

NSP Phase 2 Hibbard Park Project
Wilmette, Illinois

VIBRATION MONITORING REPORT

Mike Warning
V3 Companies
7325 Janes Avenue
Woodridge, IL 60517

February 22, 2021

Cti



4262 Old Grand Ave
Suite 102
Chicago, IL 60031

GEOTECHNICAL AND
STRUCTURAL
INSTRUMENTATION
847-244-5108

February 22, 2021

Mike Warning
V3 Companies
7325 Janes Avenue
Woodridge, IL 60517

RE: **Report:** - *Ground Vibration Monitoring for the Wilmette NSP Phase 2 Hibbard Park Project located in Wilmette, Illinois.*

Mr. Warning,

Construction Testing and Instrumentation, Inc. (CTI) have prepared this vibration monitoring report to evaluate vibrations during all construction activities. This report summarizes the results of ground vibration monitoring for three seismographs, all located around the surrounding project site (see attached location diagram). This summary report covers the monitoring period from **February 22, 2021 through February 22, 2021.**

The vibration equipment at the site are Geosonic WR3000LC seismographs that have the capacity to record peak particle velocity (PPV) and frequency (Hertz). The maximum allowable peak particle velocity is 0.50 inches per second (IPS), which is based upon the specifications established by the U.S Bureau of Mines (USBM) and a typical threshold for construction vibration monitoring. The seismographs are set to trigger whenever vibration levels exceed 0.003 in/s lowest (PPV) and continuously monitor vibrations during all construction activities.

All vibration recordings during this report period have been below the 0.50-inch per second threshold limit. The maximum PPV for the monitoring period are below.

February 19, 2021	491 Skokie Boulevard	Unit #3817	V	0.048 (in/s)
February 22, 2021	3000 Hill Street	Unit #3559	L	0.100 (in/s)
February 19, 2021	3005 Wilmette Avenue	Unit #3734	V	0.065 (in/s)

V- Vertical Vibration
T- Transversal Vibration
L- Longitudinal Vibration

Sincerely,

Daniel W. McCarthy
Senior Instrumentation Engineer



491 Skokie Blvd,
Wilmette, IL 60091

○ Seismograph Location - 491 Skokie Blvd. Place unit south of structure. If area does not allow sunlight to charge equipment unit should be placed inside of construction fence.



Seismograph Location -3000 Hill Street. Place unit east of structure.



3005 Wilmette Ave. Place unit on east side of structure.

Google

SN: 3817 v3.22
Date: 02/19/2021 **Time:** 11:25:00
Event: 1
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 491 SKOKIE BLVD

**Continuous Monitor Recording
Summary Data**

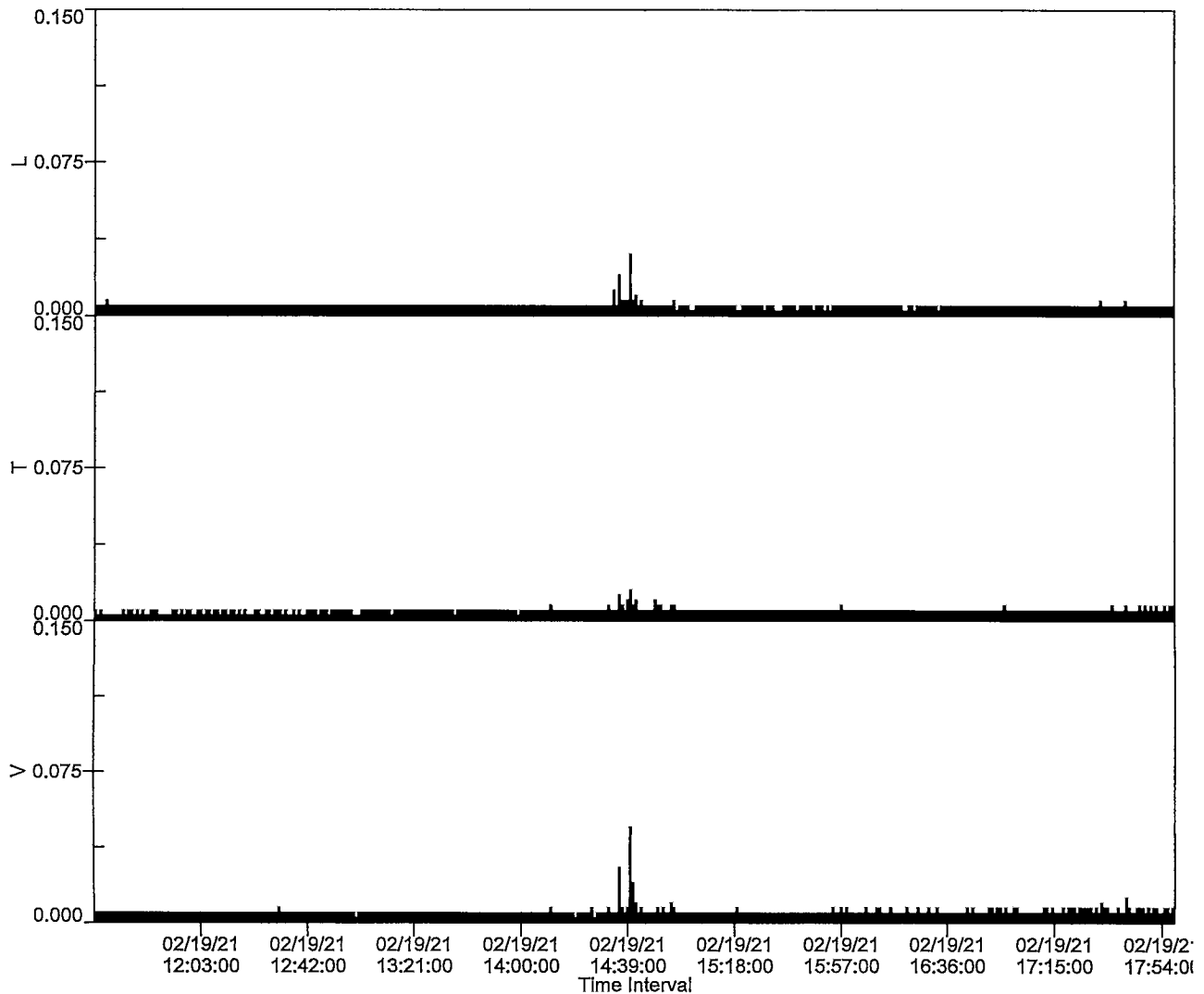
	L	T	V
PPV (in/s)	0.030	0.015	0.048
FREQ (Hz)	18.5	17.2	17.9
Peak Air Pressure: 78 db			
Recording Time: 394 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3817 Event: 1

