

**AIR, NOISE AND VIBRATION
MONTHLY MONITORING REPORT**

Prepared By:
Hajeong Lim (HRCG)

DDC Project No.:	BBJ Q DSS	Period Start: 08/01/23 End 08/31/23
Project Name:	NYC Borough Based Jails System - Queens Dismantle and Swing Space	
DDC Pin No.:	8502020CR0046P	

1) Community Air Monitoring Monthly Status Summary

TWA – Time Weighted Average
mg/m³- milligrams per cubic meter

Number of Workdays in a Month	Number of Air Monitoring Days in a Month	Number of Days with Dust Concentrations above Action Concentrations by Month (0.1 mg/m ³ 15 minute TWA)	Comments
24	2	None	The initial 2 days of peak dust monitoring the Phase IV dismantle was performed.

Community Air Monitoring Monthly Excursions and Corrective Actions

Action Concentration = 0.100 mg/m³ 15 minute TWA above background concentration*

Stop Work Concentration = 0.150 mg/m³ 15 minute TWA above background concentration*

* Background concentration values vary daily. See Prestart/Background Condition Level in the attached graphs.

Date: Time	Maximum Dust Reading Before Corrective Action 15 Minute TWA (mg/m ³)	Maximum Dust Reading After Corrective Action 15 Minute TWA (mg/m ³)	Corrective Action
N/A	N/A	N/A	N/A

Narrative Summary of Air Monitoring, Excursions and Corrective Actions:

In august 2023, construction-related levels of Particulate Matter (PM) PM10 did not surpass Daily Permissible Exposure Limits (PEL) as set by federal standards for the 24-hour Time Weighted Average (TWA), or daily value, and did not cause air quality concerns to the public or on-site workers.

The contractor, Hunter Roberts Construction Group, in conjunction with the contractor’s environmental specialist, has successfully implemented mitigation techniques at Action Level as well as Permissible Exposure Limits (15-Minute TWA) to suppress construction activity effects on air quality throughout the project work-zone.

2) Community Noise Monitoring Monthly Summary

Units to be a weighted decibels (dBA) level

Number of Workdays in a Month	Number of Noise Monitoring Days in a Month	Number of Days with Noise Levels above Action Levels by Month	Comments
24	4	None	

Community Noise Monitoring Monthly Excursions and Corrective Actions

Noise Monitoring Location 1 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 75 / NA
 Noise Monitoring Location 2 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 75 / NA
 Noise Monitoring Location 3 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 69 / 68
 Noise Monitoring Location 4 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 65 / 55
 Noise Monitoring Location 5 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 68 / 67

Date Time	Location	Maximum Noise Reading before Corrective Action (dBA)	Maximum Noise Reading after Corrective Action (dBA)	Baseline Noise Level Day/Night (dBA)	Corrective Action
N/A	N/A	N/A	N/A	N/A	N/A

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

Throughout August 2023, noise levels remained below the set thresholds at all five locations. Construction-related activities in the month stayed within or below the 75 dB warning limit at various sites: location #1 at Queens Borough Hall, location #2 at the Southwest Corner of QDA Wing, location #3 at the corner of 134th St and Hoover Ave (69 dB), location #4 (200 ft from Kew Garden Rd on 82nd Rd, 65 dB), and location #5 (between 82nd Rd and 83rd Ave on Queens Blvd, 68 dB). No corrective actions were required as noise levels didn't surpass the limits.

3) Community Vibration Monitoring Monthly Summary

Units (in/sec)

Number of Workdays in a Month	Number of Vibration Monitoring Days in a Month	Number of Days with Vibration Levels above Action Levels by Month	Comments
24	24	2	Vibration Monitoring was continued throughout the month and two exceedance events were recorded as below.

