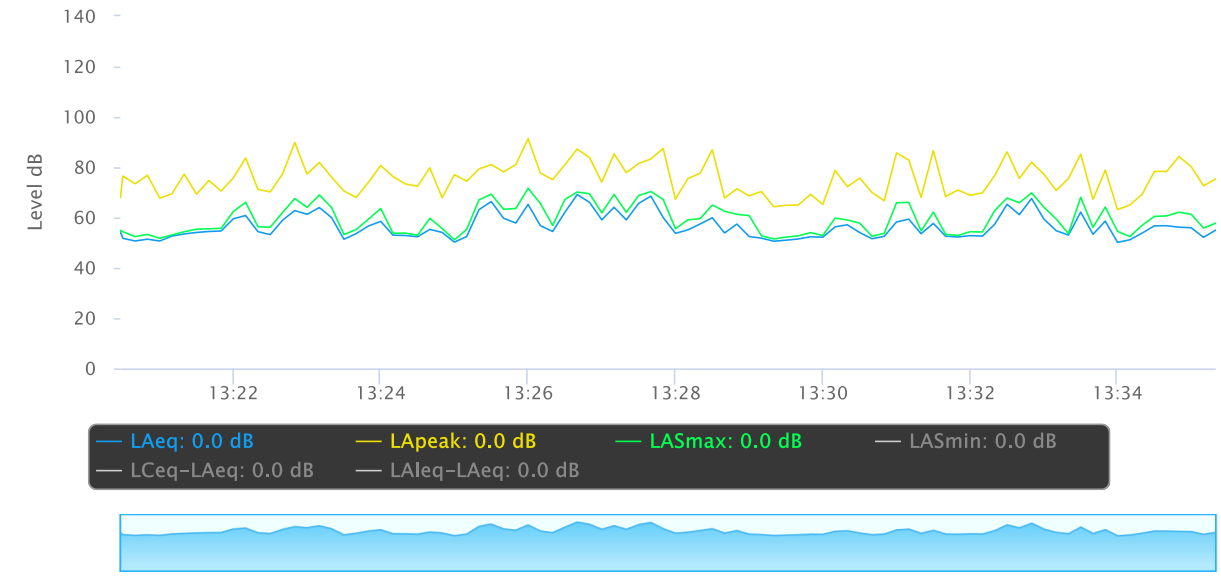
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	59.6 dB		71.9 dB		--- dB	
$L_{S(max)}$	71.6 dB	2022-08-18 13:26:07	--- dB		--- dB	
$L_{S(min)}$	49.7 dB	2022-08-18 13:25:15	--- dB		--- dB	
$L_{Peak(max)}$	91.3 dB	2022-08-18 13:26:07	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

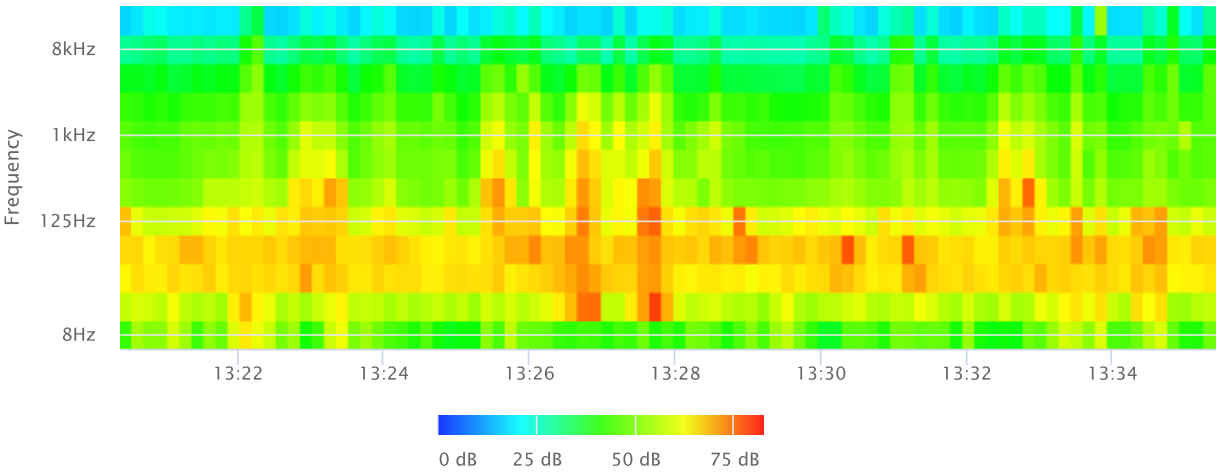
Statistics

LAS 2.0	68.7 dB
LAS 8.0	64.6 dB
LAS 25.0	58.6 dB
LAS 50.0	54.3 dB
LAS 66.6	52.9 dB
LAS 90.0	51.0 dB