Record Max PPV: 0.048 in/s Record Max DB: 78 db



SN: 3817 v3.22
Date: 02/20/2021 **Time:** 06:01:00
Event: 2
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 491 SKOKIE BLVD

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.015	0.015	0.015
FREQ (Hz)	250.0	125.0	6.9
Peak Air Pressure:	81 db		

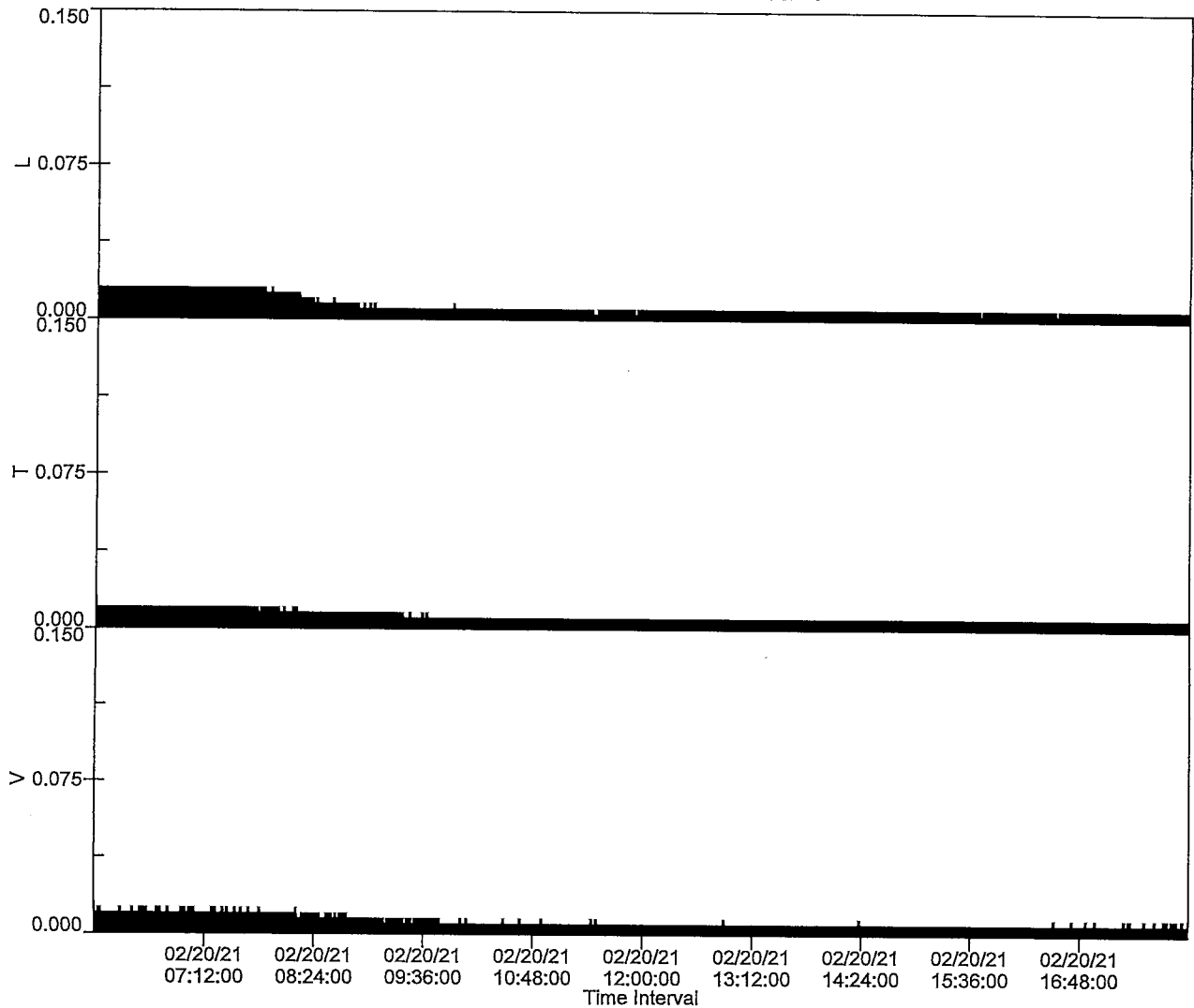
Recording Time: 718 minutes
Sample Size: 1440
Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3817 Event: 2

Record Max PPV: 0.015 in/s Record Max DB: 81 db



SN: 3817 v3.22
Date: 02/21/2021 **Time:** 06:01:00
Event: 3
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 491 SKOKIE BLVD

