

CITY OF FRANKLIN
QUARRY MONITORING COMMITTEE*
MEETING AGENDA

Revised

Franklin City Hall, **Council Chambers**
9229 West Loomis Road, Franklin, Wisconsin 53132
Thursday, October 28, 2021, 6:00 p.m.

- I. Call to Order, Roll Call and Pledge of Allegiance
- II. Approval of Minutes
 - a. Regular meeting of August 26, 2021.
- 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. Hearings
- V. Business (Action may be taken on any item)
 - a. **Quarterly presentation by Stantec Consulting Services, Inc., 3rd quarter of calendar year 2021 (July, August and September).**
 - b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan and Stantec (the City's consultant).
 - c. Review and discussion on quarry monitoring services scope of work for calendar year 2022.
 - d. Discussion on frequency of regular committee meetings.
 - e. Status update on the Franklin Aggregates Reclamation Plan.
- VI. Meeting scheduling discussion
- VII. 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
Council Chambers, Franklin City Hall
6:00 PM
August 26, 2021
Minutes

unapproved

I. CALL TO ORDER

The August 26, 2021, Quarry Monitoring Committee meeting was called to order by Acting Chair Fred Knueppel at 6:00 p.m. in the Council Chambers at City Hall.

Acting Chair Fred Knueppel, members Jon TenHaken, and Dallas Schurg were present. Alderwoman Kristen Wilhelm, Alderman Mike Barber, and non-voting member Dina Swanson were absent. Also present were Principal Planner Régulo Martínez-Montilva and the representative of the quarry operator Clint Weninger and Kristen Gunderson-Inden of Stantec.

II. APPROVAL OF THE MINUTES

a. Regular meeting of June 24, 2021.

Member TenHaken moved and member Schurg seconded to approve the minutes as presented. On voice vote, all present voted 'aye'; the vote was 3-0-2, motion carried.

III. CITIZEN COMMENT PERIOD

Citizen comment period opened at 6:02 p.m. and closed at 6:04 p.m. Clint Weninger informed the committee that the reclamation plan will be presented before the Plan Commission on September 23 and October 21 for review and discussion.

IV. HEARINGS

a. None.

No action needed. None taken.

V. BUSINESS

a. Quarterly presentation by Stantec Consulting Services, Inc., 2nd quarter of calendar year 2021 (April, May and June).

Kristen Gunderson-Inden presented the 2nd quarter monitoring 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 Martínez-Montilva informed the committee that the city received nine (9) complaints since the last meeting on June 24, recorded ground vibration (PPV) for dates corresponding to the complaints were in compliance with PDD limits. Member JonTaken noted 1 exceedance of the air overpressure (AO) level of 125 dB, while the maximum level is 123 dB, no complaints associated with this event.

c. Review and discussion on quarry monitoring services scope of work for calendar year 2022 presented by Stantec Consulting Services, Inc.

No action taken, carried over to next meeting.

- d. Discussion on frequency of regular committee meetings.

No action taken, carried over to next meeting.

VI. SCHEDULE NEXT MEETING

Member TenHaken moved and member Knueppel seconded to schedule the next meeting for October 28, 2021, based on quorum.

VII. ADJOURNMENT

Member TenHaken moved and member Schurg seconded to adjourn the August 26, 2021, Quarry Monitoring Committee meeting at 6:19 p.m. All present voted 'aye'; motion carried.



Stantec Consulting Services Inc.
1165 Scheuring Road
De Pere, Wisconsin 54115
Tel: (920) 592-8400
Fax: (920) 592-8444

V.a.

October 25, 2021

Heath Eddy
Planner - Department of City Development
City of Franklin
9229 W. Loomis Road
Franklin, Wisconsin 53132
HEddy@franklinwi.gov

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary
Period: 3rd Quarter 2021
Stantec Project: 193707487

Dear Mr. Eddy:

The enclosed information summarizes monitoring activities completed during the third quarter of 2021 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 FTP site for review by City representatives. Copies of individual reports are not provided with this summary report.

Five observation events were completed during the monitoring period; three were unannounced inspections (July 6, August 12, and September 9) and were limited to the perimeter of the quarry. Two were announced inspections that included observations inside the quarry (July 19 and August 19). During all five visits, a small amount of dust was observed on Rawson Avenue from trucks that were departing the site. Significant amounts of dirt or stone was not observed in Rawson Avenue. The street sweeper was observed operating on Rawson Avenue on four of the five inspections. No noticeable dust or debris was observed on other roads surrounding the quarry.