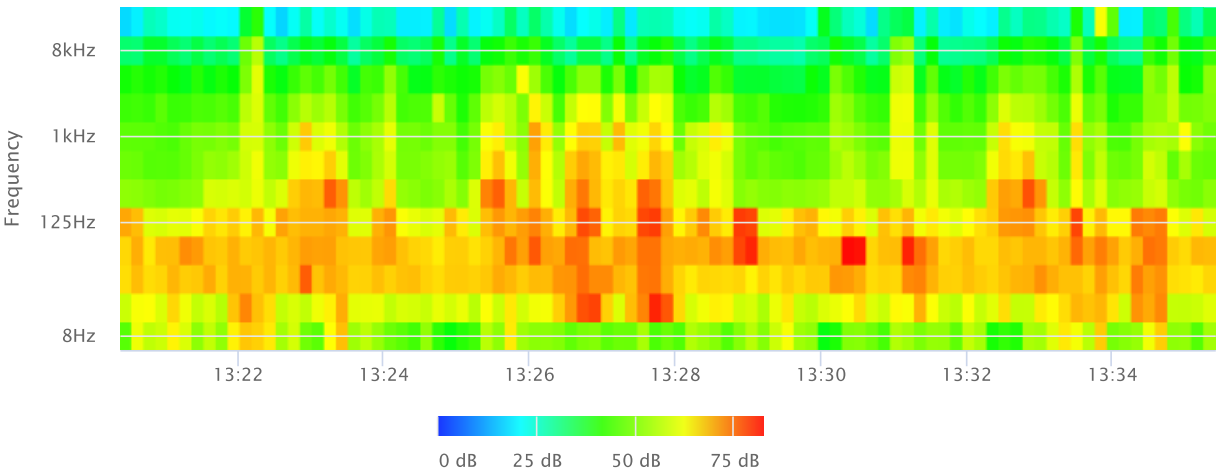
Time History



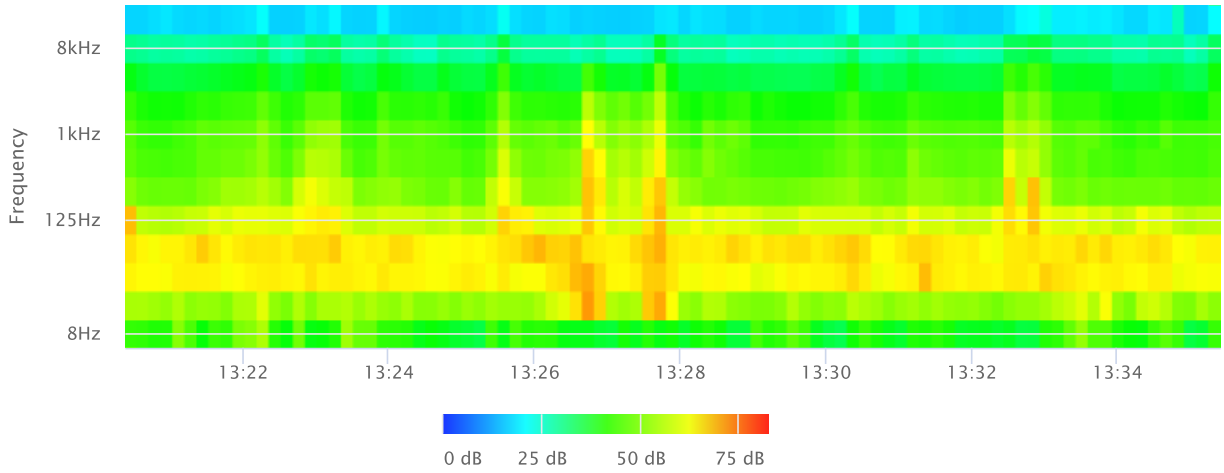
OBA 1/1 Leq



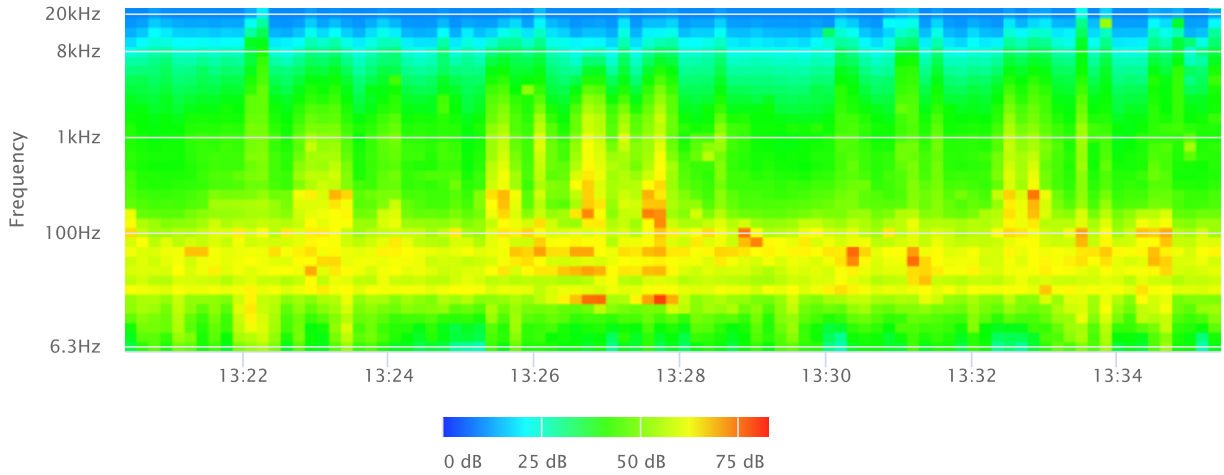
OBA 1/1 Lmax



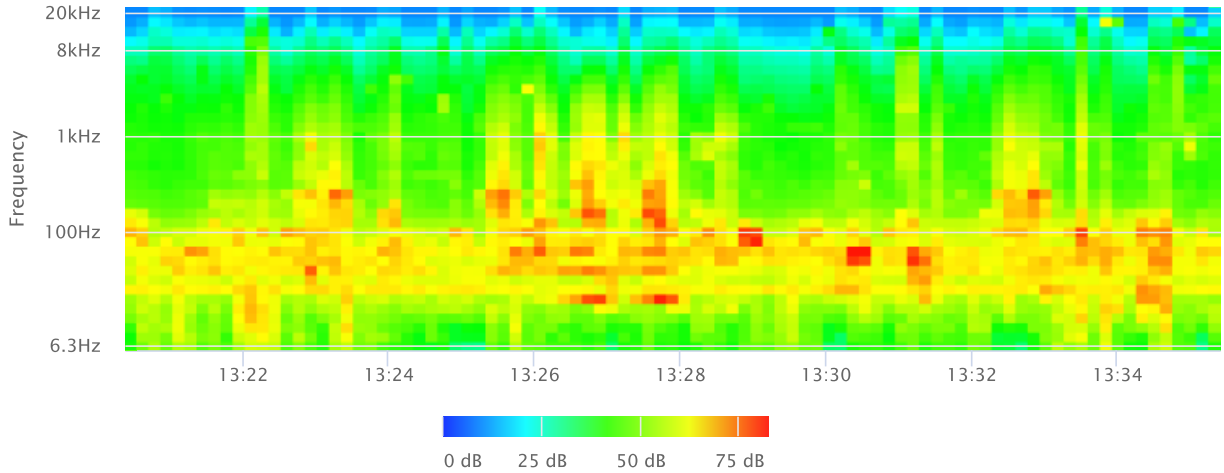
OBA 1/1 Lmin



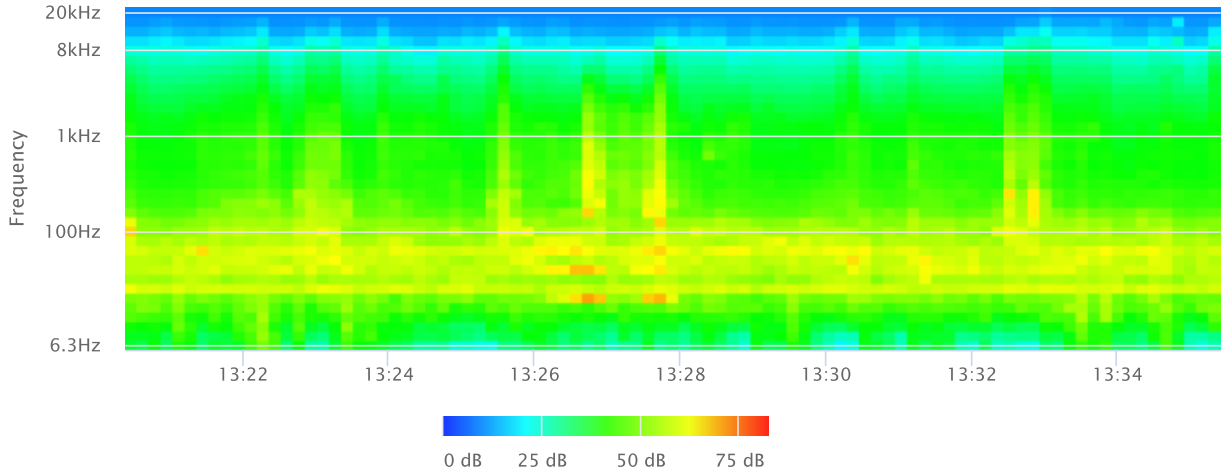
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:22
13:24
13:26
13:28
13:30
13:32
13:34

0 dB
25 dB
50 dB
75 dB

Measurement Report

Report Summary

Meter's File Name	LxT_Data.043.s	Computer's File Name	LxT_0003099-20220818 135311-LxT_Data.043.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM2 34° 5'26.40"N 118°18'46.85"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	KWAQN Project: Echelon Studios, 5601-5673 W Santa Monica Blvd		
Start Time	2022-08-18 13:53:11	Duration	0:15:00.0
End Time	2022-08-18 14:08:11	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	71.4 dB		
LAE	101.0 dB	SEA	--- dB
EA	1.4 mPa²h	LAFTM5	75.9 dB
EA8	44.6 mPa²h		
EA40	222.8 mPa²h		
LA_{peak}	100.5 dB	2022-08-18 13:57:16	
LAS_{max}	82.1 dB	2022-08-18 14:03:23	
LAS_{min}	55.3 dB	2022-08-18 13:56:37	
LA_{eq}	71.4 dB		
LC_{eq}	79.4 dB	LC_{eq} - LA_{eq}	7.9 dB
LAI_{eq}	73.5 dB	LAI_{eq} - LA_{eq}	2.1 dB