**Continuous Monitor Recording
Summary Data**

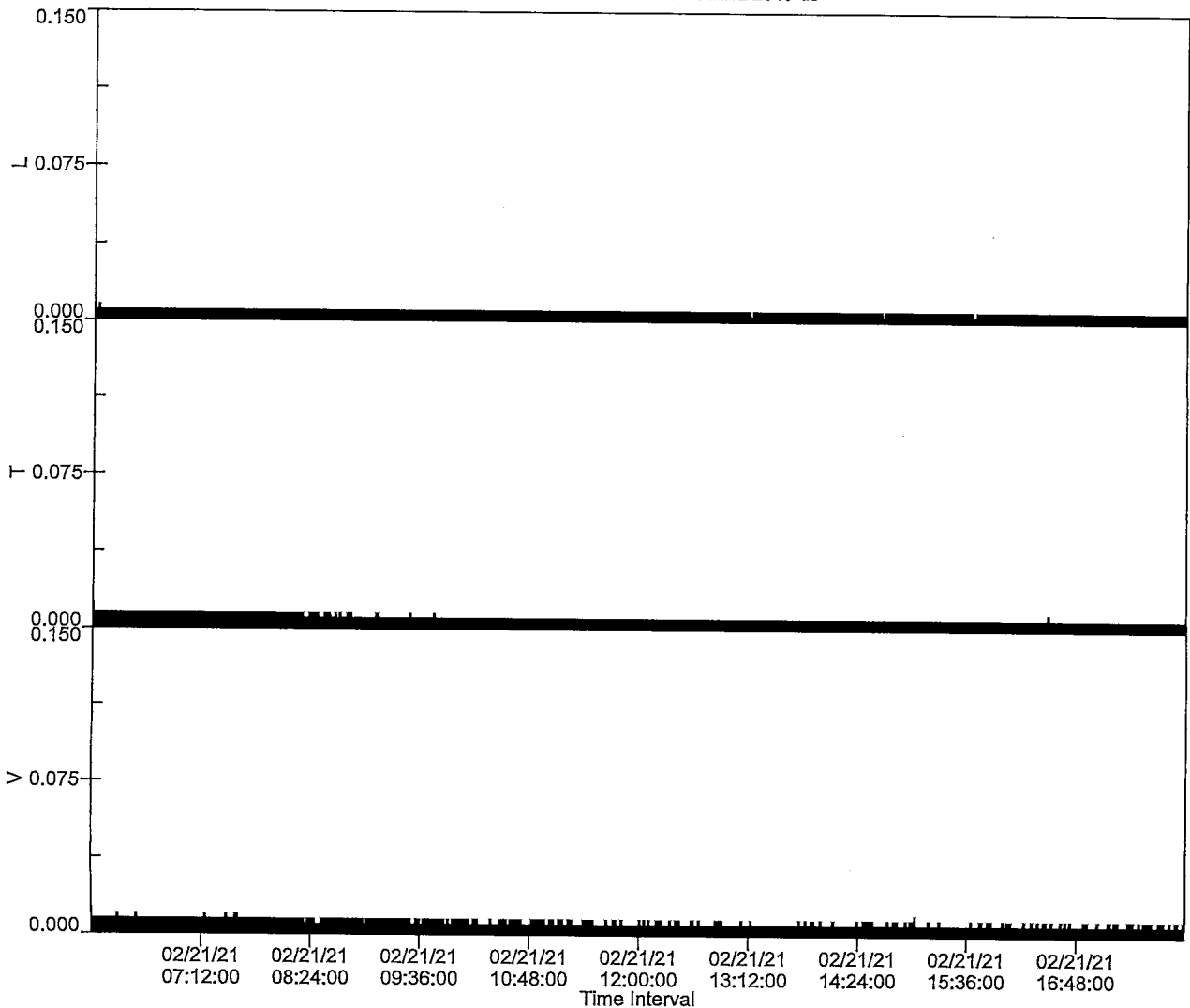
	L	T	V
PPV (in/s)	0.010	0.013	0.013
FREQ (Hz)	.6	7.1	.5
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3817 Event: 3

Record Max PPV: 0.013 in/s Record Max DB: 79 db



SN: 3817 v3.22
Date: 02/22/2021 **Time:** 06:01:00
Event: 4
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 491 SKOKIE BLVD

**Continuous Monitor Recording
Summary Data**

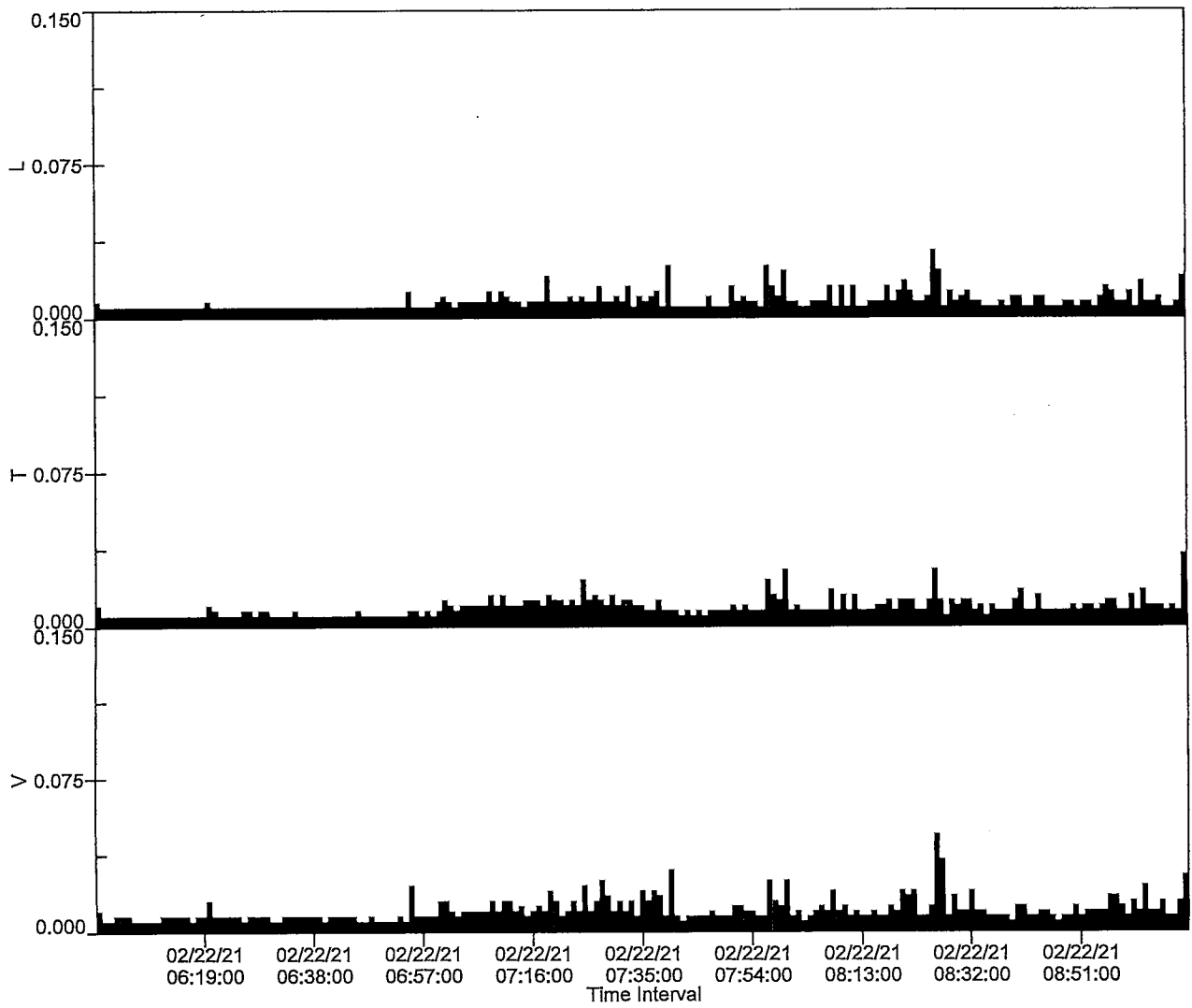
	L	T	V
PPV (in/s)	0.033	0.035	0.048
FREQ (Hz)	22.7	20.0	14.7
Peak Air Pressure:	101 db		
Recording Time:	189 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3817 Event: 4