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 first quarter.

Highlights of the seismic data include the following:

- Between July 1 and September 30, 2021, a total of 27 blasting events occurred. A total of 17 (63%) of these blasts were confirmed by the Stantec monitors. Many of the blast events not detected by the Stantec monitors were lower level or non-detects on the corresponding Payne & Dolan monitors; others were only detected by one or both of the Payne & Dolan detectors that are not paired with a Stantec monitor.
- 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 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; thus 100% of the quarry's blasts were below this level.
- Per the PDD, 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.
 - Two of the blasting events measured by Payne & Dolan or Stantec had an air overpressure (AO) greater than 123dB (125dB for both the 7/30/21 [Activity Number 43] and 9/9/21 [Activity Number 54] readings obtained from the 7526 South 51st Street monitor). Stantec does not have a monitor at this location thus we could not verify this elevated AO from our readings. These are the first readings of 2021 with an AO over 123dB. There have been 65 blasts through the third quarter. Thus, 97% of the quarry's blasts have been below the PDD AO level through September 30. There were no complaints for either blast.
- 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 are scheduled to be recalibrated in October 2021.
- 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 complaints received by Stantec for the period July 1 through September 30, 2021, 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. The locations of all blasts and complaints are shown on Figure 1. The following highlights the results of the complaint evaluation:

Complaints - General

- 8 complaints – total (Note: some complaints were for multiple reasons)
- 1 complaint – regarding noise
- 0 complaints – regarding dust
- 0 complaints – miscellaneous
- 7 complaints – regarding vibration

Complaints – Blast Related

- 7 complaints – corresponding to actual blast events
(Two were submitted online without a time but on days when blasts occurred)
- 0 complaints – not corresponding to actual blast events
- 7 complaints – complainant location identified
 - 3 households that complained once each
 - 2 households that complained two times each
 - 0 complaints – no name and address provided (requested confidentiality)

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

- 0 complaint – east of 51st Street
- 7 complaints – south of Drexel Avenue
- 0 complaints – west of Root River

Blast Events

- 27 blast events - during monitoring period 3Q2021 (shot numbers 35 through 61)
- 4 blast events - corresponding to complaints
 - 0 weather: rain
 - 3 weather: haze, partly to mostly cloudy, or cloudy
 - 1 weather: clear, fair or scattered clouds
 - 4 time: prior to 12:00 pm (noon)
 - 0 time: after 12:00 pm
- 2 blast events with one complaint
- 1 blast events with two complaints
- 1 blast event with three complaints

Quarry Blast Locations Producing Complaints

- 4 southern area of quarry
- 0 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. There was only one noise complaint this quarter.
- All of the complaints (100%) in this quarter originate from residences south of Drexel Avenue.
- No blast this quarter had more than three complaints.
- No complaints came from west of the Root River.
- Due to increased amount of employees now working from home, residents may have been at home more during the day than in years prior to 2021 and 2020. However, this is essentially the “new normal”.



October 25, 2021

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Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary
Period: 3Q2021

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

Respectfully,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink, appearing to read 'Kristen Gunderson-Inden'.

Kristen Gunderson-Inden
Senior Environmental Scientist

A handwritten signature in blue ink, appearing to read 'Michael B. Roznowski'.

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 – 3rd Quarter 2021
 Figure 1 - Seismic Monitoring, Blasting, and Complaint Locations, 3rd Quarter 2021

ATTACHMENT A

FRANKLIN QUARRY SEISMIC MONITORING DESCRIPTION OF SERVICES

DESCRIPTION OF SERVICES

Direct Observation (Visual) Monitoring

During 2020, Stantec will conduct a total of ten (10) 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 will 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
 - Dust control measures and issues on-site that may affect off-site receptors
 - 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 file transfer protocol (FTP) 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 FTP 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:
 - seismic data from both Stantec and Payne & Dolan placed monitors
 - 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, Stantec provided 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. The monitor provided continuous (24/7) remote monitoring. Monthly summaries of blasting data, comparing the Payne & Dolan (Vibra-Tech) unit recordings, to the Stantec (Sauls Seismic) unit recordings, were prepared for the months April through December.

