#### CITY OF FRANKLIN QUARRY MONITORING COMMITTEE\* MEETING AGENDA

#### Franklin City Hall, Inspection Conference Room 9229 West Loomis Road, Franklin, Wisconsin 53132 Tuesday, February 13, 2024, <u>6:00 p.m.</u>

- I. Call to Order, Roll Call and Pledge of Allegiance
- II. Approval of Minutes
  - a. Regular meeting of October 24, 2023.
- III. Citizen Comment Period PLEASE NOTE: Each speaker may need to be limited to three minutes, allowing everyone who wishes the opportunity to speak
- IV. Business (Action may be taken on any item)
  - a. Quarterly presentation by Stantec Consulting Services, Inc., 4th quarter of calendar year 2023 (October-December).
  - b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).
  - c. Status update on quarry monitoring scope of services for calendar year 2024.
- V. Meeting scheduling discussion

#### VI. Adjournment

\* Notice is given that a majority of the Common Council may attend this meeting to gather information about an agenda item over which the Common Council has decision-making responsibility. This may constitute a meeting of the Common Council per State ex rel. Badke v. Greendale Village Board, even though the Common Council will not take formal action at this meeting.

Notice is further given that upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information, please contact the Franklin City Clerk's office at (414) 425-7500.

# City of Franklin Quarry Monitoring Committee Meeting Inspection Conference Room, Franklin City Hall 6:00 PM October 24, 2023 Minutes

## I. CALL TO ORDER

The October 24, 2023, Quarry Monitoring Committee meeting was called to order by Alderman Mike Barber at 6:00 p.m. in the Inspection Conference Room at City Hall.

Chair Alderman Mike Barber, Vice-Chair Dina Swanson, Alderman Yousef Hasan as well as members Edward Pings and Jon TenHaken were present. Also present were Principal Planner Régulo Martínez-Montilva; Clint Weninger of Payne & Dolan; and Kristen Gunderson-Inden of Stantec Consulting Services.

### II. APPROVAL OF MINUTES

a. Regular meeting of August 22, 2023

Member Pings moved and Alderman Hasan seconded to approve the minutes as presented. On voice vote, all present voted 'aye'; the vote was 5-0-0, motion carried.

### III. CITIZEN COMMENT PERIOD

Citizen comment period opened at 6:02 p.m. and closed at 6:02 p.m. No comments.

### IV. **BUSINESS**

a. Quarterly presentation by Stantec Consulting Services, Inc., 3rd quarter of calendar year 2023 (July, August and September).

Kristen Gunderson-Inden presented the 3<sup>rd</sup> quarterly report. No action taken.

b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).

Principal Planner Martinez-Montilva presented. No action taken.

c. Discussion about quarry monitoring scope of services for calendar year 2024.

Kristen Gunderson-Inden presented. Alderman Hasan moved and member TenHaken seconded to recommend approval of the quarry monitoring scope of services and to forward to the Common Council. No action taken.

# V. SCHEDULE NEXT MEETING

Next meeting is scheduled for January 23, 2024.

# VI. **ADJOURNMENT**

Member TenHaken moved and Alderman Hasan seconded to adjourn the October 24, Quarry Monitoring Committee meeting at 6:33 p.m. All present voted 'aye'; motion carried.



Stantec Consulting Services Inc. 12080 Corporate Parkway, Suite 200 Mequon, Wisconsin 53092 Tel: (262) 241-4466

January 30, 2024

Regulo Martínez-Montilva Principal Planner - Department of City Development City of Franklin 9229 W. Loomis Road Franklin, Wisconsin 53132 <u>RMartinez-Montilva@franklinwi.gov</u>

#### Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 4<sup>th</sup> Quarter 2023 Stantec Project: 193709433

Dear Mr. Martínez-Montilva:

The enclosed information summarizes monitoring activities completed during the fourth quarter of 2023 by Stantec Consulting Services Inc. (Stantec) pertaining to the Franklin Aggregates, Inc. quarry (owned by Payne & Dolan, Inc.) located at 6211 W. Rawson Avenue, Franklin, Wisconsin (the Quarry). Stantec was retained by the City of Franklin to conduct a combination of direct observation (visual) monitoring, seismic monitoring of the quarry operations, and evaluation of citizen complaints. Separate description of services and project background are provided in **Attachments A and B**, respectively. This letter summarizes the results.

#### **Direct Observation (Visual) Monitoring**

Copies of completed observation forms are prepared and posted to the project Teams site for review by City representatives. Copies of individual reports are not provided with this summary report.

One observation event was completed during the monitoring period. An unannounced inspection was completed on October 10. The street sweeper was not observed in use on Rawson Avenue during the site visit. No significant dust was observed from trucks exiting to the east on Rawson during the visit.