Record Max PPV: 0.048 in/s Record Max DB: 101 db



SN: 3559 v2.75
Date: 02/19/2021 **Time:** 11:18:00
Event: 1
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3005 WILMETTE AVENUE

**Continuous Monitor Recording
Summary Data**

	L	T	V
PPV (in/s)	0.013	0.013	0.023
FREQ (Hz)	71.4	100.0	41.7
Peak Air Pressure:	84 db		

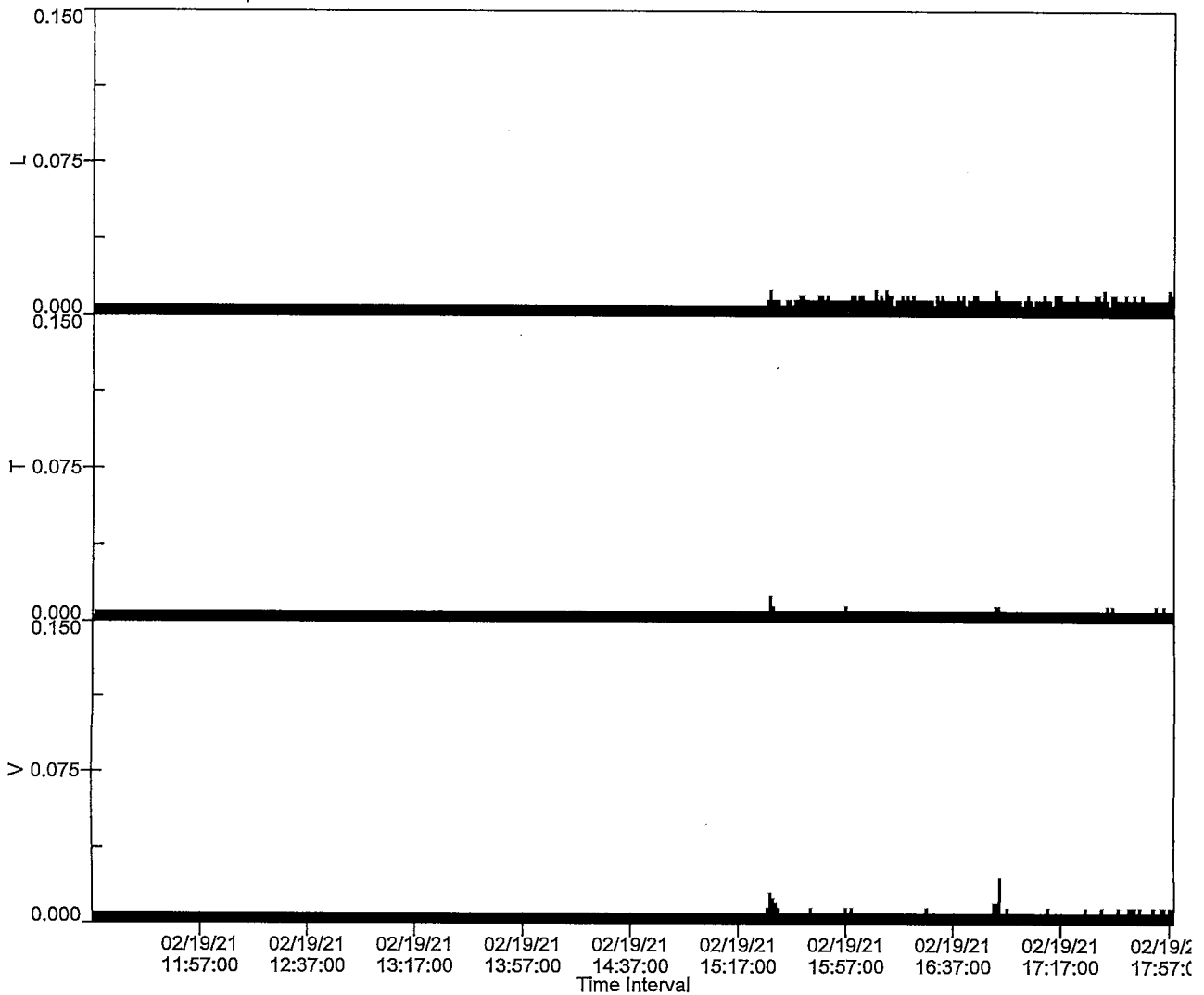
Recording Time: 401 minutes
Sample Size: 1440
Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 1

Record Max PPV: 0.023 in/s Record Max DB: 84 db



SN: 3559 v2.75
Date: 02/20/2021 **Time:** 06:01:00
Event: 2
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3005 WILMETTE AVENUE

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.020	0.013	0.013
FREQ (Hz)	45.5	4.7	2.2
Peak Air Pressure:	87 db		