Exceedances	Count	Duration
LAS > 65.0 dB	22	0:10:45.1
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

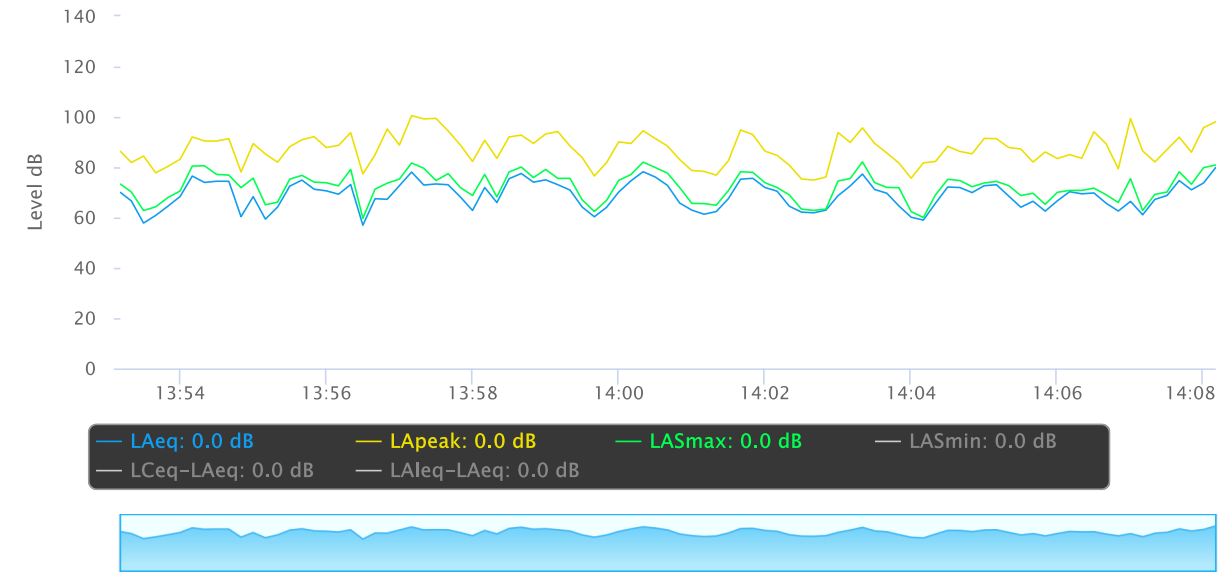
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	71.4 dB		79.4 dB		--- dB	
$L_{S(max)}$	82.1 dB	2022-08-18 14:03:23	--- dB		--- dB	
$L_{S(min)}$	55.3 dB	2022-08-18 13:56:37	--- dB		--- dB	
$L_{Peak(max)}$	100.5 dB	2022-08-18 13:57:16	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

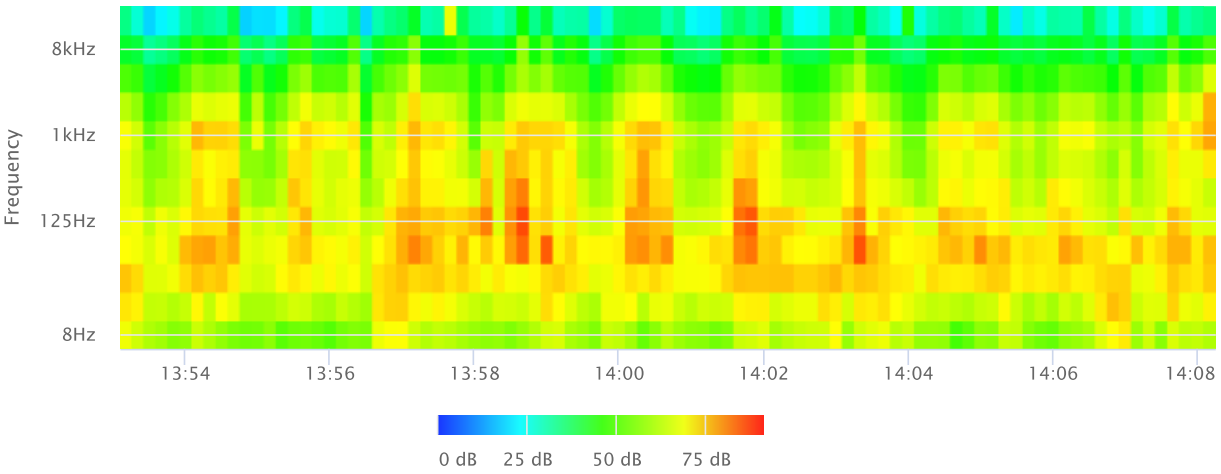
Statistics

LAS 2.0	78.6 dB
LAS 8.0	75.6 dB
LAS 25.0	72.8 dB
LAS 50.0	68.9 dB
LAS 66.6	65.0 dB
LAS 90.0	60.0 dB