Community Vibration Monitoring Monthly Excursions and Corrective Actions

Alert / Action Level = 0.3 in/s

Stop Work Level = 0.5 in/s

Date: Time (at QDA Wing Vibration Monitor Location #2)	Maximum Vibration Level before Corrective Action (in/s)	Exceedance Duration	Maximum Vibration Level after Corrective Action (in/s)	Corrective Action
Aug 07 at 12:04 PM	2.49	5 min	N/A	No work occurred at this location at the time of the exceedances as there was no construction activities associated with erecting a new weather wall around the DA Wing due to rain on this day, and an air gap was created between DA Wing and Queens Detention Center in mid-July. Each event lasted less than 30 seconds and was preceded and followed by vibration level less than 0.006 in/sec. Consequently, the events were likely the result of direct contact with the transducer rather by rodents or small animals than vibrations in the structure. No corrective action was required.
Aug 07 at about 13:30 PM	More than 0.5.	Not recorded.	N/A	AKRF disregarded this incident similar to the 12:04 exceedance alarm because there is no construction activities that could cause this alarm except direct contact with rodents or small animals. No corrective action was required.
Aug 28 at 11:17 AM	2.43	<30 sec	N/A	No work occurred at this location at the time of the exceedance as there was no dismantle activities in the Queens Detention Center. The exceedance lasted for less than 30 seconds and was preceded and followed by vibration level less than 0.002 in/sec. Consequently, the event was likely the result of direct contact with the transducer by rodents or small animals rather than vibrations in the structure. No corrective action was required.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

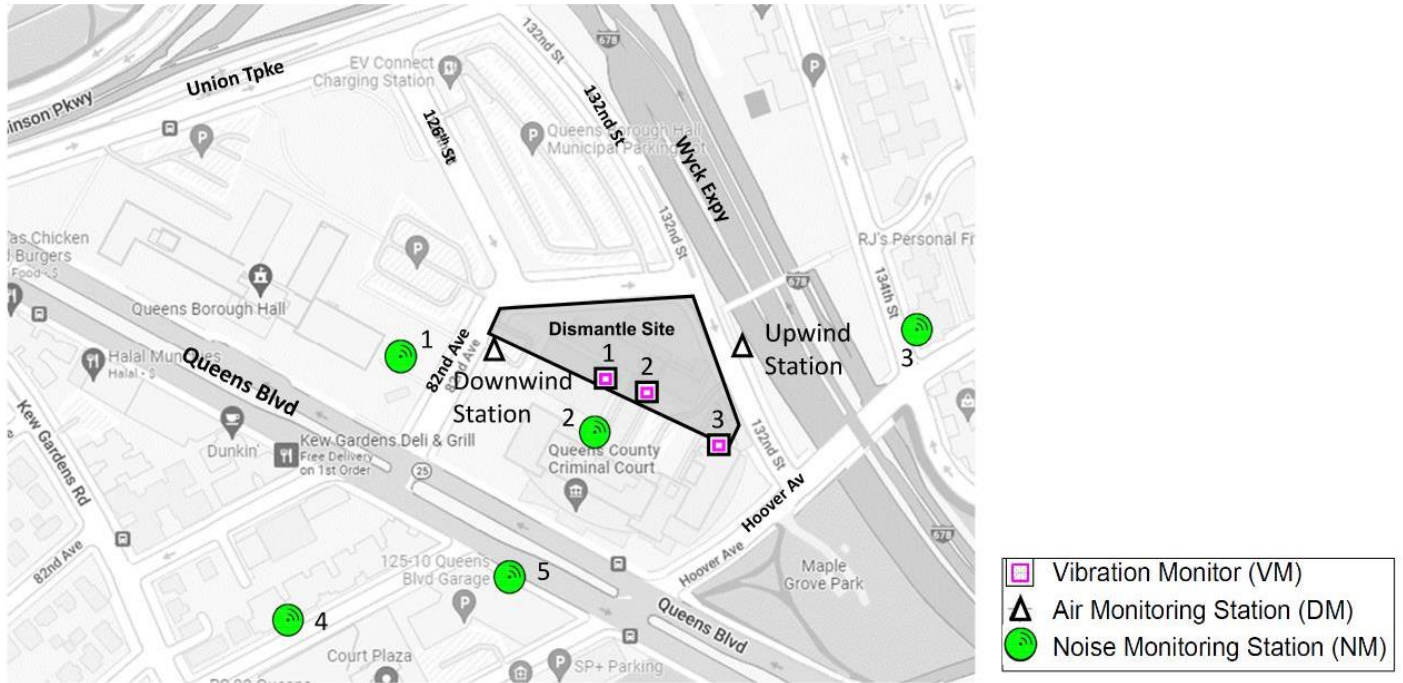
During the Month of August 2023, there were two vibration monitor exceedances at the Family Justice Center and QDA Wing vibration monitor locations. In both cases, there was no work in the adjacent areas at the vibration monitor location at the time of the exceedances. The events were likely the result of direct contact with the transducer rather than vibrations in the structure. No corrective action was required.