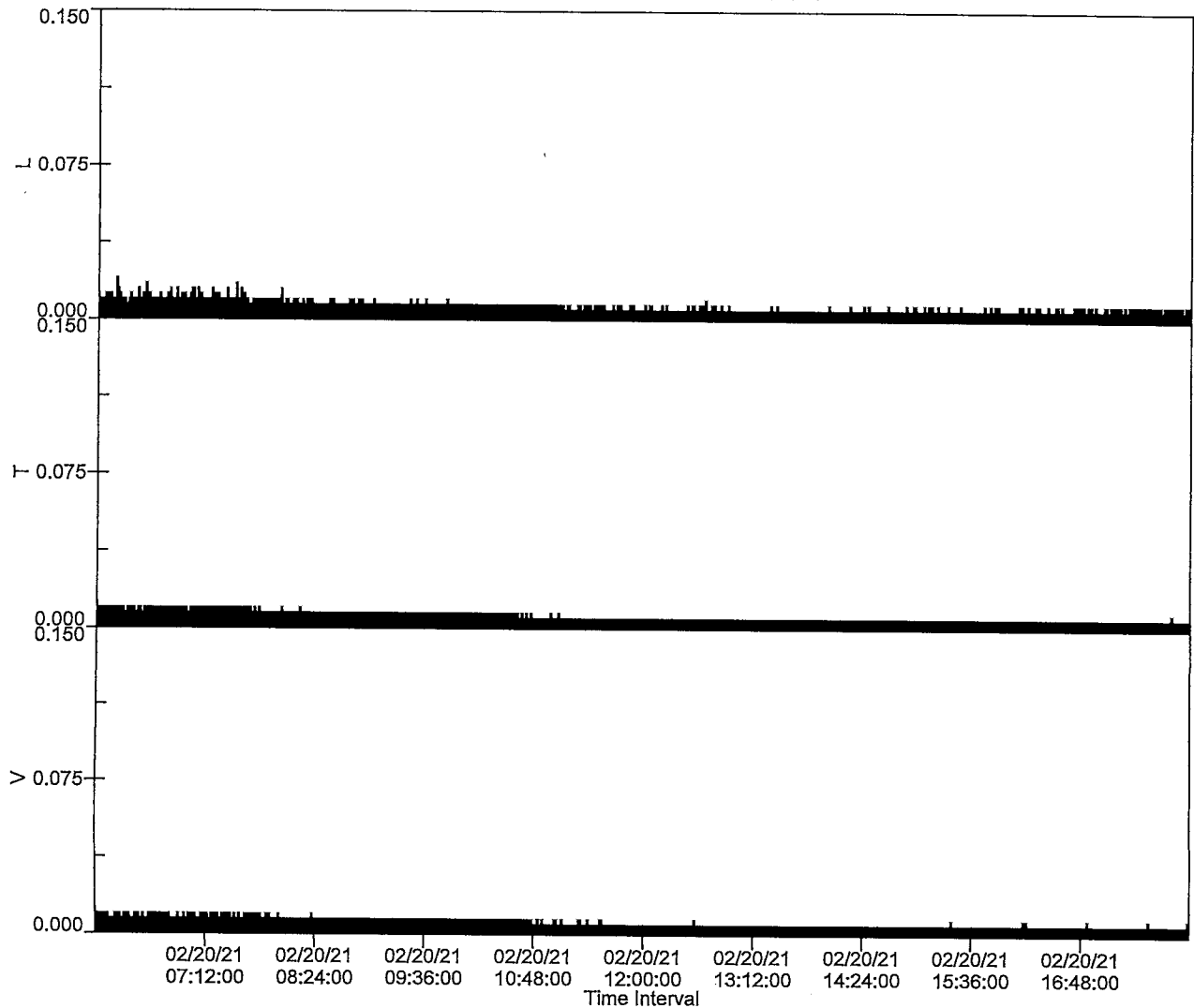
Recording Time: 718 minutes
Sample Size: 1440
Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 2

Record Max PPV: 0.020 in/s Record Max DB: 87 db



SN: 3559 v2.75
Date: 02/21/2021 **Time:** 06:01:00
Event: 3
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3005 WILMETTE AVENUE

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.3	6.4	.2
Peak Air Pressure:	86 db		

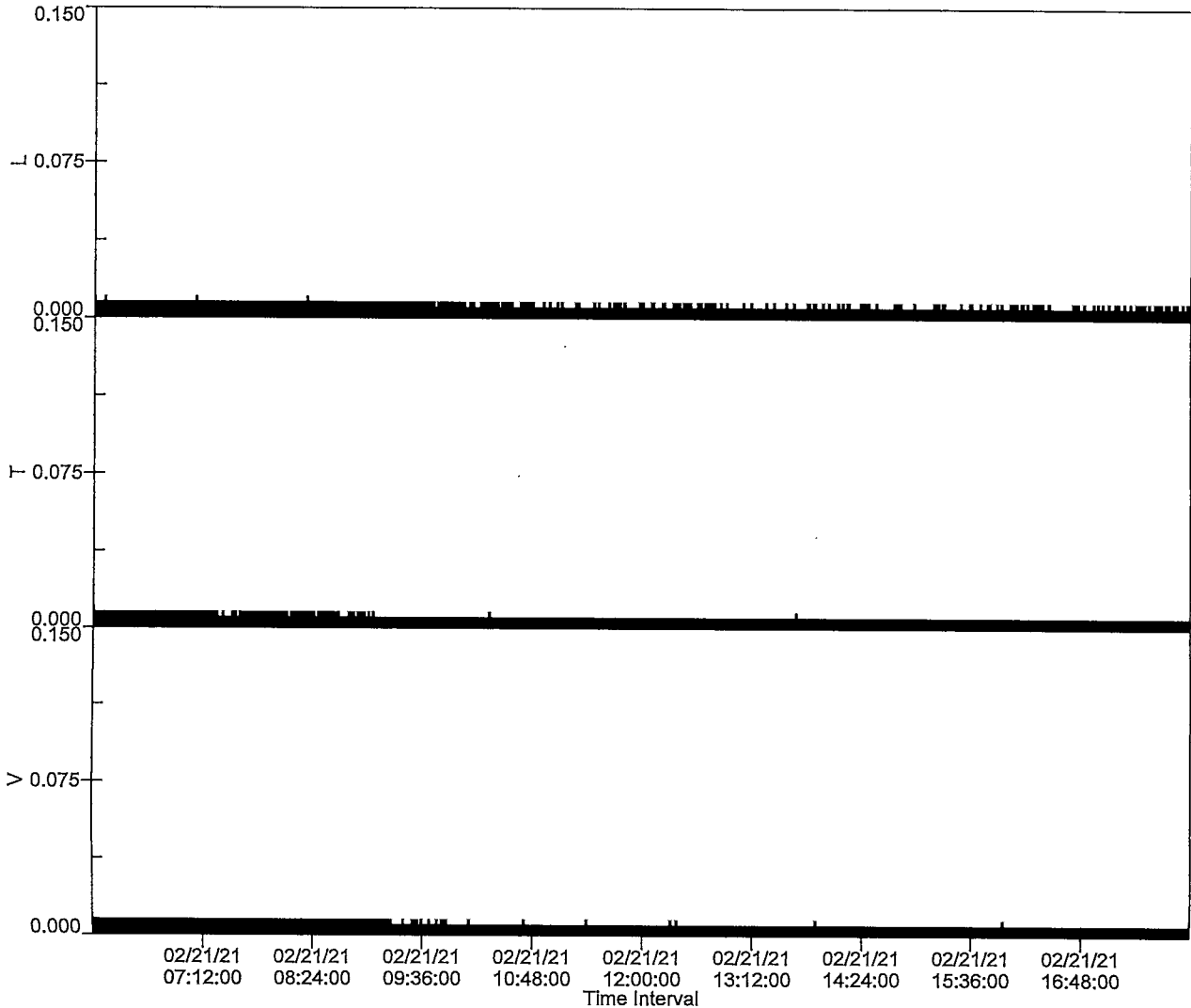
Recording Time: 718 minutes
Sample Size: 1440
Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 3