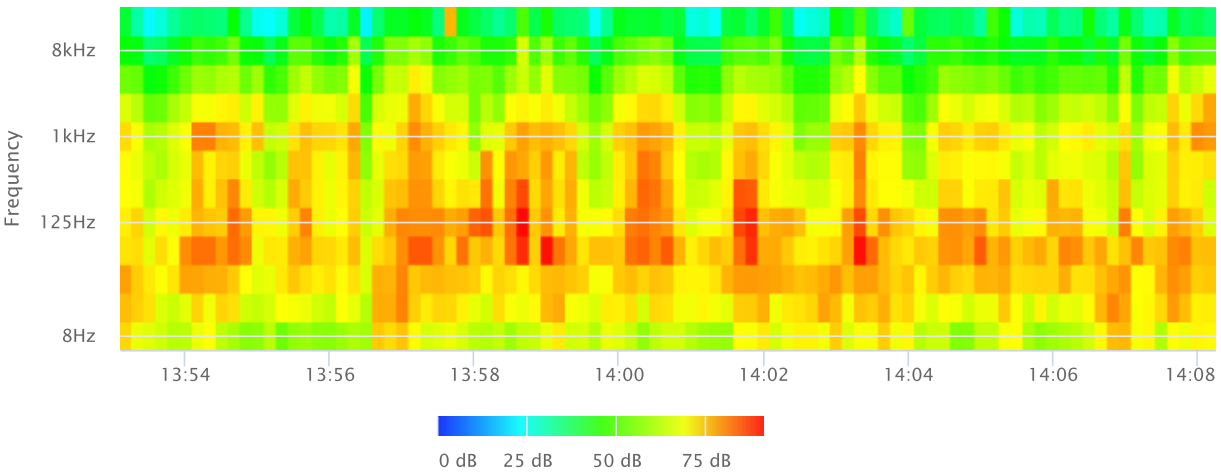
Time History



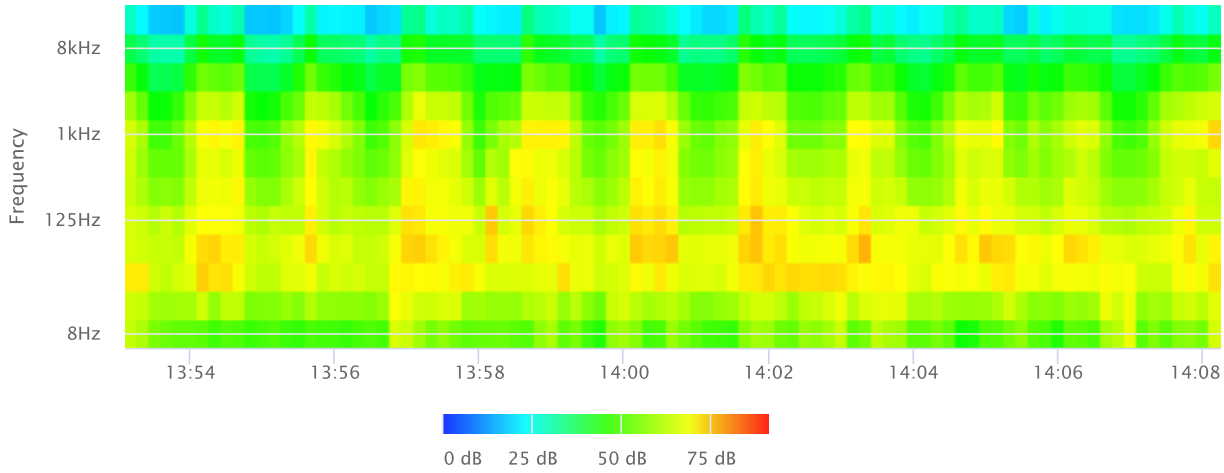
OBA 1/1 Leq



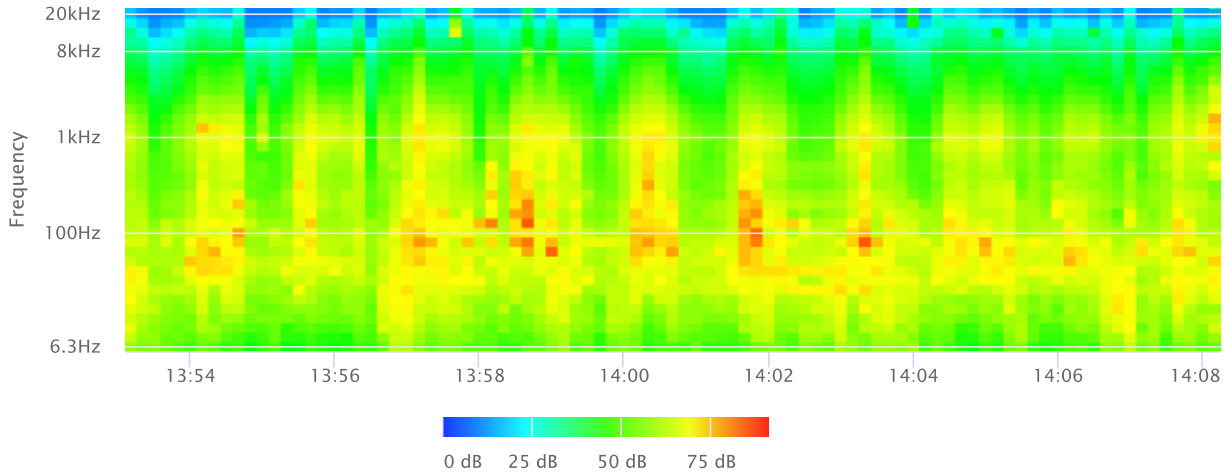
OBA 1/1 Lmax



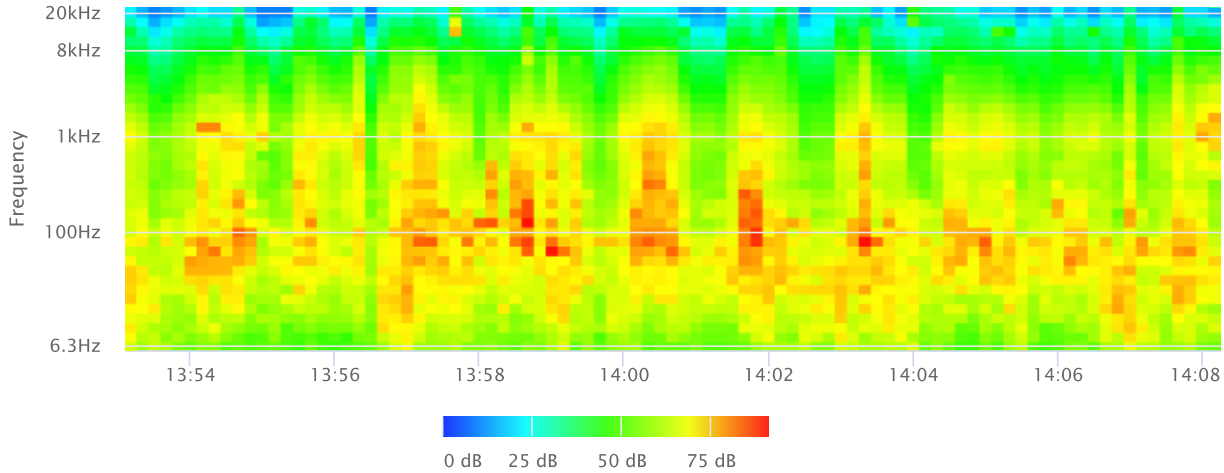
OBA 1/1 Lmin



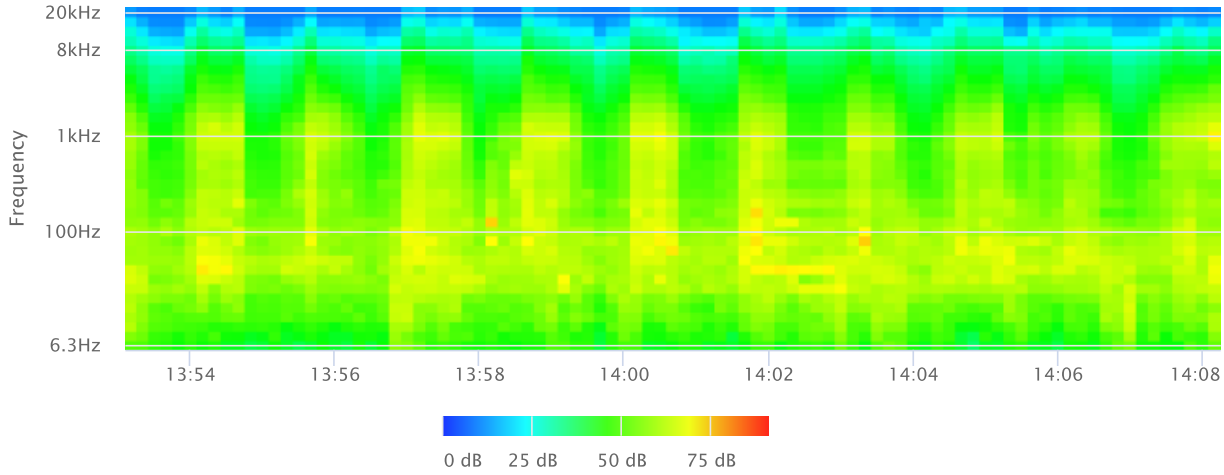
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:54
13:56
13:58
14:00
14:02
14:04
14:06
14:08

0 dB
25 dB
50 dB
75 dB

Measurement Report

Report Summary

Meter's File Name	LxT_Data.044.s	Computer's File Name	LxT_0003099-20220818 142033-LxT_Data.044.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM3 34° 5'29.42"N 118°18'49.15"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	KWAQN Project: Echelon Studios, 5601-5673 W Santa Monica Blvd		
Start Time	2022-08-18 14:20:33	Duration	0:15:00.0
End Time	2022-08-18 14:35:33	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	66.8 dB		
LAE	96.3 dB	SEA	--- dB
EA	474.0 µPa²h	LAFTM5	71.3 dB
EA8	15.2 mPa²h		
EA40	75.8 mPa²h		
LA_{peak}	101.9 dB	2022-08-18 14:24:58	
LAS_{max}	84.2 dB	2022-08-18 14:24:59	
LAS_{min}	55.2 dB	2022-08-18 14:33:42	
LA_{eq}	66.8 dB		
LC_{eq}	78.8 dB	LC_{eq} - LA_{eq}	12.1 dB
LAI_{eq}	68.5 dB	LAI_{eq} - LA_{eq}	1.8 dB