Other monitor at Annex Basement showed results of vibration being under the warning limit of 0.3(in/sec) / stop work limit of 0.5(in/sec).

ATTACHMENTS:

- 1 – Map of Monitoring Station/Locations
- 2 – Baseline Reference
- 3 – Data Plots

Environmental Monitoring Queens



Noise Threshold Limits in dBA – Baseline Survey April 2022

Construction Noise Threshold Limits in dBA

Location	Daytime Leq	Nighttime Leq
Adjacent to the easternmost façade of Queens Borough Hall	75	N/A
At the southwestern corner of the DA Wing	75	N/A
At the residences along 134th Street between 82nd Avenue and Hoover Avenue	69	68
At the residences on 82nd Road between Kew Gardens Road and Queens Boulevard, approximately 200 feet from Kew Gardens Road	65	55
At the residences on Queens Boulevard between 82nd Road and Lefferts Boulevard	68	67

Air Monitoring Upwind Station – Phase IV Peak Monitoring on August 8, 2023

Upwind Station Data Charts (PM 10)



Mass Conc. Total mg/m ³			Mass Conc. Total mg/m ³ AVG 15m		
DustTrak-8530			DustTrak-8530		
R0232(C)			R0232(C)		
MIN	AVG	MAX	MIN	AVG	MAX
0.001	0.012	0.065	0.0017	0.0125	0.0223

Name Queens Blvd. Upwind
S/N 0B446167
Description FA04057
Location Queens Borough Hall,
120-55 Queens Blvd,
Queens, NY 11424, USA

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Air Monitoring Downwind Station – Phase IV Peak Monitoring on August 8, 2023

Downwind Station Data Charts (PM 10)



Mass Conc. Total mg/m ³ DustTrak-8530 R0232(C)			Mass Conc. Total mg/m ³ AVG 15m DustTrak-8530 R0232(C)		
MIN	AVG	MAX	MIN	AVG	MAX
0.017	0.024	0.042	0.0179	0.0236	0.0296

Name Queens Blvd. Downwind
S/N 0B266651
Description FA04921
Location 125-1 Queens Blvd, Kew Gardens, NY 11415, USA

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Air Monitoring Upwind Station – Phase IV Peak Monitoring on August 9, 2023

Upwind Station Data Charts (PM 10)



Mass Conc. Total mg/m ³ DustTrak-8530 R5232(C)			Mass Conc. Total mg/m ³ AVG 15m mg/m ³ DustTrak-8530 R5232(C)		
MIN	AVG	MAX	MIN	AVG	MAX
0.005	0.035	0.064	0.0091	0.0341	0.0617

Name Queens Blvd. Upwind
S/N 0B446167
Description FA04057
Location 8185 126th St, Kew Gardens, NY 11415, USA

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Air Monitoring Downwind Station – Phase IV Peak Monitoring on August 9, 2023

Downwind Station Data Charts (PM 10)



Mass Conc. Total mg/m ³		
DustTrak-8530 RS232(C)		
MIN	AVG	MAX
-0.061	0.041	0.098

Mass Conc. Total mg/m ³ AVG 15m		
DustTrak-8530 RS232(C)		
MIN	AVG	MAX
-0.0493	0.0413	0.0726

Name Queens Blvd. Downwind
S/N 0B266651
Description FA04921
Location 125-1 Queens Blvd, Kew Gardens, NY 11415, USA

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Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 8-11-2023 Fri **Weather:** Sunny 73°

Work Activities: Cut steels at tank room & Demo brick at 8th fl west.

Prepared by: Law

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:03	63.6	<75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	9:37	67.2	<75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 nd Road	10:27	65	= 65 dBA/ 55 dBA N/A	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action:

N/A

Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 8-14-2023 Mon **Weather:** 77° F Mostly cloudy

Work Activities: Demo walls at Fan Room & cut steel beams at fan room

Prepared by: Lao

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1 1A	Queens Borough Hall NW corner	9:48	59.8	< 75 dBA	N/A Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	9:22	63	< 75 dBA	N/A Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 nd Road	10:14	62	< 65 dBA/ 55 dBA N/A	N/A Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action: N/A

Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 8-21-2023 Mon **Weather:** 78°F cloudy

Work Activities: Demo bricks at 8th fl west roof & remove steel at fan room

Prepared by: Tao

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	9:50	65.7	< 75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	09:26	71	< 75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 nd Road	10:14	63.7	65 dBA/ 55 dBA N/A	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action: N/A

Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 8-28-2023 Mon Weather: 74°F Cloudy

Work Activities: Demo walls at 8th fl west & Demo slab at mech room

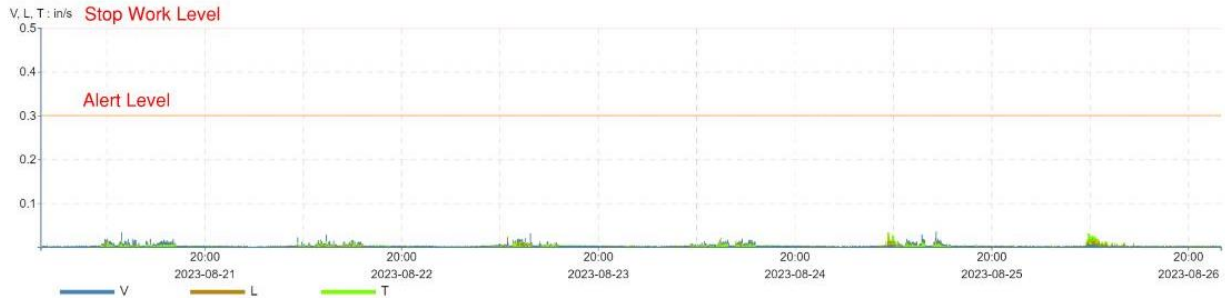
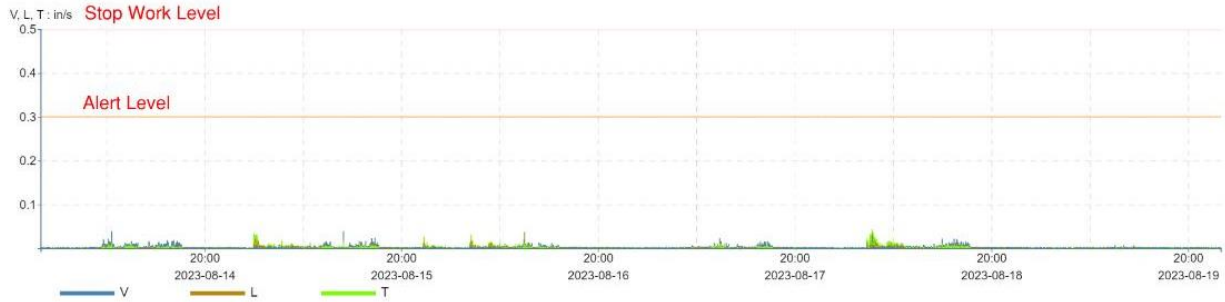
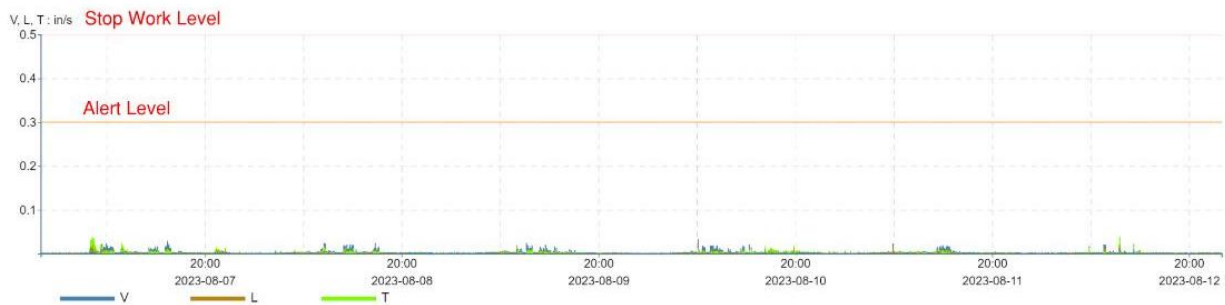
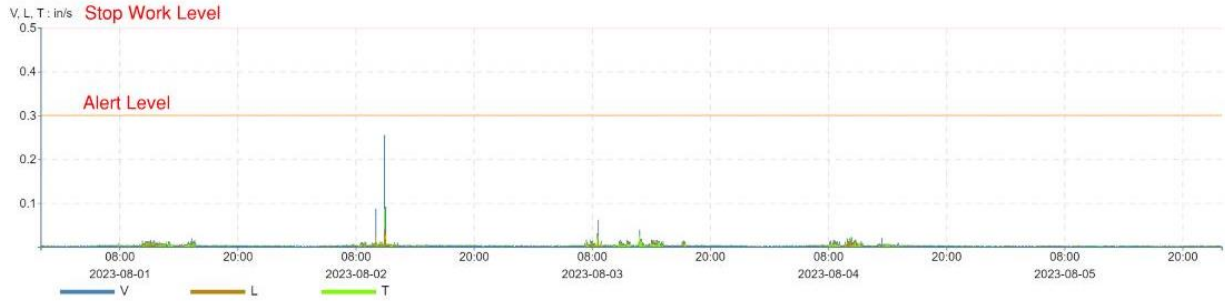
Prepared by: Yao