Record Max PPV: 0.010 in/s Record Max DB: 86 db



SN: 3559 v2.75
Date: 02/22/2021 **Time:** 06:01:00
Event: 4
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3005 WILMETTE AVENUE

**Continuous Monitor Recording
Summary Data**

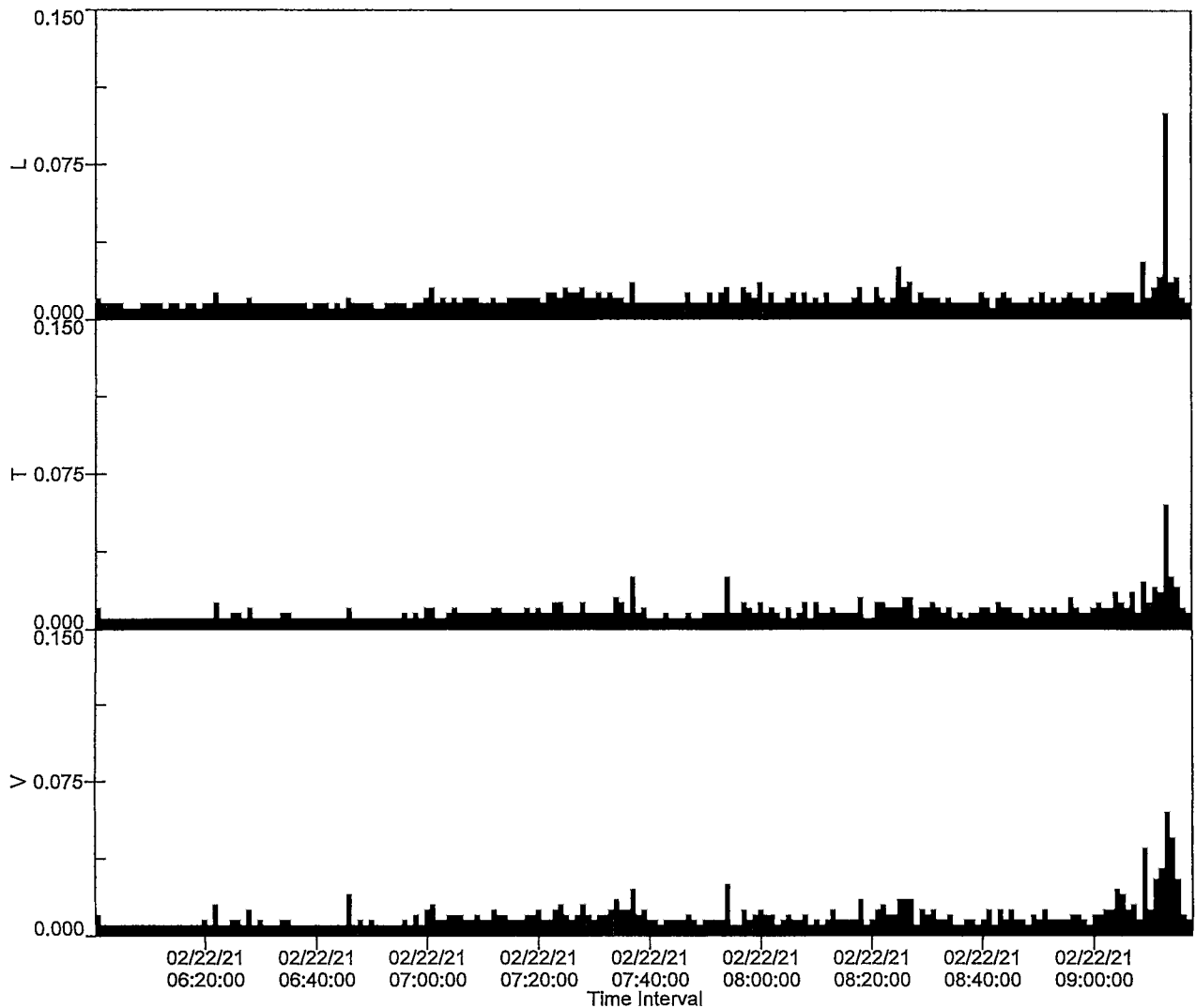
	L	T	V
PPV (in/s)	0.100	0.060	0.060
FREQ (Hz)	21.7	20.8	26.3
Peak Air Pressure:	92 db		
Recording Time:	197 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 4

Record Max PPV: 0.100 in/s Record Max DB: 92 db



SN: 3734 v3.22
Date: 02/19/2021 **Time:** 11:23:00
Event: 1
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.4
Operator: CTI INC
Comment: 3000 HILL STREET