Exceedances	Count	Duration
LAS > 65.0 dB	36	0:08:29.8
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

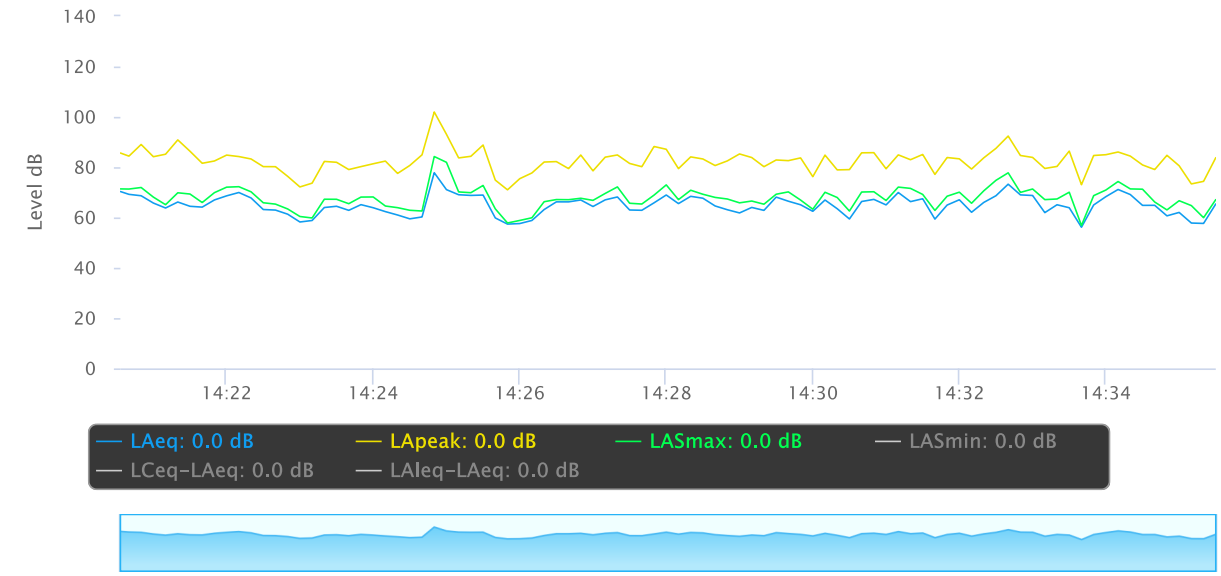
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	66.8 dB		78.8 dB		--- dB	
$L_{S(max)}$	84.2 dB	2022-08-18 14:24:59	--- dB		--- dB	
$L_{S(min)}$	55.2 dB	2022-08-18 14:33:42	--- dB		--- dB	
$L_{Peak(max)}$	101.9 dB	2022-08-18 14:24:58	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

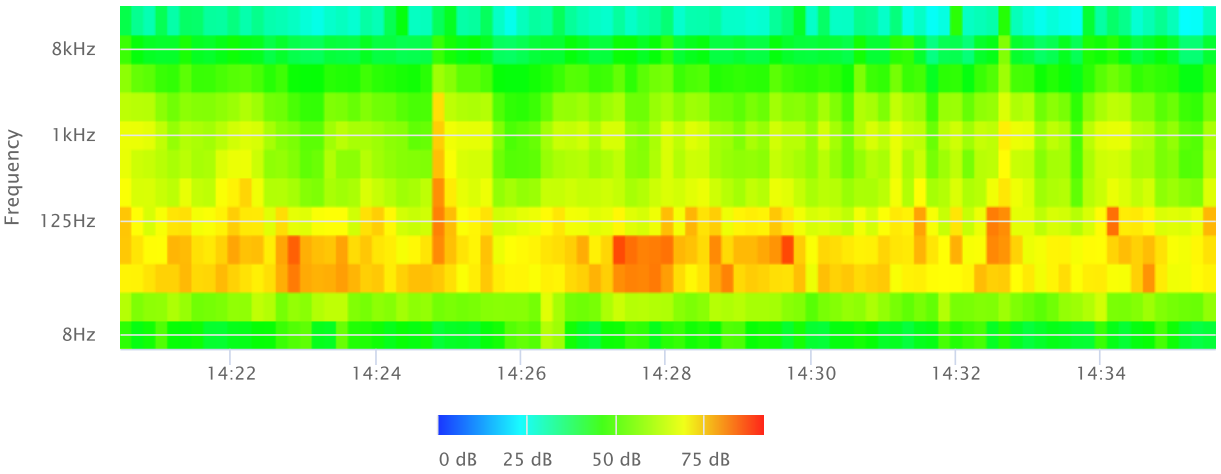
Statistics

LAS 2.0	72.5 dB
LAS 8.0	69.8 dB
LAS 25.0	67.4 dB
LAS 50.0	64.6 dB
LAS 66.6	62.4 dB
LAS 90.0	58.5 dB