#### Seismic Monitoring

As contracted by the City, Stantec provided remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street (VT1 and S1) and 5800 W. Allwood Drive (VT4 and S2). The monitoring provides continuous (24/7) remote monitoring. Payne & Dolan also has monitors at 7526 S. 51st Street (VT2) and southeast of the quarry (VT3). Summaries of blasting data, comparing the Payne & Dolan unit recordings to the Stantec (Sauls Seismic) unit recordings, were prepared for the quarter, and are presented in **Attachment C. Figure 1** illustrates the locations of the blasts in the quarter.

Highlights of the seismic data include the following:

- Between October 1 and December 31, 2023, a total of 18 blasting events occurred. 14 of 18 (78%) of these blasts were confirmed by the Stantec monitors.
- Per the Planned Development District agreements (PDD), 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (of 0.30 inches per second (in/sec), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources (WDNR) that are above 0.75 in/sec.
  - None of the blasting events measured by Payne & Dolan or Stantec had a vibration greater than 0.30 in/sec. There have been 57 blasts year to date in 2023 and one vibration



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exceedance (3rd quarter), thus 98.2% of the quarry's blasts were below this level. This is in conformance with the PDD.

- Per the PDD, airblast resulting from P&D blasting shall not <u>exceed</u> 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.
  - None of the blasting events measured by Payne & Dolan or Stantec had an air overpressure (AO) greater than 123dB. Thus 100% of the quarry's blasts this quarter and year to date were below this level. This is in conformance with the PDD.
- The corresponding blast data measured by Stantec with the Sauls Seismic monitors generally
  aligned with the readings at each Payne & Dolan sponsored Vibra-Tech monitors. There were some
  larger differences in the AO readings. It should be noted that in addition to the fact the monitors are
  produced by different manufacturers, there are a variety of variables that can influence actual PPV
  readings. The Sauls Seismic monitors were swapped out and recalibrated in the late July 2023 by
  the equipment vendor; calibration is typically completed annually.
- In general, the largest blast readings at each monitor appear to correlate with the proximity of the nearest adjacent blast location.

### **Blast Complaint Evaluation**

A compilation of all blast events and complaints received by Stantec for the period October 1 through December 31, 2023, is provided as **Attachment C**. Note that Attachment C does not provide the actual complainant details (name, address, and phone number) if known; it was decided to have this information remain confidential in this report. However, complainant identity may be released upon public records request to the City of Franklin. The locations of all blasts and complaints are shown on **Figure 1**. The following highlights the results of the complaint evaluation:

#### Complaints - General

- 1 complaints (formally submitted)
- 1 complaints (informally submitted phone call only)
- 0 complaints regarding noise
- 0 complaints regarding dust
- 1 complaints miscellaneous (cloudy water in Root River south of Puetz Road)
- 1 complaints regarding vibration

#### Complaints – Blast Related

- 1 complaints corresponding to actual blast events
- 0 complaints not corresponding to specific blast events
- 1 complaints complainant location identified
  - 1 households that complained once this quarter

#### Complaints (non-anonymous; confirmed blast related) - Locations

- 1 complaint east of 51<sup>st</sup> Street
- 0 complaints south of Drexel Avenue
- 0 complaints west of Root River



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#### Summary of Complaint Comments - Blast Related

- November 28, 2023 (highest readings at the 7301 S. 51st Street meter 0.115 in/sec PPV, and 122.0 dB AO) one complaint to the east blast in the northern pit. This was an informal complaint.
  - o Complainant asked to be notified if there was an exceedance. Phone call only.

#### Summary of Complaint Comments – Non-Blast Related

- December 14, 2023 one complaint submitted on the City website stating cloudy water was observed in the Root River.
  - "My brother was walking along the Root River in Franklin south of Puetz Road and the water was very murky...I believe because of the color and that's it's downstream from Franklin Aggregate it might be a discharge from them".
- The WDNR also received a complaint regarding this issue on December 14, 2023. A Conservation Warden investigated and determined the source of the cloudy water to be from an outfall on the Payne and Dolan, Franklin Aggregates site. The Warden talked with the site supervisor, and he stated that the dewatering of groundwater from the pit is typically clear, but it was cloudy at that time due to additional pumping from the sediment pond. The pump was then turned off and stated pumping would not resume until sediment had settled. The WDNR issued a Notice of Non-Compliance to Payne and Dolan, Franklin Aggregates on December 20, 2023, and requested a written report be submitted by January 31, 2024, that validates pumping did not resume until the water was clear, steps that will be taken to prevent this from happening again, and confirmation that the monitoring in place is representative of actual discharges.

#### <u>Blast Events</u>

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- 18 blast events during monitoring period 4Q2023 (shot numbers 40 through 57)
  - 1 blast events corresponding to complaints
    - o 0 weather: rain
    - 1 weather: haze, partly to mostly cloudy, or cloudy
    - 0 weather: clear, fair, or scattered clouds
    - 0 time: prior to 12:00 pm (noon)
    - o 1 time: after 12:00 pm
  - 1 blast events with one complaint

#### Quarry Blast Locations Producing Complaints

- 0 southern area of quarry
- 0 central area of quarry
- 1 northern area of quarry

Upon review of these results outlined above, on Figure 1, and in Attachment C, the following observations are made:

- Very few, if any, quarry operational complaints are made regarding dust or truck traffic. Most complaints focus on quarry blasting and resulting ground vibrations.
- One complaint was received regarding cloudy water observed in the river south of the quarry. The WDNR investigated and issued a Notice of Non-Compliance.