**Continuous Monitor Recording
Summary Data**

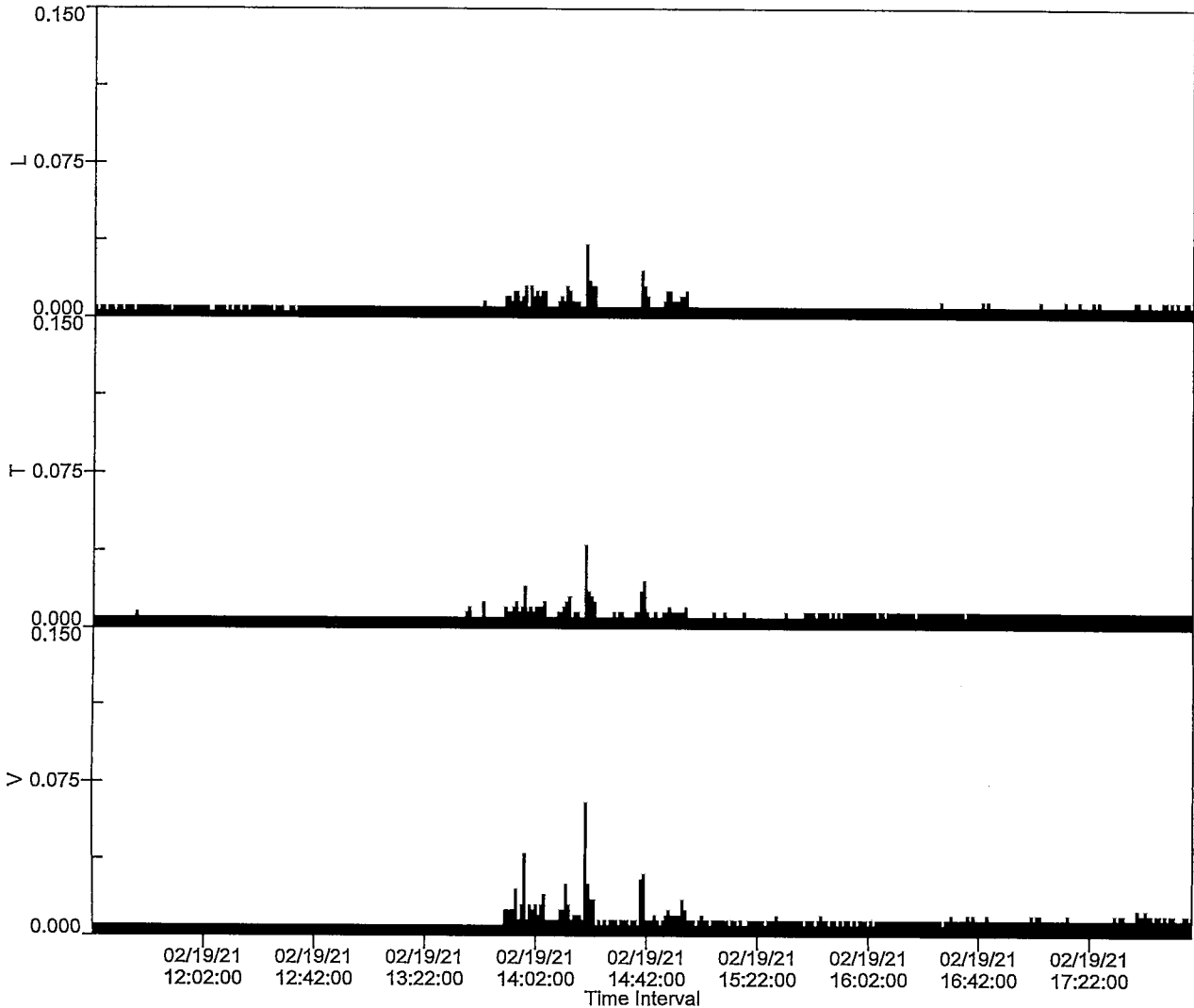
	L	T	V
PPV (in/s)	0.035	0.040	0.065
FREQ (Hz)	14.3	7.6	12.8
Peak Air Pressure:	86 db		
Recording Time:	396 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3734 Event: 1

Record Max PPV: 0.065 in/s Record Max DB: 86 db



SN: 3734 v3.22
Date: 02/20/2021 **Time:** 06:01:00
Event: 2
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3000 HILL STREET

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.015	0.015	0.018
FREQ (Hz)	55.6	17.9	500.0
Peak Air Pressure:	87 db		

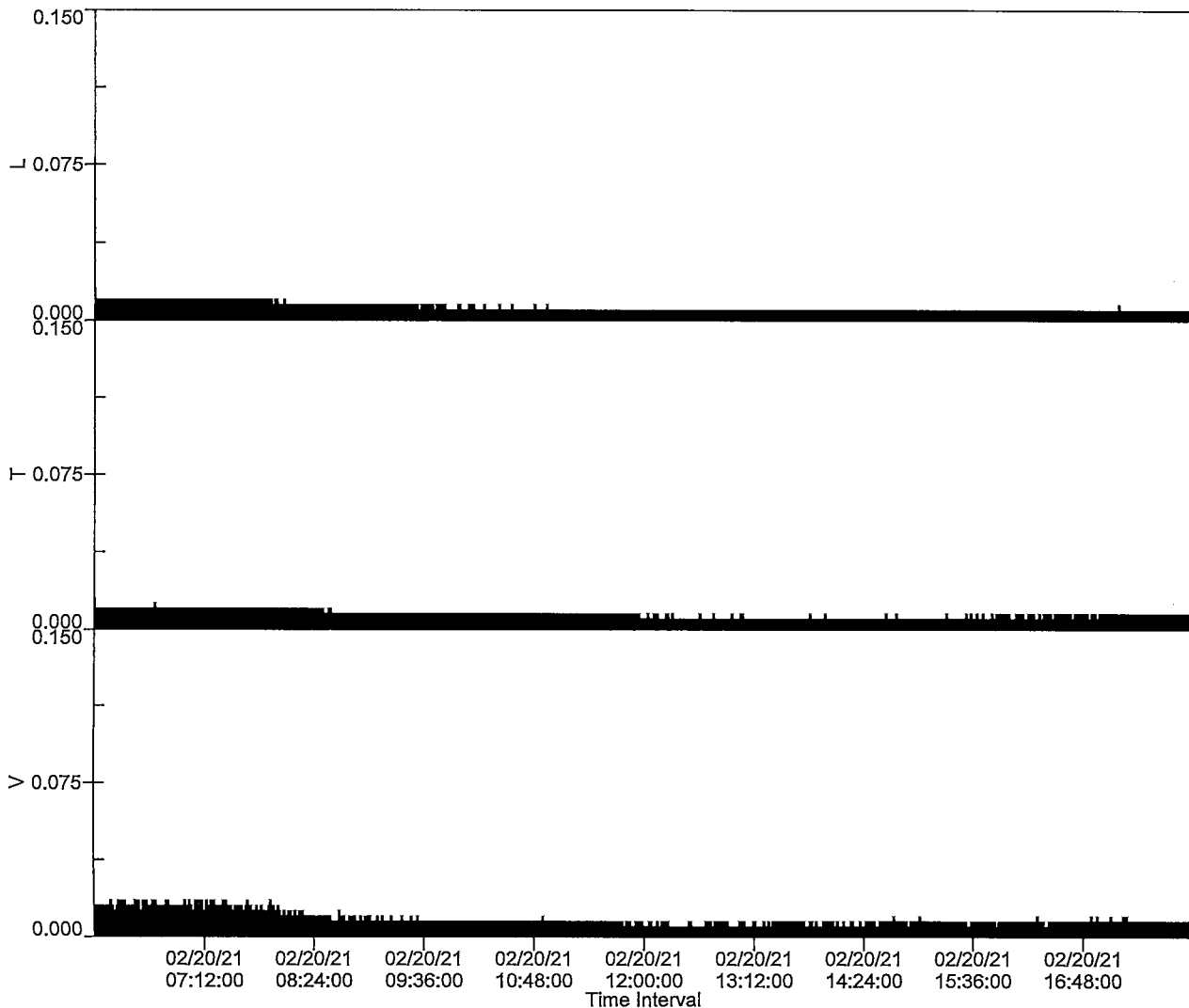
Recording Time: 718 minutes
Sample Size: 1440
Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3734 Event: 2