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 51st 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 –3rd QUARTER 2021

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)	AO (dB)	PPV (in/sec)	AO (dB)	Difference in PPV Values	Difference in AO dB Values	Complaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)
7/2/2021	9:15 AM	35	north	5800 ALLWOOD	3,736	N/A	N/A	N/A	N/A	--	--	no										
7/2/2021	9:15 AM	35	north	7301 S 51st Street	1,115	N/A	N/A	0.1	101	--	--											
7/2/2021	9:15 AM	35	north	7526 S. 51st Street	1551	N/A	N/A															
7/2/2021	9:15 AM	35	north	SE of Quarry	2,382	N/A	N/A															
7/8/2021	10:22 AM	36	north	5800 ALLWOOD	3,750	N/A	N/A	N/A	N/A	--	--	no										
7/8/2021	10:22 AM	36	north	7301 S 51st Street	1,123	0.13	109	0.16	102	-0.030	7											
7/8/2021	10:22 AM	36	north	7526 S. 51st Street	1,574	0.045	117															
7/8/2021	10:22 AM	36	north	SE of Quarry	2,404	N/A	N/A															
7/13/2021	9:11 AM	37	south	5800 ALLWOOD	1,379	0.03	112	0.05	111	-0.020	1	yes	1	south	NNW	6	none	29.26	84	cloudy	0	71
7/13/2021	9:11 AM	37	south	7301 S 51st Street	3,136	N/A	N/A	N/A	N/A	--	--											
7/13/2021	9:11 AM	37	south	7526 S. 51st Street	2,059	0.028	105															
7/13/2021	9:11 AM	37	south	SE of Quarry	1,215	0.073	108															
7/15/2021	9:04 AM	38	south	5800 ALLWOOD	1,535	0.075	114	0.05	111	0.025	3	yes	2	south	W	10	none	29.19	87	haze	0	72
7/15/2021	9:04 AM	38	south	7301 S 51st Street	2,967	N/A	N/A	N/A	N/A	--	--											
7/15/2021	9:04 AM	38	south	7526 S. 51st Street	1,916	0.038	111															
7/15/2021	9:04 AM	38	south	SE of Quarry	1,155	0.118	110															
7/19/2021	9:00 AM	39	south	5800 ALLWOOD	1,443	0.04	112	0.04	107	0.000	5	yes	1	south	NW	6	none	29.46	56	fair	0	76
7/19/2021	9:00 AM	39	south	7301 S 51st Street	3082	N/A	N/A	N/A	N/A	--	--											
7/19/2021	9:00 AM	39	south	7526 S. 51st Street	1,993	0.05	103															
7/19/2021	9:00 AM	39	south	SE of Quarry	1,146	0.1	108															
7/21/2021	11:11 AM	40	south	5800 ALLWOOD	1,537	0.028	112	N/A	N/A	--	--	no										
7/21/2021	11:11 AM	40	south	7301 S 51st Street	2975	N/A	N/A	N/A	N/A	--	--											
7/21/2021	11:11 AM	40	south	7526 S. 51st Street	1,905	0.048	101															
7/21/2021	11:11 AM	40	south	SE of Quarry	1,115	0.125	106															
7/23/2021	10:51 AM	41	north	5800 ALLWOOD	3,852	N/A	N/A	N/A	N/A	--	--	no										
7/23/2021	10:51 AM	41	north	7301 S 51st Street	1,462	0.088	109	0.14	102	-0.052	7											
7/23/2021	10:51 AM	41	north	7526 S. 51st Street	1,999	0.078	109															
7/23/2021	10:51 AM	41	north	SE of Quarry	2,753	0.025	106															
7/27/2021	10:42 AM	42	north	5800 ALLWOOD	3,932	N/A	N/A	N/A	N/A	--	--	no										
7/27/2021	10:42 AM	42	north	7301 S 51st Street	898	0.088	107	0.1	100	-0.012	7											
7/27/2021	10:42 AM	42	north	7526 S. 51st Street	1523	0.05	114															
7/27/2021	10:42 AM	42	north	SE of Quarry	2,454	N/A	N/A															
7/30/2021	9:14 AM	43	north	5800 ALLWOOD	3,756	N/A	N/A	N/A	N/A	--	--	no										
7/30/2021	9:14 AM	43	north	7301 S 51st Street	1,140	0.123	110	0.13	103	-0.007	7											
7/30/2021	9:14 AM	43	north	7526 S. 51st Street	1,599	0.065	125															
7/30/2021	9:14 AM	43	north	SE of Quarry	2,425	N/A	N/A															
7/30/2021	11:30 AM	44	south	5800 ALLWOOD	1,629	N/A	N/A	N/A	N/A	--	--	no										
7/30/2021	11:30 AM	44	south	7301 S 51st Street	2876	N/A	N/A	N/A	N/A	--	--											
7/30/2021	11:30 AM	44	south	7526 S. 51st Street	1,822	0.053	101															
7/30/2021	11:30 AM	44	south	SE of Quarry	1,087	0.098	106															
8/4/2021	10:23 AM	45	north	5800 ALLWOOD	3,945	N/A	N/A	N/A	N/A	--	--	no										
8/4/2021	10:23 AM	45	north	7301 S 51st Street	914	0.083	106	0.06	100	0.023	6											
8/4/2021	10:23 AM	45	north	7526 S. 51st Street	1,553	0.038	112															
8/4/2021	10:23 AM	45	north	SE of Quarry	2,481	N/A	N/A															