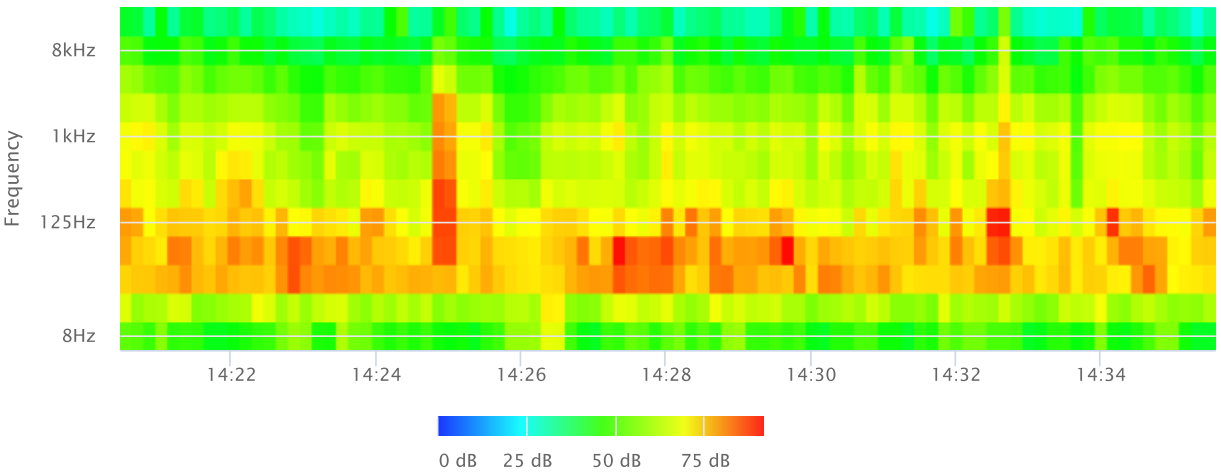
Time History



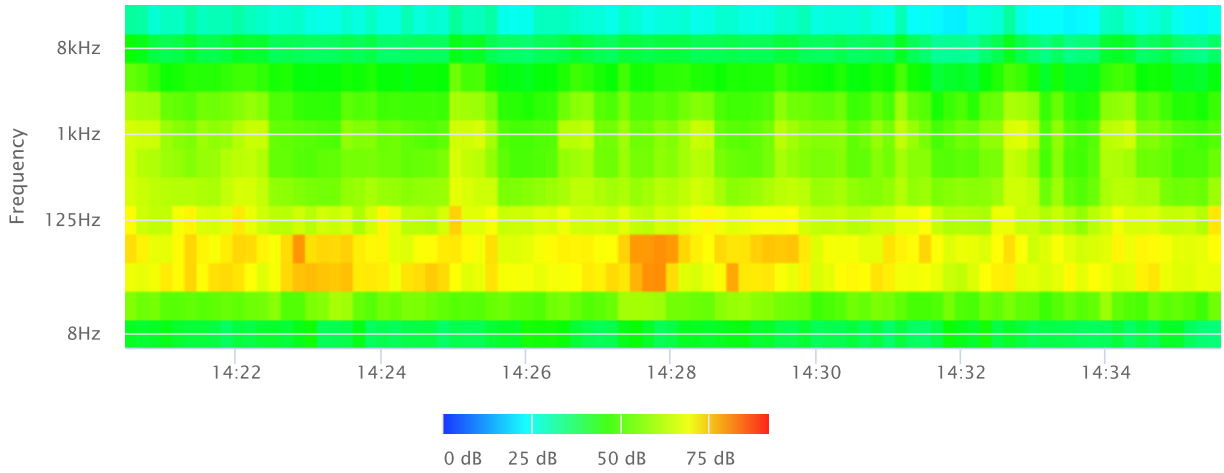
OBA 1/1 Leq



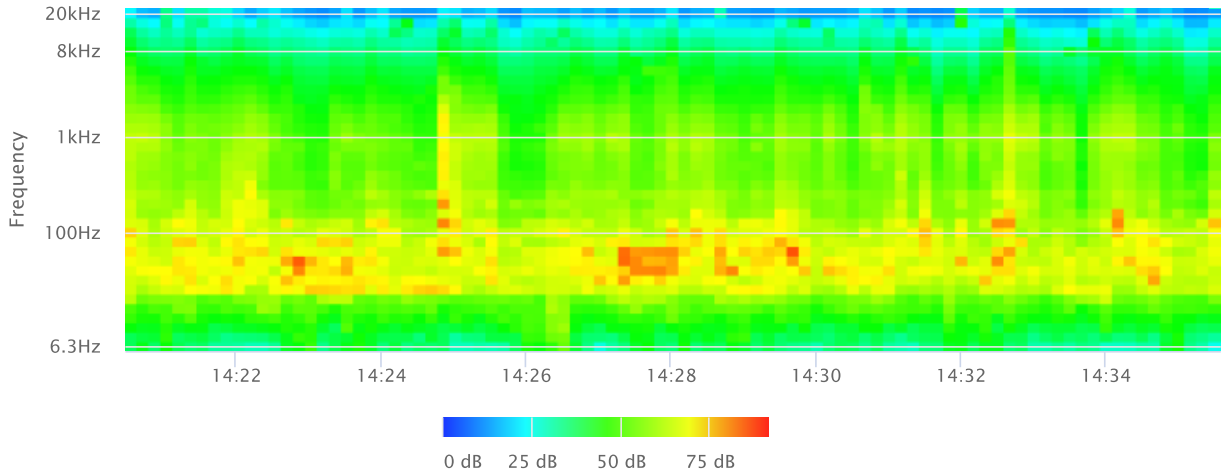
OBA 1/1 Lmax



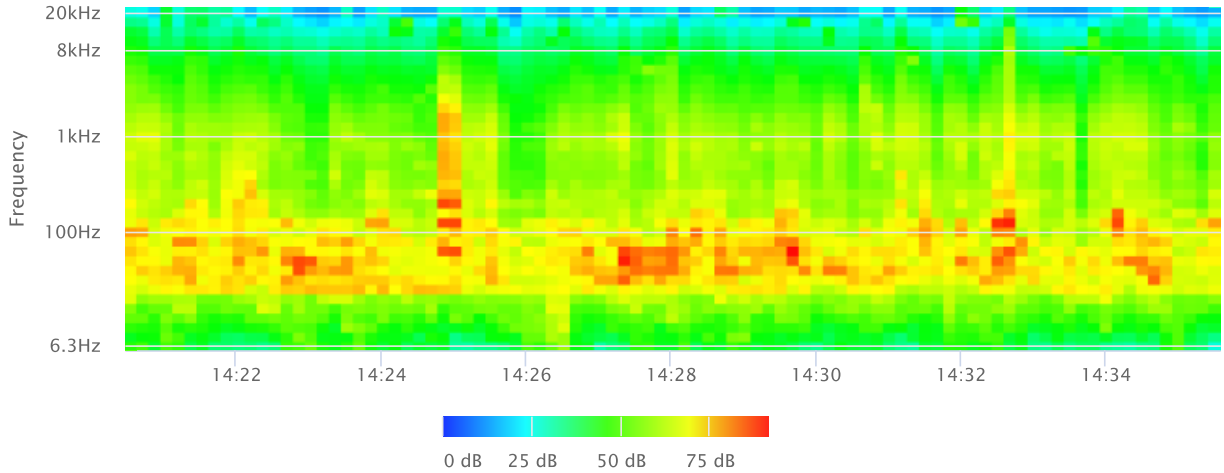
OBA 1/1 Lmin



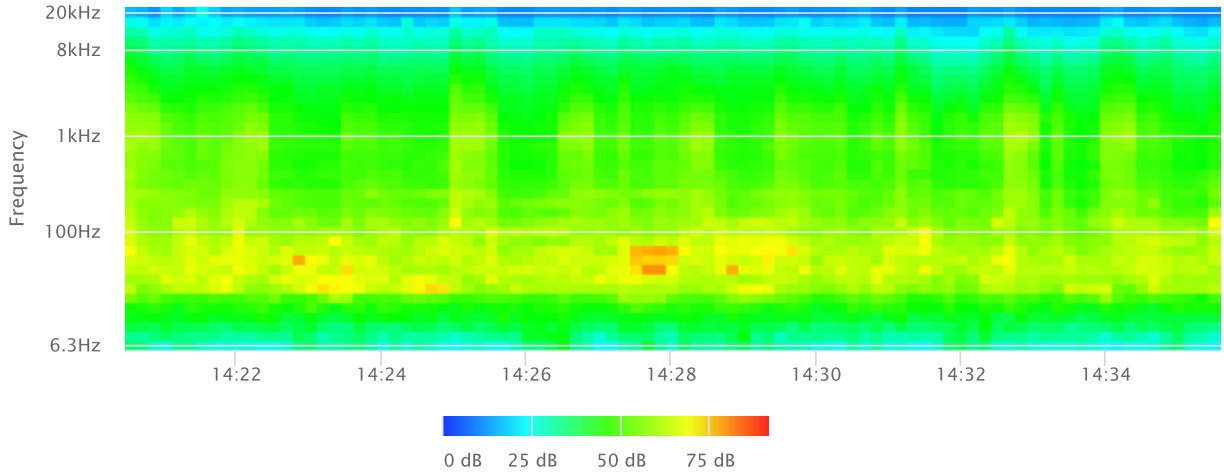
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
14:22
14:24
14:26
14:28
14:30
14:32
14:34

0 dB
25 dB
50 dB
75 dB

Measurement Report

Report Summary

Meter's File Name	LxT_Data.045.s	Computer's File Name	LxT_0003099-20220818 144823-LxT_Data.045.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM4 34° 5'30.69"N 118°18'37.04"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	KWAQN Project: Echelon Studios, 5601-5673 W Santa Monica Blvd		
Start Time	2022-08-18 14:48:23	Duration	0:15:00.0
End Time	2022-08-18 15:03:23	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	57.7 dB		
LAE	87.2 dB	SEA	--- dB
EA	58.4 µPa²h	LAFTM5	63.0 dB
EA8	1.9 mPa²h		
EA40	9.3 mPa²h		
LA_{peak}	92.5 dB	2022-08-18 14:58:31	
LAS_{max}	72.3 dB	2022-08-18 14:58:31	
LAS_{min}	48.6 dB	2022-08-18 14:50:29	
LA_{eq}	57.7 dB		
LC_{eq}	70.8 dB	LC_{eq} - LA_{eq}	13.1 dB
LAI_{eq}	61.6 dB	LAI_{eq} - LA_{eq}	3.9 dB