Stantec

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- One complaint came from east of South 51<sup>st</sup> Street.
- No blast this quarter had more than one complaint.
- One address this quarter has complained more than once so far year to date (once in the second quarter, once in the third quarter).
- No complaints came from west of the Root River.

Please feel free to contact Mike Roznowski at 920-278-3200 or <u>mike.roznowski@stantec.com</u>; or Kristen Gunderson-Inden at 262-665-3447 or <u>kristen.gunderson-inden@stantec.com</u> if you have any questions.

# Respectfully, **STANTEC CONSULTING SERVICES INC.**

Kristen Gunderson-Inden Senior Environmental Scientist

Michael B. Roznowski, CHMM Senior Principal

Attachments A - Franklin Quarry Seismic Monitoring Description of Services B - Franklin Quarry Seismic Monitoring Project Background C - Summary of Seismic Data – 4th Quarter 2023 Figure 1 - Seismic Monitoring, Blasting, and Complaint Locations, 4th Quarter 2023



# ATTACHMENT A

FRANKLIN QUARRY SEISMIC MONITORING DESCRIPTION OF SERVICES



#### **DESCRIPTION OF SERVICES**

#### **Direct Observation (Visual) Monitoring**

During 2023, Stantec will conduct a total of eight (8) qualitative site visits at the quarry to observe and document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements, and to evaluate whether the quarry's general operations are consistent with best management practices employed by other similar quarries. Site visits are a combination of announced and unannounced, but all are conducted during normal business hours. The days of the week and times of the day for the visits vary. The observations are planned to be completed between April and October, when quarry operations are occurring, and airborne dust is more likely. Qualitative data to be collected includes the following:

- Visual observation of all aspects of the mining operation, including but not limited to:
  - Trucking operations, in particular pertaining to dust issues along Rawson Avenue
  - Operational issues that may affect local citizens in some form of adverse off-site impact
- Direct air quality observations, including:
  - General site and surrounding visual air quality, including opacity, in particular along Rawson Avenue
  - o Dust control measures and issues on-site that may affect off-site receptors
  - o Dust control issues directly adjacent off-site
  - Any other dust issues that may affect local citizens
- Quarry operations review (for announced visits), including:
  - Review of quarry records pertaining to dust control measures and recordkeeping, ensuring that the operator is following standard protocol to minimize off-site impacts, and evaluating how well and how quickly they respond to potential of actual off-site impact situations
  - Comparison of records to stated performance objectives and respective PDD compliance, only as they pertain to dust in general, and along Rawson Avenue in particular

The findings of each visit will be documented on a standard form previously approved by the City. The form will be filled out by hand during each site visit, and then scanned/posted to a project SharePoint site for review by City representatives. Stantec also will obtain photos to document site or directly adjacent off-site conditions, and short-duration video clips (e.g., showing dust impacts). These photos and videos are also uploaded to the project SharePoint site.

In addition to the observations and record review, Stantec also will obtain and document on the inspection forms local meteorological conditions that were relevant to the observations (e.g., temperature, wind speed, wind direction, humidity, and precipitation).

Stantec also will notify the City Planning Manager of any condition (pertaining to air or dust monitoring, or other PDD condition) that we become aware of that exceeds the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.

#### Seismic Monitoring

Stantec provides remote vibration monitoring by using Nomis Seismographs. Sauls Seismic is subcontracted to operate two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power is provided via an internal battery and an external battery connected to a solar panel. This type of configuration provides continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

Stantec also will notify the City Planning Manager of any condition (pertaining to blasting, noise or other PDD condition) that we become aware of that exceeded the allowances outlined in the PDD. This communication will be completed prior to noon the business day following the day we become aware of any such event.



#### **Blast Complaint Evaluation**

Periodically the City forwards to Stantec specific information pertaining to quarry complaints received. Stantec evaluates each one on a quarterly basis to determine the following corresponding collaborative conditions:

- Off-site dust complaints: weather conditions (wind direction and speed) the day of the complaint
- Off-site seismic complaints: seismic data from both Stantec (if monitoring at the time) and Payne & Dolan placed monitors
- On occasion, the City may request an exceptional blast complaint evaluation if a blast event receives an unusually high number of complaints. A letter report will be issued by Stantec within approximately one week of the request that describes:
  - o seismic data from both Stantec and Payne & Dolan placed monitors
  - $\circ$  weather conditions (wind direction and speed) the day of the complaint
  - a figure showing location of blast and complaints



# ATTACHMENT B

FRANKLIN QUARRY SEISMIC MONITORING PROJECT BACKGROUND



# **Background Summary**

Seismic monitoring was completed to document whether the site was compliant with operational parameters defined in the existing Planned Development District (PDD) agreements. Prior to 2018, Stantec completed a variety of 2, 4, and 8-week seismic monitoring periods. During 2018, Stantec completed one 4-week period and one 16-week period of monitoring. Monitoring consisted of placing a city owned and maintained Instantel MiniMate Plus fixed seismograph equipped with an external geophone at one of two city-established blast monitoring sites or vaults for each period. Seismic data was downloaded once every two weeks. Due to equipment limitations the data could not be downloaded remotely as it occurs (i.e., real time).