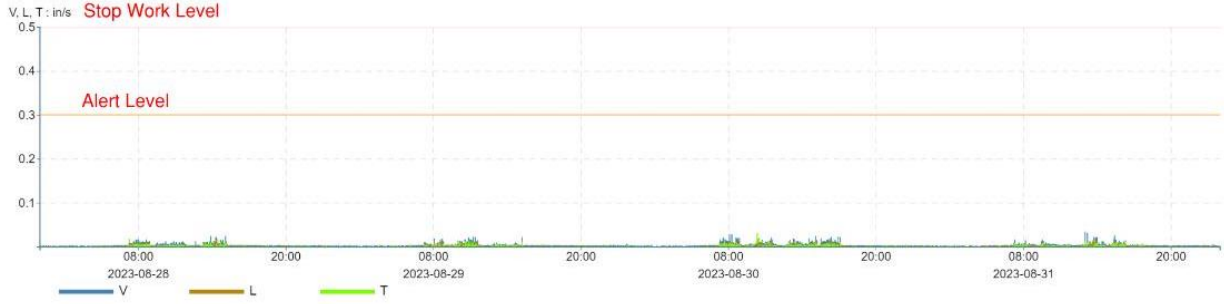
NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:04	68.1	< 75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	9:40	71.8	< 75 dBA	NA Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 nd Road	10:28	62	< 65 dBA/ 55 dBA N/A	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action: NA.

Vibration Monitor – VM1 August 2023

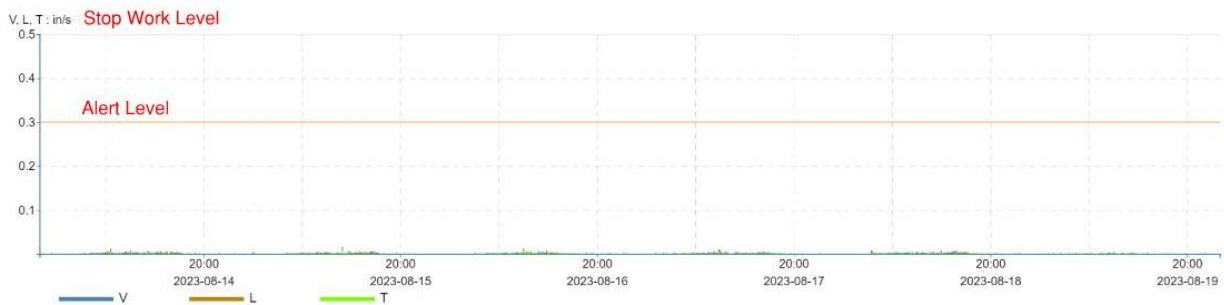
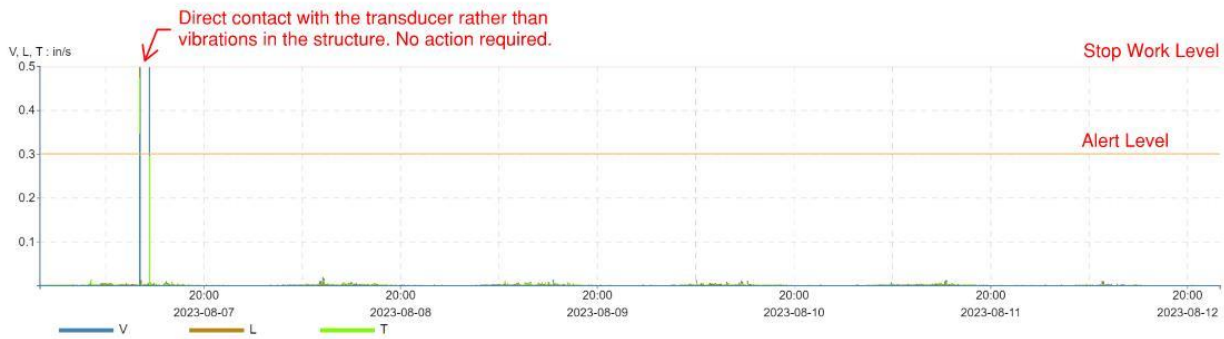
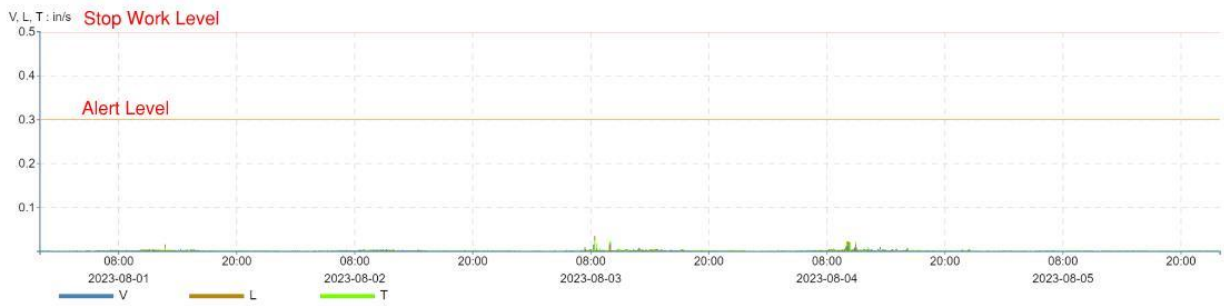
FAMILY JUSTICE CENTER – NORTHEAST CORNER