Exceedances	Count	Duration
LAS > 65.0 dB	8	0:00:33.3
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

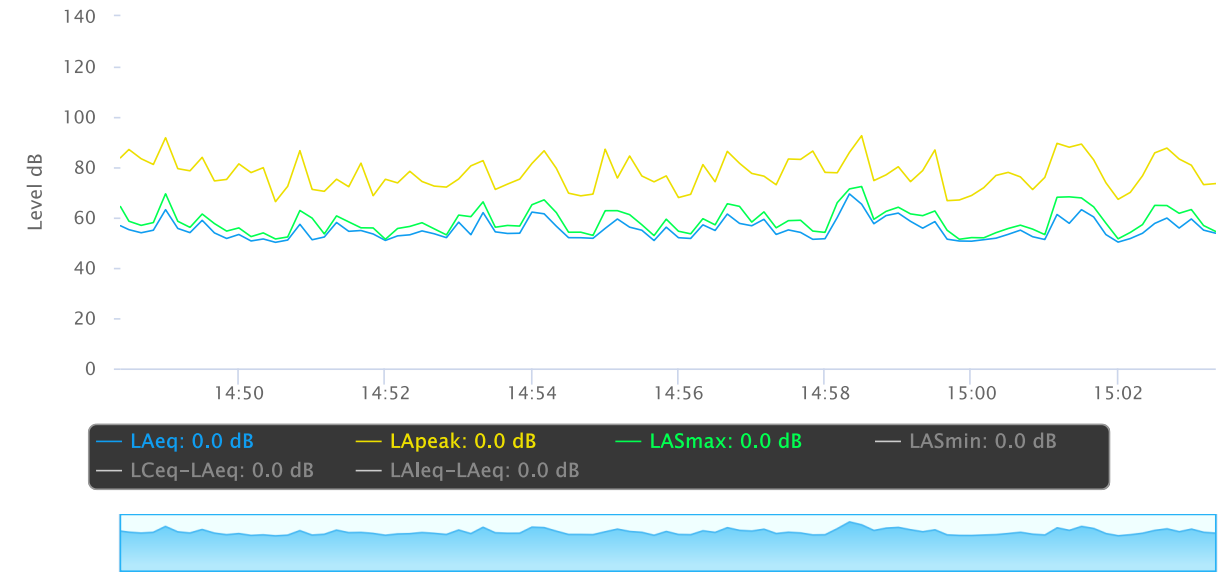
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	57.7 dB		70.8 dB		--- dB	
$L_{S(max)}$	72.3 dB	2022-08-18 14:58:31	--- dB		--- dB	
$L_{S(min)}$	48.6 dB	2022-08-18 14:50:29	--- dB		--- dB	
$L_{Peak(max)}$	92.5 dB	2022-08-18 14:58:31	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

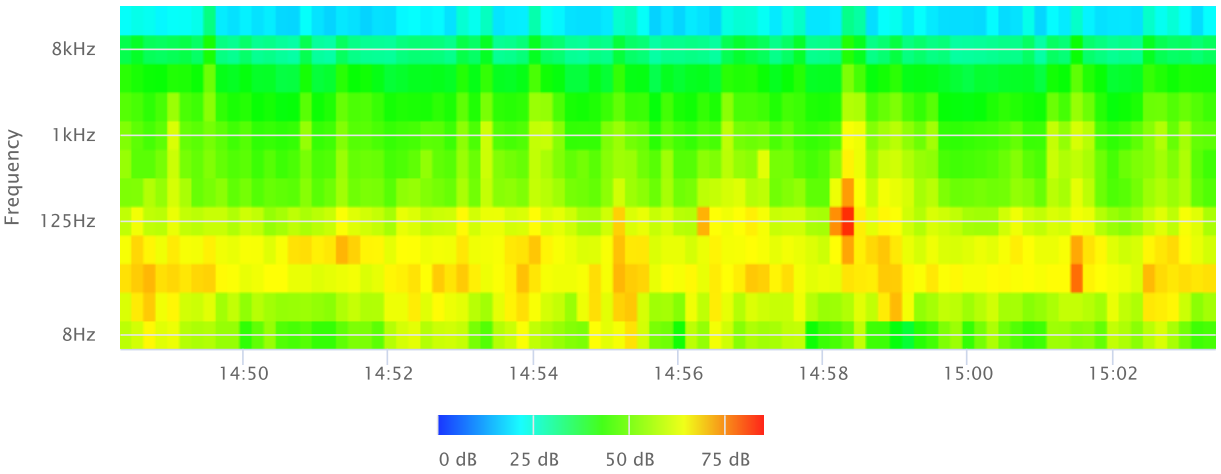
Statistics

LAS 2.0	66.5 dB
LAS 8.0	61.3 dB
LAS 25.0	56.8 dB
LAS 50.0	53.8 dB
LAS 66.6	52.4 dB
LAS 90.0	50.7 dB