In 2019, Stantec provided remote vibration monitoring by using Nomis Seismographs. Sauls Seismic was subcontracted to install two separate seismographs, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51st Street, and 5800 W. Allwood Drive. Each monitor was pole-mounted and provided with a weatherproof enclosure. Power was provided via an internal battery and an external battery connected to a solar panel. This type of configuration provided continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet.

As contracted by the City for 2023, Stantec is providing remote vibration monitoring using two seismographs co-located with two existing Payne & Dolan (Vibra-Tech) monitors at 7301 S. 51st Street and 5800 W. Allwood Drive. There is a chance one of these monitors may be moved to an alternate location during 2022. The monitor provided continuous (24/7) remote monitoring. Quarterly summaries of blasting data, comparing the Payne & Dolan (Vibra-Tech) unit recordings, to the Stantec (Sauls Seismic) unit recordings, will be prepared for calendar year 2023.

Per the PDD #23 and #24 Ordinances, 85% of the quarry's blasts within any calendar year must be below the maximum permissible vibration (also referred to as particle or ground velocity) of 0.30 inches per second (in/sec), measured at the closest residence or inhabited structure not owned or controlled by the quarry. This is more stringent than State of Wisconsin regulations (Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast [new reference now Wis. Adm. Code, Safety and Professional Services (SPS) Chapter 307]) which require quarry operators to report any ground vibration levels to the Wisconsin Department of Natural Resources that are above 0.75 in/sec.

Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year, measured at the residence or inhabited structure closest to the site of the blast which is not owned or controlled by the Operator. Notwithstanding any other provision in this subsection, the Operator shall not exceed the airblast limitation imposed by Wis. Adm. Code, SPS Ch. 307.

In addition to obtaining and reviewing the blast data from the city-owned, fixed seismograph, Stantec also received data from Payne & Dolan's Vibra-Tech meters, which provided independently monitored Franklin Aggregate blasting data for the entire calendar year. Four monitors are used by Vibra-Tech, three along South 51<sup>st</sup> Street, and one just south of West Drexel Avenue. This independently monitored data was compared to the Stantec-obtained data.