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)	AO (dB)	PPV (in/sec)	AO (dB)	Difference in PPV Values	Difference in AO dB Values	Complaints?	#	Primary direction of complaints (from quarry)	Wind Direction	Wind Speed (mph)	Wind Gusts (mph)	Pressure (in)	Humidity (%)	Conditions	Precipitation	Temp. (°F)		
9/20/2021	10:42 AM	57	south	5800 ALLWOOD	1,768	0.025	112	N/A	N/A	--	--	no												
9/20/2021	10:42 AM	57	south	7301 S 51st Street	2,720	N/A	N/A	N/A	N/A	--	--													
9/20/2021	10:42 AM	57	south	7526 S. 51st Street	1748	0.075	103																	
9/20/2021	10:42 AM	57	south	SE of Quarry	1,178	0.11	104																	
9/22/2021	10:50 AM	58	south	5800 ALLWOOD	1,085	0.023	94	N/A	N/A	--	--	no												
9/22/2021	10:50 AM	58	south	7301 S 51st Street	3,402	N/A	N/A	N/A	N/A	--	--													
9/22/2021	10:50 AM	58	south	7526 S. 51st Street	2385	N/A	N/A																	
9/22/2021	10:50 AM	58	south	SE of Quarry	1,561	N/A	N/A																	
9/24/2021	12:34 PM	59	north	5800 ALLWOOD	3,523	N/A	N/A	N/A	N/A	--	--	no												
9/24/2021	12:34 PM	59	north	7301 S 51st Street	1,143	0.118	106	0.14	98	-0.022	8													
9/24/2021	12:34 PM	59	north	7526 S. 51st Street	1,319	0.085	110																	
9/24/2021	12:34 PM	59	north	SE of Quarry	2,108	0.028	101																	
9/27/2021	11:48 AM	60	south	5800 ALLWOOD	1,205	0.028	94	N/A	N/A	--	--	no												
9/27/2021	11:48 AM	60	south	7301 S 51st Street	3,318	N/A	N/A	N/A	N/A	--	--													
9/27/2021	11:48 AM	60	south	7526 S. 51st Street	2229	N/A	N/A																	
9/27/2021	11:48 AM	60	south	SE of Quarry	1,332	0.043	88																	
9/28/2021	10:43 AM	61	south	5800 ALLWOOD	1,130	0.118	107	0.14	108	-0.022	-1	yes	3	south	ENE	7	none	29.29	73	partly cloudy	0	65		
9/28/2021	10:43 AM	61	south	7301 S 51st Street	3357	N/A	N/A	N/A	N/A	--	--	yes	7	events with complaints / total complaints										
9/28/2021	10:43 AM	61	south	7526 S. 51st Street	2,350	0.035	111																	
9/28/2021	10:43 AM	61	south	SE of Quarry	1,546	0.043	108																	
9/28/2021	10:43 AM	61	south	SE of Quarry	1,546	0.043	108																	
Totals		26	blast events									4	7											

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, 3rd QUARTER 2021

V:\1937\active\193707487\03_data\gis_cad\figs\mxd\2021_3rd_Quarter_Report\fig1_Seismic_Complaints_193707487.mxd Revised: 2021-10-25 By: aswaim