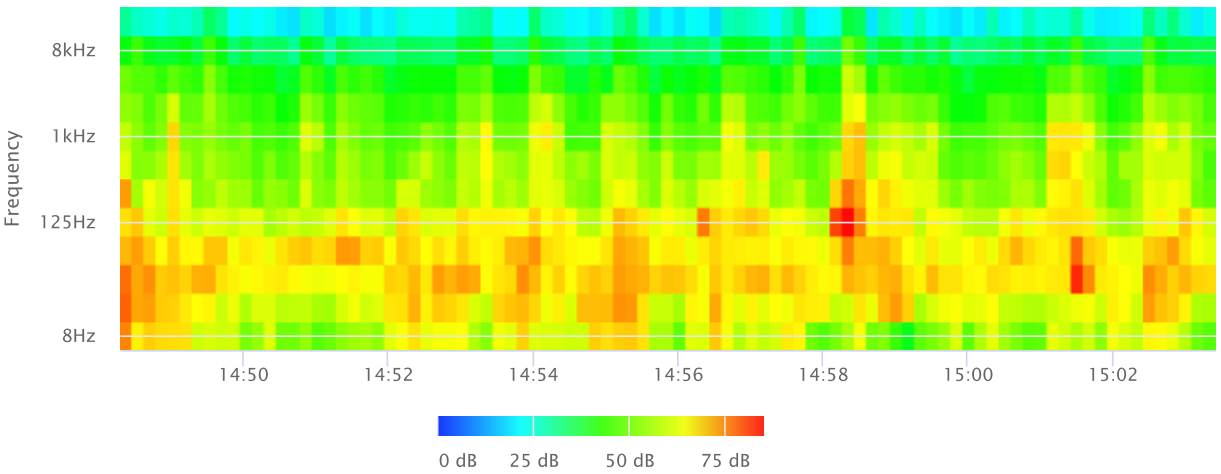
Time History



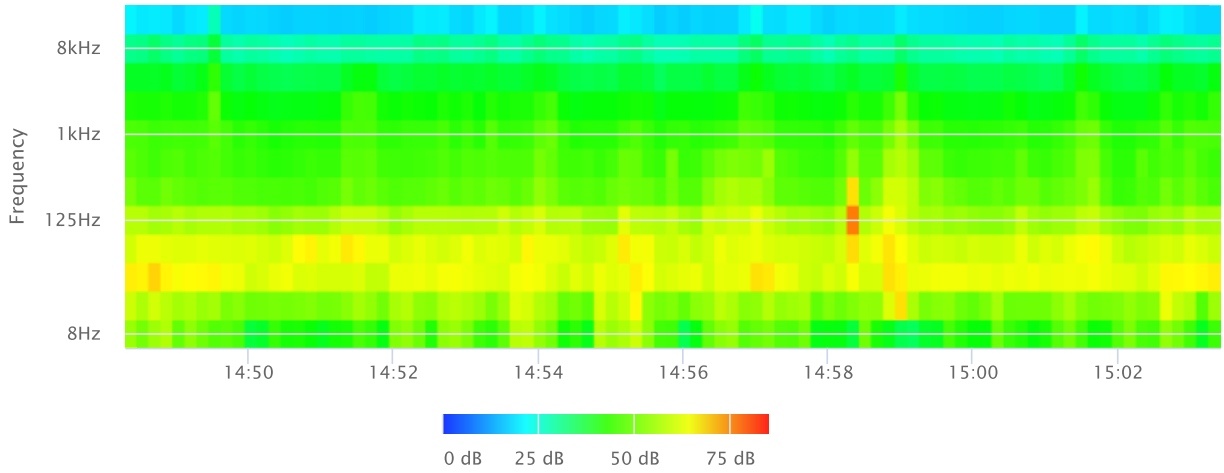
OBA 1/1 Leq



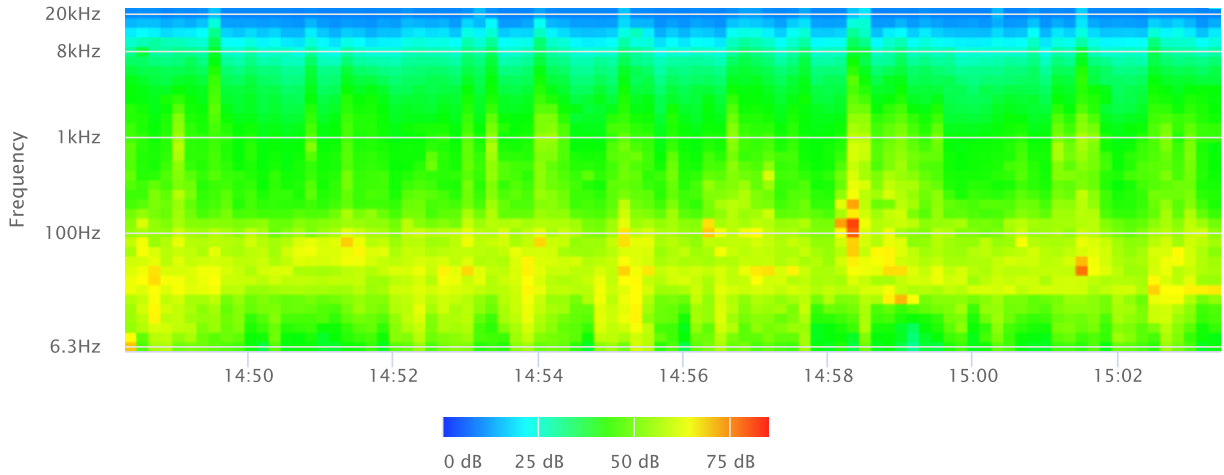
OBA 1/1 Lmax



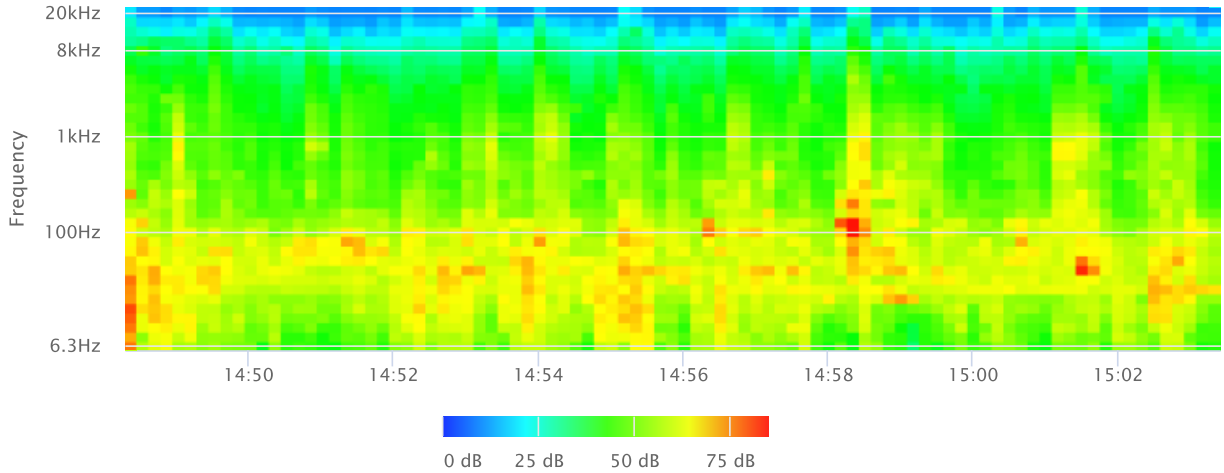
OBA 1/1 Lmin



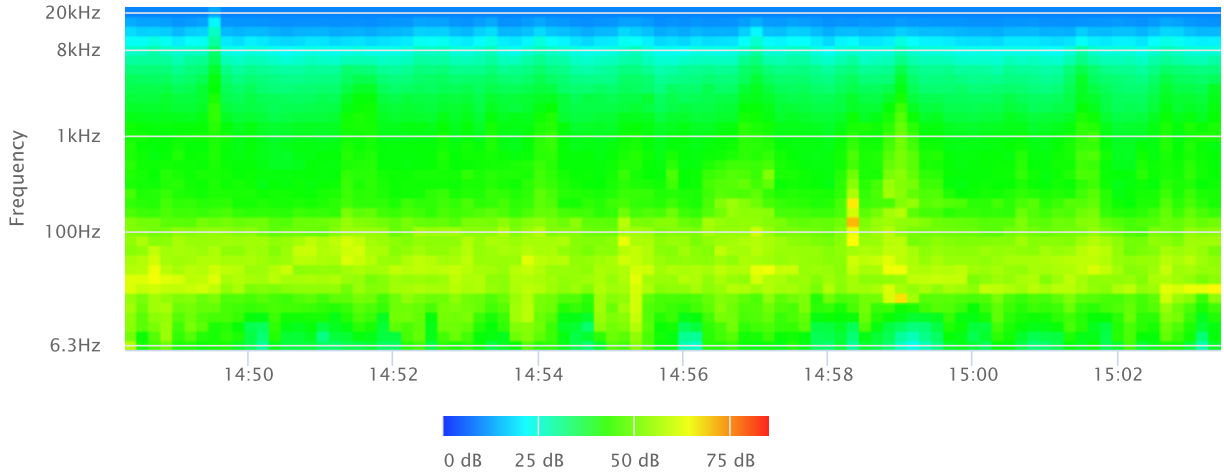
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
14:50
14:52
14:54
14:56
14:58
15:00
15:02

0 dB
25 dB
50 dB
75 dB

GROUNDBORNE VIBRATION ANALYSIS			
Project:	Echelon Studios		Date: 12/23/22
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Project Site		
Address:	Residential uses on west side of N. Wilton Pl		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	55.00	Distance from Equipment to Façade of Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equation 7-2 from Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, 2018, pg 185.			
RESULTS			
PPV =	0.027	IN/SEC	OUTPUT IN BLUE