# ATTACHMENT C

SUMMARY OF SEISMIC DATA - 4th QUARTER 2023

Payne & Dolan Blast Monitoring Data					Stantec Blast Monitoring Data			Comparison of P&D and Stantec Monitoring Data			Complaint Information			Weather (for complaints only)											
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	Freq (Hz)	AO (dB)	PPV (in/sec)	Freq (Hz)		Difference in PPV Values	Difference in Freq Hz Values		Com- plaints?	#	Primary direction of complaints (from quarry)	Wind Direc-tion	Wind Speed (mph)	Wind Gusts (mph)	Press-ure (in)	Humi-dity (%)	Condi-tions	Precip- itation	Temp. (°F)
10/5/23	12:50 PM	40	south	5800 ALLWOOD	2,640	0.035	25.0	112.0	N/D	N/D	N/D				no										
10/5/23	12:50 PM	40		7301 S 51st Street	1,849	0.033	7.2	112.0	N/D	N/D	N/D				110										
10/5/23	12:50 PM	40		7526 S. 51st Street	1,000	0.183	25.0	116.0		, 5	, 5														
10/5/23	12:50 PM	40	south	SE of Quarry	1,152	0.158	21.7	110.0																	
10/9/23	11:43 AM	41	south	5800 ALLWOOD	2,206	0.043	12.5	107.0	0.045	14.2	91.5	-0.002	-1.7	15.5	no										
10/9/23	11:43 AM	41	south	7301 S 51st Street	2,288	0.033	13.2	111.0	N/D	N/D	N/D														
10/9/23	11:43 AM	41		7526 S. 51st Street	1,310	0.150	26.3	111.0																	
10/9/23	11:43 AM	41		SE of Quarry	990	0.155	35.7	115.0																	
10/11/23	1:10 PM	42		5800 ALLWOOD	3,973	N/D	N/D	N/D	N/D	N/D	N/D				no										
10/11/23	1:10 PM	42	ł	7301 S 51st Street	1,605	0.080	14.3	120.0	0.078	12.8	112.3	0.003	1.5	7.7											
10/11/23	1:10 PM	42		7526 S. 51st Street	2,208	0.063	21.7	117.0																	
10/11/23	1:10 PM	42		SE of Quarry	2,955	N/D	N/D	N/D																	
10/17/23	3:45 PM	43		5800 ALLWOOD	4,093	N/D	N/D	N/D	N/D	N/D	N/D				no										
10/17/23	3:51 PM	43		7301 S 51st Street	1,374	0.093	8.8	118.0	0.085	10.2	109.9	0.008	-1.4	8.1											
10/17/23 10/17/23	3:51 PM 3:45 PM	43 43	ł	7526 S. 51st Street SE of Quarry	2,087 2,920	0.048	19.2 N/D	121.0																	
10/17/23	11:30 AM	43		5800 ALLWOOD	2,920	N/D N/D	N/D N/D	N/D N/D	N/D	N/D	N/D				no										<b> </b>
10/19/23	11:27 AM	44		7301 S 51st Street	1,577	0.053	38.5	108.0	0.060	34.1	98.8	-0.007	4.4	9.2	110										
10/19/23	11:27 AM	44		7526 S. 51st Street	1,246	0.033	26.3	103.0	0.000	54.1	90.0	0.007		5.2											
10/19/23	11:27 AM	44		SE of Quarry	1,724	0.000	12.5	107.0																	
10/25/23	11:05 AM	45		5800 ALLWOOD	2,965	N/D	N/D	N/D	N/D	N/D	N/D				no										
10/25/23	11:07 AM	45		7301 S 51st Street	1,571	0.044	35.7	109.0	0.043	64.0	101.0	0.001	-28.3	8.0											
10/25/23	11:07 AM	45		7526 S. 51st Street	1,157	0.059	27.8	110.0																	
10/25/23	11:07 AM	45	central	SE of Quarry	1,627	0.024	20.0	102.0																	
11/2/23	11:07 AM	46		5800 ALLWOOD	2,957	N/D	N/D	N/D	N/D	N/D	N/D				no										
11/2/23	11:07 AM	46	central	7301 S 51st Street	1,571	0.040	50.0	107.0	0.063	64.0	103.5	-0.023	-14.0	3.5											
11/2/23	11:07 AM	46		7526 S. 51st Street	1,132	0.073	27.8	106.0																	
11/2/23	11:07 AM	46	central	SE of Quarry	1,599	0.040	33.3	103.0																	
11/3/23	10:54 AM	47		5800 ALLWOOD	2,195	0.023	11.6	110.0	N/D	N/D	N/D				no										1
11/3/23	10:54 AM	47		7301 S 51st Street	2,301	N/D	N/D	N/D	N/D	N/D	N/D														1
11/3/23	10:54 AM	47		7526 S. 51st Street	1,317	0.093	26.3	121.0																	( I
11/3/23	10:54 AM	47		SE of Quarry	982	0.125	33.3	123.0	0.045	25.6	101 -	0.005	77	12.0			ļ								<b>↓</b>
11/7/23	10:45 AM	48		5800 ALLWOOD	2,067	0.038	33.3	114.0	0.043	25.6	101.0	-0.005	7.7	13.0	no										( I
11/7/23	10:45 AM	48		7301 S 51st Street	2,452	N/D	N/D	N/D	N/D	N/D	N/D														1
11/7/23	10:45 AM	48		7526 S. 51st Street	1,392	0.080	11.9	112.0																	1
11/7/23 11/8/23	10:45 AM 10:35 AM	48 49		SE of Quarry 5800 ALLWOOD	867 2,895	0.150 N/D	16.1 N/D	115.0 N/D	N/D	N/D	N/D				no		<u> </u>								<b>├</b> ───┨
11/8/23	10:33 AM	49		7301 S 51st Street	1,675	0.045	19.2	106.0	N/D	N/D N/D	N/D N/D				10										1
11/8/23	10:38 AM	49		7526 S. 51st Street	1,075	0.043	26.3	106.0		N/D															1
11/8/23	10:38 AM	49		SE of Quarry	1,280	0.000	18.5	100.0																	1
11/14/23	10:23 AM	50		5800 ALLWOOD	2,119	0.053	14.3	110.0	0.053	17.6	94.0	0.000	-3.3	16.0	no										<u> </u>
11/14/23	10:20 AM	50		7301 S 51st Street	2,371	N/D	N/D	N/D	N/D	N/D	N/D														1
11/14/23	10:23 AM	50		7526 S. 51st Street	1,414	0.143	22.7	114.0	,-	,-	, -														1
11/14/23		50		SE of Quarry	1,053	0.118	26.3	111.0																	1