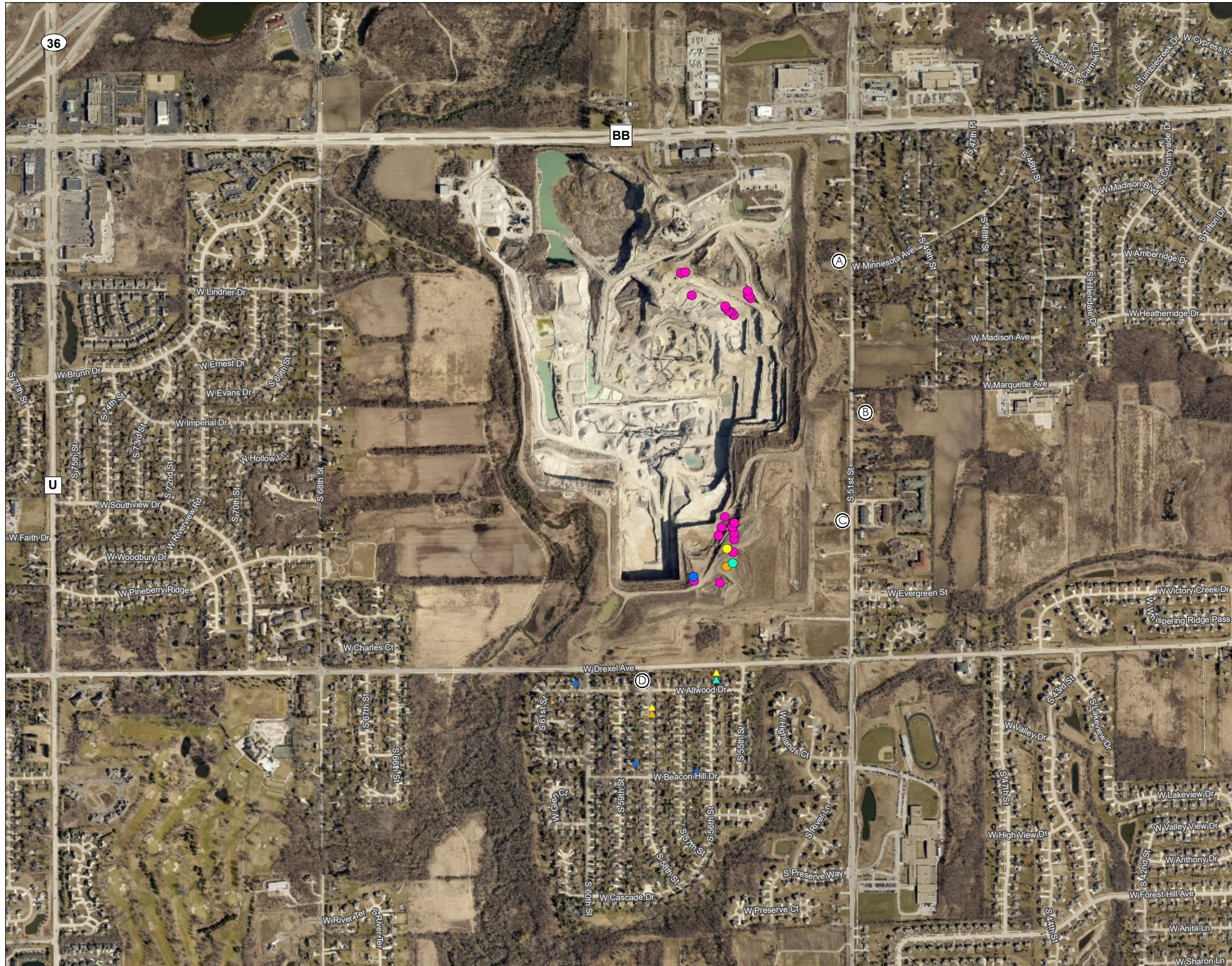


Figure No. **1**

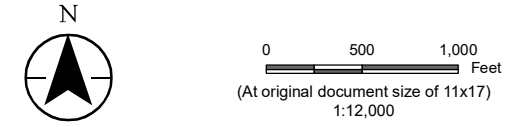
Title
Seismic Monitoring, Blasting, and Complaint Locations - 3rd Quarter 2021

Client/Project
City of Franklin
Vicinity of Payne and Dolan Quarry

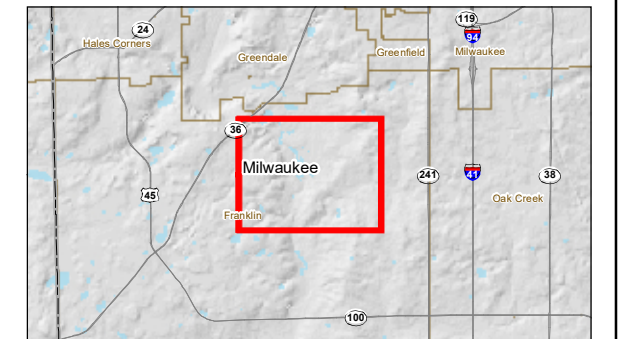
Project Location
C. of Franklin, Milwaukee Co., WI