Record Max PPV: 0.018 in/s Record Max DB: 87 db



SN: 3734 v3.22
Date: 02/21/2021 **Time:** 06:01:00
Event: 3
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3000 HILL STREET

Continuous Monitor Recording

Summary Data

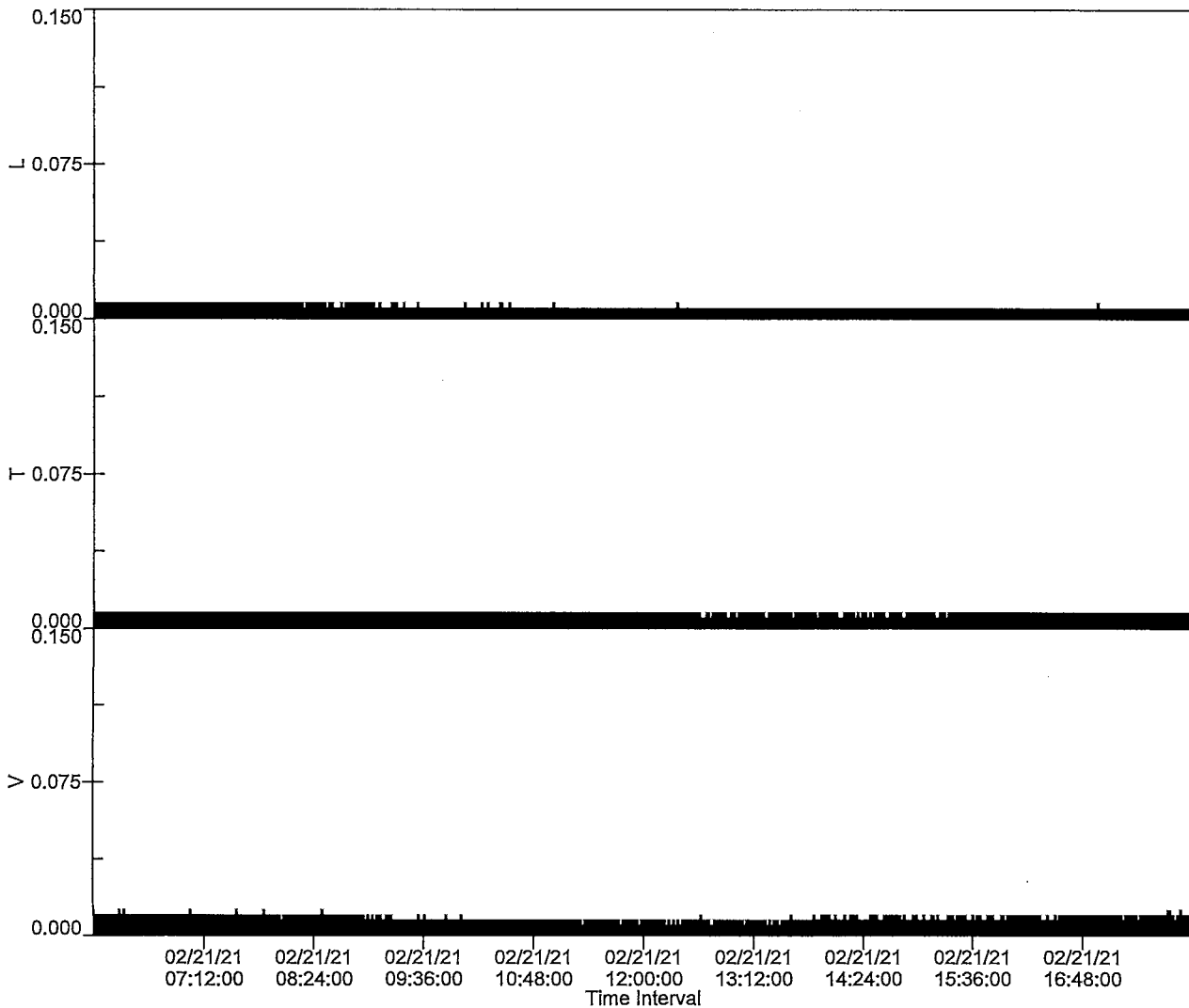
	L	T	V
PPV (in/s)	0.013	0.013	0.013
FREQ (Hz)	.3	2.8	.2
Peak Air Pressure:	86 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3734 Event: 3

Record Max PPV: 0.013 in/s Record Max DB: 86 db



SN: 3734 v3.22
Date: 02/22/2021 Time: 06:01:00
Event: 4
Client: V3 COMPANIES
Operation: CONSTRUCTION
Location: HIBBARD PARK
Distance: 15.
Operator: CTI INC
Comment: 3000 HILL STREET

**Continuous Monitor Recording
Summary Data**

	L	T	V
PPV (in/s)	0.050	0.048	0.053
FREQ (Hz)	12.2	20.8	13.9
Peak Air Pressure:	97 db		
Recording Time:	192 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 10/14/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3734 Event: 4

Record Max PPV: 0.053 in/s Record Max DB: 97 db