	Payne & Dolan Blast Monitoring Data					Stantec Blast Monitoring Data			Comparison of P&D and Stantec Monitoring Data		Complaint Information		Weather (for complaints only)												
Date	Time	Activity Number	General Quarry Blast Location	Monitor Location	Distance (feet)	PPV (in/sec)	Freq (Hz)	AO (dB)	PPV (in/sec)	Freq (Hz)	AO (dB)		Difference in Freq Hz Values		Com- plaints?	#	Primary direction of complaints (from quarry)	Wind Direc-tion	Wind Speed (mph)	Wind Gusts (mph)	Press-ure (in)	Humi-dity (%)	<b>Condi-tions</b>	Precip- itation	Temp. (°F)
11/17/23	10:47 AM	51	south	5800 ALLWOOD	2,107	0.043	14.3	110.0	0.038	28.4	91.5	0.005	-14.1	18.5	no										
11/17/23	10:44 AM	51		7301 S 51st Street	2,389	N/D	N/D	N/D	N/D	N/D	N/D														
11/17/23	10:47 AM	51	south	7526 S. 51st Street	1,393	0.100	27.8	112.0		•															
11/17/23	10:47 AM	51		SE of Quarry	981	0.128	29.4	111.0																	
11/17/23	11:50 AM	52	north	5800 ALLWOOD	3,980	N/D	N/D	N/D	N/D	N/D	N/D				no										
11/17/23	11:50 AM	52	north	7301 S 51st Street	913	0.153	17.9	108.0	0.128	16.0	104.2	0.025	1.9	3.8											
11/17/23	11:50 AM	52	north	7526 S. 51st Street	1,588	0.070	20.0	108.0																	
11/17/23	11:50 AM	52	north	SE of Quarry	2,521	0.028	15.6	108.0																	
11/28/23	1:12 PM	53	north	5800 ALLWOOD	3,947	N/D	N/D	N/D	N/D	N/D	N/D				no										
11/28/23	1:12 PM	53		7301 S 51st Street	848	0.223	20.8	109.0	0.158	17.6	101.9	0.065	3.2	7.1											
11/28/23	1:12 PM	53		7526 S. 51st Street	1,488	0.120	12.5	110.0																	
11/28/23	1:12 PM	53		SE of Quarry	2,437	0.045	16.7	104.0																	
11/28/23	1:19 PM	54		5800 ALLWOOD	4,200	N/D	N/D	N/D	N/D	N/D	N/D				yes	1	east	WSW	13	none	29.44	46	mostly	none	25
11/28/23	1:19 PM	54		7301 S 51st Street	1,336	0.115	26.3	122.0	0.098	24.3	110.2	0.018	2.0	11.8									cloudy		
11/28/23	1:19 PM	54		7526 S. 51st Street	2,125	0.060	27.8	118.0																	
11/28/23	1:19 PM	54		SE of Quarry	2,991	N/D	N/D	N/D																	
12/4/23	11:56 AM	55		5800 ALLWOOD	4,041	N/D	N/D	N/D	N/D	N/D	N/D				no										
12/4/23	11:56 AM	55		7301 S 51st Street	965	0.150	29.4	104.0	0.143	10.4	100.0	0.008	19.0	4.0											
12/4/23	11:56 AM	55		7526 S. 51st Street	1,693	0.085	35.7	109.0																	
12/4/23	11:56 AM	55		SE of Quarry	2,621	0.028	16.1	102.0																	
12/8/23	2:20 PM	56		5800 ALLWOOD	4,189	N/D	N/D	N/D	N/D	N/D	N/D				no										
12/8/23	2:20 PM	56		7301 S 51st Street	1,230	0.080	26.3	115.0	0.108	39.3	108.8	-0.028	-13.0	6.2											
12/8/23	2:20 PM	56		7526 S. 51st Street	2,030	0.043	38.5	112.0																	
12/8/23	2:20 PM	56		SE of Quarry	2,919	N/D	N/D	N/D	N1 /=	AL /=	A. /=														
12/19/23	12:30 PM	57		5800 ALLWOOD	3,629	N/D	N/D	N/D	N/D	N/D	N/D				no										
12/19/23	12:30 PM	57		7301 S 51st Street	1,383	N/D	N/D	N/D	N/D	N/D	N/D														
12/19/23	12:25 PM	57		7526 S. 51st Street	1,743	0.048	14.7	119.0																	
12/19/23	12:30 PM	57	central	SE of Quarry	2,466	N/D	N/D	N/D																	
Totals		18													1	1									

Notes:

Shaded cells do not have a meter in that location N/D = not detected, meter did not detect blast



# FIGURE 1

SEISMIC MONITORING, BLASTING, AND COMPLAINT LOCATIONS, 4th QUARTER 2023



Figure No. 1 Title

Client/Project City of Franklin

Ν

Legend

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• Blast Complaint ▲ Blast #54

Blast Location

Project Location C. of Franklin, Milwaukee Co., WI

Seismic Monitoring Location

B Vibra-Tech(VT2)

Blast #54

Vibra-Tech(VT3)

Seismic Monitoring, Blasting, and Complaint Locations - 4th Quarter 2023

Vicinity of Payne and Dolan Quarry

Ø Vibra-Tech(VT1) and Stantec(S1)

Vibra-Tech(VT4) and Stantec(S2)