193707487

Prepared by AJS on 2021-10-20
TR by DG on 2021-10-20
IR by KGI on 2021-10-25



- Legend
- | | |
|-------------------------------------|-----------------|
| Seismic Monitoring Location | Blast Complaint |
| (A) Vibra-Tech(VT1) and Stantec(S1) | ▲ Blast #37 |
| (B) Vibra-Tech(VT2) | ▲ Blast #38 |
| (C) Vibra-Tech(VT3) | ▲ Blast #39 |
| (D) Vibra-Tech(VT4) and Stantec(S2) | ▲ Blast #61 |
- Blast Location
- Non-complaint Blast Location
 - Blast #37
 - Blast #38
 - Blast #39
 - Blast #61



Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources: Stantec, SCO, WDNR, WisDOT
3. Orthophotography: ESRI Clarity Imagery



Franklin Aggregates
Recorded Ground Vibration and Airblast Levels for PDDs #23 & 24
August 2021

Time	Activity	Location	Distance	PPV	Freq	AO
8/19/2021 13:28	52	5800 ALLWOOD	1,765	N/T	N/T	N/A
8/19/2021 13:28	52	7526 S. 51st Street	1,707	0.058	26.3	114
8/19/2021 13:28	52	SE of Quarry	1,070	N/T	N/T	N/A
8/19/2021 13:28	52	7301 S 51st Street	2,731	0.105	50	112
8/19/2021 10:10	51	5800 ALLWOOD	3,787	N/T	N/T	N/A
8/19/2021 10:10	51	7526 S. 51st Street	1,653	0.025	27.8	101
8/19/2021 10:10	51	SE of Quarry	2,478	0.043	35.7	103
8/19/2021 10:10	51	7301 S 51st Street	1,163	N/T	N/T	N/A
8/17/2021 10:18	50	5800 ALLWOOD	1,733	0.023	38.5	110
8/17/2021 10:18	50	7526 S. 51st Street	1,743	0.038	33.3	106
8/17/2021 10:18	50	SE of Quarry	1,099	0.045	38.5	106
8/17/2021 10:18	50	7301 S 51st Street	2,761	N/T	N/T	N/A
8/11/2021 11:28	49	5800 ALLWOOD	3,779	N/T	N/T	N/A
8/11/2021 11:28	49	7526 S. 51st Street	1,641	0.06	41.7	120
8/11/2021 11:28	49	SE of Quarry	2,465	N/T	N/T	N/A
8/11/2021 11:28	49	7301 S 51st Street	1,159	0.143	38.5	110
8/11/2021 11:21	48	5800 ALLWOOD	4,064	N/T	N/T	N/A
8/11/2021 11:21	48	7526 S. 51st Street	2,188	0.065	31.3	110
8/11/2021 11:21	48	SE of Quarry	2,979	0.03	16.7	96
8/11/2021 11:21	48	7301 S 51st Street	1,515	0.09	31.3	109
8/6/2021 10:05	47	5800 ALLWOOD	1,684	N/T	N/T	N/A
8/6/2021 10:05	47	7526 S. 51st Street	1,775	N/T	N/T	N/A
8/6/2021 10:05	47	SE of Quarry	1,076	0.068	71.4	106
8/6/2021 10:05	47	7301 S 51st Street	2,817	N/T	N/T	N/A
8/4/2021 13:52	46	5800 ALLWOOD	4,051	N/T	N/T	N/A
8/4/2021 13:52	46	7526 S. 51st Street	2,199	0.105	29.4	103
8/4/2021 13:52	46	SE of Quarry	2,981	0.03	26.3	106
8/4/2021 13:52	46	7301 S 51st Street	1,537	0.068	20.8	116
8/4/2021 10:23	45	SE of Quarry	2,481	N/T	N/T	N/A
8/4/2021 10:23	45	5800 ALLWOOD	3,945	N/T	N/T	N/A
8/4/2021 10:23	45	7526 S. 51st Street	1,553	0.038	17.2	112
8/4/2021 10:23	45	7301 S 51st Street	914	0.083	17.2	106