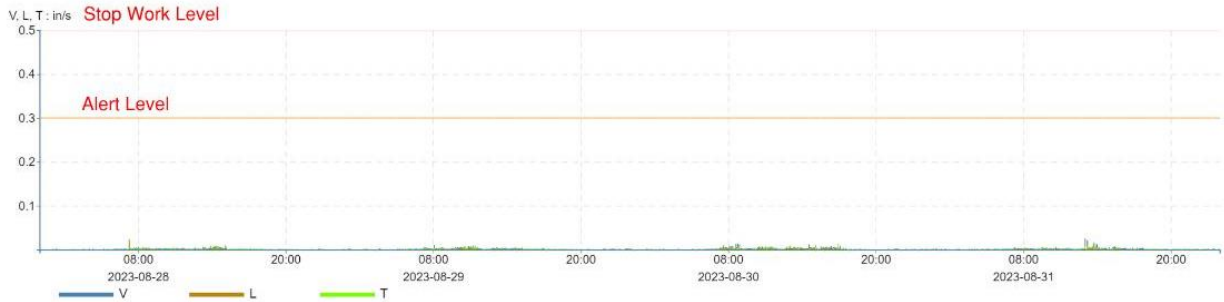
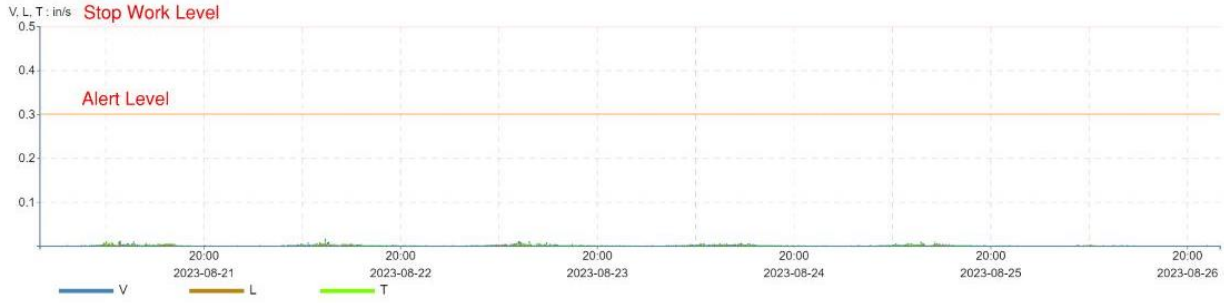




Vibration Monitor – VM2 August 2023

DA WING – NORTHWEST CORNER





Vibration Monitor – VM3 August 2023

ANNEX – BASEMENT FIRE PUMP ROOM