Non-complaint Blast Location

193709433

Prepared by AJS on 2024-01-03 TR by DG on 2024-01-03 IR by KGI on 2024-01-03

800 Feet

400

(At original document size of 11x17) 1:9,600





# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 October 2023

Time	Activity	Location	Distance	PPV	Freq	AO
10/25/2023 11:07	45	5800 ALLWOOD	2,965	N/T	N/T	N/A
10/25/2023 11:07	45	7526 S. 51st Street	1,157	0.0588	27.8	110
10/25/2023 11:07	45	SE of Quarry	1,627	0.0238	20	102
10/25/2023 11:07	45	7301 S 51st Street	1,571	0.0438	35.7	109
10/19/2023 11:27	44	5800 ALLWOOD	2,995	N/T	N/T	N/A
10/19/2023 11:27	44	7526 S. 51st Street	1,246	0.088	26.3	107
10/19/2023 11:27	44	SE of Quarry	1,724	0.025	12.5	101
10/19/2023 11:27	44	7301 S 51st Street	1,577	0.053	38.5	108
10/17/2023 15:51	43	5800 ALLWOOD	4,093	N/T	N/T	N/A
10/17/2023 15:51	43	7526 S. 51st Street	2,087	0.048	19.2	121
10/17/2023 15:51	43	SE of Quarry	2,920	N/T	N/T	N/A
10/17/2023 15:51	43	7301 S 51st Street	1,374	0.093	8.8	118
10/11/2023 13:10	42	5800 ALLWOOD	3,973	N/T	N/T	N/A
10/11/2023 13:10	42	7526 S. 51st Street	2,208	0.063	21.7	117
10/11/2023 13:10	42	SE of Quarry	2,955	N/T	N/T	N/A
10/11/2023 13:10	42	7301 S 51st Street	1,605	0.08	14.3	120
10/9/2023 11:43	41	5800 ALLWOOD	2,206	0.043	12.5	107
10/9/2023 11:43	41	7526 S. 51st Street	1,310	0.15	26.3	111
10/9/2023 11:43	41	SE of Quarry	990	0.155	35.7	115
10/9/2023 11:43	41	7301 S 51st Street	2,288	0.033	13.2	111
10/5/2023 12:50	40	5800 ALLWOOD	2,640	0.035	25	112
10/5/2023 12:50	40	7526 S. 51st Street	1,000	0.183	25	116
10/5/2023 12:50	40	SE of Quarry	1,152	0.158	21.7	110
10/5/2023 12:50	40	7301 S 51st Street	1,849	0.033	7.2	115

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).

# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 November 2023

Time	Activity	Location	Distance	PPV	Freq	AO
11/28/2023 13:19	54	5800 ALLWOOD	4,200	N/T	N/T	N/A
11/28/2023 13:19	54	7526 S. 51st Street	2,125	0.06	27.8	118
11/28/2023 13:19	54	SE of Quarry	2,991	N/T	N/T	N/A
11/28/2023 13:19	54	7301 S 51st Street	1,336	0.115	26.3	122
11/28/2023 13:12	53	5800 ALLWOOD	3,947	N/T	N/T	N/A
11/28/2023 13:12	53	7526 S. 51st Street	1,488	0.12	12.5	110
11/28/2023 13:12	53	SE of Quarry	2,437	0.045	16.7	104
11/28/2023 13:12	53	7301 S 51st Street	848	0.2225	20.8	109
11/17/2023 11:50	52	5800 ALLWOOD	3,980	N/T	N/T	N/A
11/17/2023 11:50	52	7526 S. 51st Street	1,588	0.07	20	108
11/17/2023 11:50	52	SE of Quarry	2,521	0.0275	15.6	108
11/17/2023 11:50	52	7301 S 51st Street	913	0.1525	17.9	108
11/17/2023 10:47	51	5800 ALLWOOD	2,107	0.0425	14.3	110
11/17/2023 10:47	51	7526 S. 51st Street	1,393	0.1	27.8	112
11/17/2023 10:47	51	SE of Quarry	981	0.1275	29.4	111
11/17/2023 10:47	51	7301 S 51st Street	2,389	N/T	N/T	N/A
11/14/2023 10:23	50	5800 ALLWOOD	2,119	0.0525	14.3	110
11/14/2023 10:23	50	7526 S. 51st Street	1,414	0.1425	22.7	114
11/14/2023 10:23	50	SE of Quarry	1,053	0.1175	26.3	111
11/14/2023 10:23	50	7301 S 51st Street	2,371	N/T	N/T	N/A
11/8/2023 10:38	49	5800 ALLWOOD	2,895	N/T	N/T	N/A
11/8/2023 10:38	49	7526 S. 51st Street	1,280	0.06	26.3	106
11/8/2023 10:38	49	SE of Quarry	1,680	0.035	18.5	100
11/8/2023 10:38	49	7301 S 51st Street	1,675	0.045	19.2	106
11/7/2023 10:45	48	5800 ALLWOOD	2,067	0.0375	33.3	114
11/7/2023 10:45	48	7526 S. 51st Street	1,392	0.08	11.9	112
11/7/2023 10:45	48	SE of Quarry	867	0.15	16.1	115
11/7/2023 10:45	48	7301 S 51st Street	2,452	N/T	N/T	N/A
11/3/2023 10:54	47	5800 ALLWOOD	2,195	0.0225	11.6	110
11/3/2023 10:54	47	7526 S. 51st Street	1,317	0.0925	26.3	121
11/3/2023 10:54	47	SE of Quarry	982	0.125	33.3	123
11/3/2023 10:54	47	7301 S 51st Street	2,301	N/T	N/T	N/A
11/2/2023 11:07	46	5800 ALLWOOD	2,957	N/T	N/T	N/A
11/2/2023 11:07	46	7526 S. 51st Street	1,132	0.0725	27.8	106
11/2/2023 11:07	46	SE of Quarry	1,599	0.04	33.3	103
11/2/2023 11:07	46	7301 S 51st Street	1,571	0.04	50	107

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).