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
September 2021

Time	Activity	Location	Distance	PPV	Freq	AO
9/28/2021 10:43	61	5800 ALLWOOD	1,130	0.118	29.4	107
9/28/2021 10:43	61	7526 S. 51st Street	2,350	0.035	25	111
9/28/2021 10:43	61	SE of Quarry	1,546	0.043	33.3	108
9/28/2021 10:43	61	7301 S 51st Street	3,357	N/T	N/T	N/A
9/27/2021 11:48	60	5800 ALLWOOD	1,205	0.028	16.1	94
9/27/2021 11:48	60	7526 S. 51st Street	2,229	N/T	N/T	N/A
9/27/2021 11:48	60	SE of Quarry	1,332	0.043	19.2	88
9/27/2021 11:48	60	7301 S 51st Street	3,318	N/T	N/T	N/A
9/24/2021 12:34	59	5800 ALLWOOD	3,523	N/T	N/T	N/A
9/24/2021 12:34	59	7526 S. 51st Street	1,319	0.085	29.4	110
9/24/2021 12:34	59	SE of Quarry	2,108	0.028	20	101
9/24/2021 12:34	59	7301 S 51st Street	1,143	0.118	33.3	106
9/22/2021 10:50	58	5800 ALLWOOD	1,085	0.023	41.7	94
9/22/2021 10:50	58	7526 S. 51st Street	2,385	N/T	N/T	N/A
9/22/2021 10:50	58	SE of Quarry	1,561	N/T	N/T	N/A
9/22/2021 10:50	58	7301 S 51st Street	3,402	N/T	N/T	N/A
9/20/2021 10:42	57	5800 ALLWOOD	1,768	0.025	35.7	112
9/20/2021 10:42	57	7526 S. 51st Street	1,748	0.075	29.4	103
9/20/2021 10:42	57	SE of Quarry	1,178	0.11	45.5	104
9/20/2021 10:42	57	7301 S 51st Street	2,720	N/T	N/T	N/A
9/16/2021 10:45	56	5800 ALLWOOD	3,963	N/T	N/T	N/A
9/16/2021 10:45	56	7526 S. 51st Street	1,601	0.035	26.3	116
9/16/2021 10:45	56	SE of Quarry	2,522	N/T	N/T	N/A
9/16/2021 10:45	56	7301 S 51st Street	943	0.088	50	109
9/13/2021 10:09	55	5800 ALLWOOD	1,661	N/T	N/T	N/A
9/13/2021 10:09	55	7526 S. 51st Street	1,841	0.038	33.3	103
9/13/2021 10:09	55	SE of Quarry	1,209	0.083	35.7	107
9/13/2021 10:09	55	7301 S 51st Street	2,827	N/T	N/T	N/A
9/9/2021 10:30	54	5800 ALLWOOD	3,946	N/T	N/T	N/A
9/9/2021 10:30	54	7526 S. 51st Street	1,581	0.048	33.3	125
9/9/2021 10:30	54	SE of Quarry	2,501	N/T	N/T	N/A
9/9/2021 10:30	54	7301 S 51st Street	940	0.113	50	121
9/8/2021 9:21	53	5800 ALLWOOD	1,597	0.028	31.3	112
9/8/2021 9:21	53	7526 S. 51st Street	1,897	0.053	31.3	105
9/8/2021 9:21	53	SE of Quarry	1,232	0.088	33.3	106
9/8/2021 9:21	53	7301 S 51st Street	2,891	N/T	N/T	N/A

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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Search:

Date	Time	Shot #	Seismo Loc	PPV	AO
10/13/2021	12:25 pm	66	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
10/13/2021	12:24 pm	66	Franklin Quarry (7301 S 51st Street)	0.155	99
10/13/2021	12:24 pm	66	Franklin Quarry (SE of Quarry)	0.033	99
10/13/2021	12:24 pm	66	Franklin Quarry (7526 S. 51st Street)	0.128	109
10/11/2021	10:50 am	65	Franklin Quarry (7301 S 51st Street)	N/T	N/T
10/11/2021	10:49 am	65	Franklin Quarry (7526 S. 51st Street)	0.050	112
10/11/2021	10:49 am	65	Franklin Quarry (SE of Quarry)	0.070	110
10/11/2021	10:49 am	65	Franklin Quarry (5800 ALLWOOD)	0.120	106
10/08/2021	1:00 pm	64	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
10/08/2021	1:04 pm	64	Franklin Quarry (7526 S. 51st Street)	0.093	118
10/08/2021	1:04 pm	64	Franklin Quarry (SE of Quarry)	0.033	108
10/08/2021	1:04 pm	64	Franklin Quarry (7301 S 51st Street)	0.148	111
10/06/2021	10:56 am	63	Franklin Quarry (7301 S 51st Street)	N/T	N/T
10/06/2021	10:56 am	63	Franklin Quarry (7526 S. 51st Street)	0.028	113
10/06/2021	10:56 am	63	Franklin Quarry (5800 ALLWOOD)	0.075	111
10/06/2021	10:56 am	63		0.065	110