# Franklin Aggregates Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24 December 2023

Time	Activity	Location	Distance	PPV	Freq	AO
12/19/2023 12:25	57	5800 ALLWOOD	3,629	N/T	N/T	N/A
12/19/2023 12:25	57	7526 S. 51st Street	1,743	0.0475	14.7	119
12/19/2023 12:25	57	SE of Quarry	2,466	N/T	N/T	N/A
12/19/2023 12:25	57	7301 S 51st Street	1,383	N/T	N/T	N/A
12/8/2023 14:20	56	5800 ALLWOOD	4,189	N/T	N/T	N/A
12/8/2023 14:20	56	7526 S. 51st Street	2,030	0.0425	38.5	112
12/8/2023 14:20	56	SE of Quarry	2,919	N/T	N/T	N/A
12/8/2023 14:20	56	7301 S 51st Street	1,230	0.08	26.3	115
12/4/2023 11:56	55	5800 ALLWOOD	4,041	N/T	N/T	N/A
12/4/2023 11:56	55	7526 S. 51st Street	1,693	0.085	35.7	109
12/4/2023 11:56	55	SE of Quarry	2,621	0.0275	16.1	102
12/4/2023 11:56	55	7301 S 51st Street	965	0.15	29.4	104

PDD Vibration Limit - Per the PDD #23 and #24 Ordinances, ground vibration resulting from P&D blasting shall not exceed 0.30 inches per second on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the ground vibration limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in Figure 7.64 of ch. ILHR 7, Wis. Adm. Code (new reference now Wis. Adm. Code, Safety and Professional Services Chapter 307), or 0.65 inches per second, whichever is more restrictive, on any blast.

PDD Airblast Limit - Per the PDD #23 and #24 Ordinances, airblast resulting from P&D blasting shall not exceed 123 dB on at least 85% of its blasts within any single calendar year. The Operator shall not exceed the airblast limitation imposed by the Wisconsin Department of Industry, Labor and Human Relations in ch.ILHR 7, Wis. Adm. Code on any blast (new reference now Wis. Adm. Code, Safety and Professional Services [SPS] Chapter 307).



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Show 20 v entries Search:

Date	Time	Shot #	Seismo Loc	PPV	AO
2/01/2024	12:15 pm	3	Franklin Quarry (7301 S 51st Street)	N/T	N/T
2/01/2024	12:18 pm	3	Franklin Quarry (5800 ALLWOOD)	0.065	115
2/01/2024	12:18 pm	3	Franklin Quarry (SE of Quarry)	0.135	109
2/01/2024	12:18 pm	3	Franklin Quarry (7526 S. 51st Street)	0.080	107
1/08/2024	11:51 am	2	Franklin Quarry (7301 S 51st Street)	N/T	N/T
1/08/2024	11:51 am	2	Franklin Quarry (5800 ALLWOOD)	0.072	111
1/08/2024	11:51 am	2	Franklin Quarry (SE of Quarry)	0.100	112
1/08/2024	11:51 am	2	Franklin Quarry (7526 S. 51st Street)	0.070	110
1/03/2024	12:30 pm	1	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
1/03/2024	12:28 pm	1	Franklin Quarry (SE of Quarry)	0.025	111
1/03/2024	12:28 pm	1	Franklin Quarry (7301 S 51st Street)	0.185	111
1/03/2024	12:28 pm	1	Franklin Quarry (7526 S. 51st Street)	0.062	115
12/19/2023	12:30 pm	57	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
12/19/2023	12:30 pm	57	Franklin Quarry (SE of Quarry)	N/T	N/T
12/19/2023	12:30 pm	57	Franklin Quarry (7301 S 51st Street)	N/T	N/T
12/19/2023	12:25 pm	57	Franklin Quarry (7526 S. 51st Street)	0.048	119
12/08/2023	2:20 pm	56	Franklin Quarry (5800 ALLWOOD)	N/T	N/T

2/2/24, 11:32 AM

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Date	Time	Shot #	Seismo Loc	PPV	AO
12/08/2023	2:20 pm	56	Franklin Quarry (SE of Quarry)	N/T	N/T
12/08/2023	2:20 pm	56	Franklin Quarry (7301 S 51st Street)	0.080	115
12/08/2023	2:20 pm	56	Franklin Quarry (7526 S. 51st Street)	0.043	112
Showing 1 to 20 of 2	32 entries				

FirstPrevious12345...12NextLast Franklin Quarry

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