Date	Time	Shot #	Seismo Loc	PPV	AO
			Franklin Quarry (SE of Quarry)		
10/01/2021	11:00 am	62	Franklin Quarry (7301 S 51st Street)	N/T	N/T
10/01/2021	10:55 am	62	Franklin Quarry (5800 ALLWOOD)	0.050	111
10/01/2021	10:55 am	62	Franklin Quarry (SE of Quarry)	0.048	108
10/01/2021	10:55 am	62	Franklin Quarry (7526 S. 51st Street)	0.025	111

Showing 1 to 20 of 316 entries
 FirstPrevious12345...16NextLast
 Franklin Quarry

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ATTACHMENT A - QUARRY MONITORING SERVICES

SCOPE OF WORK AND ASSOCIATED COST

The following scope of work items, each with their own associated professional fee, is offered to the City by Stantec for calendar year 2021.

DESCRIPTION	EVENT PERIOD	COST PER EVENT	# OF EVENTS	SUBTOTAL	NOTES REGARDING SCOPE OF SERVICES
Operations Monitoring	daily	\$700	9	\$6,300	Visual assessments around quarry perimeter, concentrating on Rawson Avenue adjacent to the quarry entrances. Will include weather data as part of observation summary, along with photos and short duration videos during periods of high winds. A percentage of the visits will also include on-site observations and records review.
Blast Monitoring	monthly	\$1,775	12	\$21,300	Stantec will provide remote vibration monitoring by using Nomis Seismographs. We plan to subcontract Sauls Seismic to assist with this scope of work. Two separate seismographs will be installed, each co-located with two existing Payne & Dolan (Vibra-Tech) monitors located at: 7301 S. 51 st Street and 5800 W. Allwood Drive. Each monitor will be provided with an enclosure and will either be pole mounted or located in a short-stack weatherproof enclosure. Power will be provided via an internal battery and an external battery connected to a solar panel. All maintenance/repair and annual calibration of seismographs are included. This type of configuration will provide continuous (24/7) remote monitoring, allowing Stantec to have access to data anytime via the Internet. No written reports or summaries will be provided monthly.
Exceptional Blast Complaint Evaluation	Per City request	\$1,000	3	\$3,000	For unusual blast events (e.g., those resulting in multiple complaints), at the City's request, Stantec will prepare a brief summary report describing: <ul style="list-style-type: none"> • seismic data from both Stantec and Payne & Dolan placed monitors • weather conditions (wind direction and speed) the day of the complaint • a figure showing locations of blast along with location of complaints
Quarterly Reports and Presentation	Quarterly (May, August, November 2020, and February 2021)	\$3,600	4	\$14,400	Stantec will prepare a quarterly report (to be distributed/presented as part of the regularly scheduled Quarry Monitoring Committee meetings) describing: <ul style="list-style-type: none"> • Operations monitoring completed in prior quarter • Blast monitoring completed in prior quarter (summary of blasting data, comparing the Payne & Dolan unit recordings, to the Stantec unit recordings) • Citizen complaints received by the City of Franklin in prior quarter <ul style="list-style-type: none"> ○ For off-site dust complaints <ul style="list-style-type: none"> ▪ weather conditions (wind direction and speed) the day of the complaint ○ For off-site seismic complaints <ul style="list-style-type: none"> ▪ seismic data from both Stantec and Payne & Dolan placed monitors ▪ weather conditions (wind direction and speed; temp.; humidity; precipitation) the day of the complaint ▪ a figure showing locations of blasts along with location of complaints The February 2022 quarterly report and presentation will also summarize the operations and blast monitoring, along with complaint evaluations, completed during calendar year 2021. This annual report is not meant to repeat what has already been provided in the prior quarterly reports; rather, it is intended to be a brief summary.

\$45,000 TOTAL (compared to budget: \$45,000)

Note: The number of Exceptional Blast Complaint Evaluations is estimated, since the exact number cannot be determined at this time. In addition, based on prior years Stantec is estimating approximately 25 different blasts will result in complaints needing to be evaluated as part of the quarterly reports and presentations. Stantec agrees to be flexible with the City regarding this scope of work as the year progresses as the actual number of events are determined, and agrees not to exceed the approved budget without prior approval.