CITY OF FRANKLIN QUARRY MONITORING COMMITTEE* MEETING AGENDA

Franklin City Hall, **HEARING ROOM** 9229 West Loomis Road, Franklin, Wisconsin 53132 Thursday, September 24, 2020, <u>6:00 p.m.</u>

- I. Call to Order and Roll Call
- II. Approval of Minutes
 - a. Regular meeting of July 29, 2020.

III. Citizen Comment Period PLEASE NOTE: Due to the anticipated number of citizens who may attend, 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. Selection of non-voting member (Ordinance 2020-2425).
 - b. Review and discussion on matters pertaining to citizen complaints, blasting data from Payne & Dolan, and on Stantec's (the City's consultant) recent site inspections and quarterly report.
 - c. Reclamation Plan revisions from July 29, 2020 meeting.
- VI. Schedule Next Meeting

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 6:30 PM July 29, 2020 Minutes

I. CALL TO ORDER

The July 29, 2020 Quarry Monitoring Committee meeting was called to order by Alderwoman Wilhelm at 6:30 p.m. in the Council Chambers at City Hall.

Planning Manager Heath Eddy was present in the Council Chambers. Present by phone were Alderwoman Kristen Wilhelm, Alderman Mike Barber, Members Fred Knueppel and Dallas Schurg. Also present were Penny and Richard Danoski.

II. APPROVAL OF THE MINUTES

a. Regular meeting of May 28, 2020.

Alderman Barber moved and Member Knueppel seconded to approve the minutes. Four (4) members voted 'aye'; the vote was 4-0, motion carried.

III. CITIZEN COMMENT PERIOD

Citizen comment period opened at 6:33 p.m. and closed at 6:46 p.m. Ms. Danoski commented that it was unfair that there were no Committee members present in the Council Chambers when the public is required to attend to provide comments; that the minutes from the May 28, 2020 meeting did not include her specific comments; that a number of recent blasts were very large, noting specifically the blast on July 24, 2020 at 8:30 a.m., which was large enough to shake the front door and fireplace at her home; that the land survey needed to be notarized or it would be invalid; and that the comments and discussion of the Committee, and complaints of neighbors, should be included in the City of Franklin newsletter.

IV. HEARINGS

a. None.

No action needed. None taken.

V. BUSINESS

a. Election of new Vice-Chairperson.

Alderman Barber was nominated to become the next Vice-Chairperson for the Committee by Mr. Knueppel. There being no other nominations, the Committee voted to elect Alderman Barber. The vote was four (4) votes in favor, none against. The motion carried.

b. Selection of non-voting member (Ordinance 2020-2425).

Alderwoman Wilhelm noted that there was a potential for one other applicant, and Alderman Barber stated he knew of another person interested in the position. Alderwoman Wilhelm noted that there didn't appear to be a process for interviewing or vetting applicants and such process should be undertaken. It was requested that all applications should be included in the next meeting packet.

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

Planning Manager Eddy noted that there were a total of five (5) complaints submitted for four (4) events since the last Committee meeting, including June 8, June 12, June 25, and July 21. In checking the blasting data from the monitoring sites, all events on those dates were under the maximum limits permitted under Ord. 1997-1456 and Ord. 1997-1457.

Alderwoman Wilhelm suggested that the limits established by those ordinances were too high, and suggested that perhaps Council and/or the Plan Commission should revisit them. However, it was noted that there may not be enough Council support to reconsider either the limits or the permitted allowance above the limits.

d. Reclamation Plan review (previously discussed on July 27, 2017).

Alderwoman Wilhelm stated that she discussed the adoption of the Reclamation Plan during a Plan Commission meeting, and that it was decided the Committee should review the Plan document again (currently dated June 29, 2017) to verify that all information provided is accurate and up-to-date. The Plan will be taken up by the Plan Commission following Committee review and recommendation.

Alderman Barber asked if the most recent survey of the quarry should be included with the Reclamation Plan. Alderwoman Wilhelm supported the idea of including the survey. Alderman Barber moved to include the most recent quarry survey with the Reclamation Plan, which was seconded by Mr. Knueppel. All voted 'aye', the motion carried.

Alderwoman Wilhelm suggested the Committee go through the document page by page. These are the recommended changes or questions for the quarry operator (Payne & Dolan):

Front cover - change the Final Revision date to July 29, 2020 Page 2 last paragraph – "fine graded" should perhaps be "finely graded" Page 3 first paragraph end – the Committee requested clarification on what "overburden materials" will be included with the final site reclamation? Page 3 second paragraph – the Committee wondered if the stormwater drainage pipe was to remain, then how would the quarry fill up? The Committee also requested clarification on the water quality in the new "lake". Page 4 first paragraph – missing a "to" between "currently" and "be" Page 4 second paragraph – there should be a reference to PR #37 from the Southeastern Wisconsin Regional Planning Commission. Page 6 second paragraph – references Sheet 3 on the attached mapping, but the sheet numbers on the ends of the plan sheets are too small. The sheets should have labels in bigger text. Page 7 first paragraph – end of second line add ", or as updated or amended." Page 8 second paragraph – end of paragraph add "by the operator and available to the City." Page 10 appears to be missing (Second VI is on Page 10, but the 2017 Plan doesn't have any Section VI currently.) Page 11 the insert from the City Code should be checked to make sure it is current. Page 12 seventh paragraph – doesn't indicate who will be removing the fence (operator or City) or when the City would be accepting the reclaimed property. Page 13 need a new signature and date based on the updates above.

Alderwoman Wilhelm stated the revised Reclamation Plan should be available for a final review at the next Committee meeting.

VI. SCHEDULE NEXT MEETING

The Committee agreed to schedule the next meeting at a time and date to be determined, near the end of August, in coordination with the Planning Manager, based in part on response to the revisions to the Reclamation Plan.

VII. ADJOURNMENT

Alderman Barber moved and Member Knueppel seconded to adjourn the July 29, 2020, Quarry Monitoring Committee meeting at 7:43 p.m. All present voted 'aye'; motion carried.

City of Franklin 9229 West Loomis Road Franklin, Wisconsin 53132

VOLUNTEER FACT SHEET

Thank-you for your interest in serving on a City Board, Commission, or Committee. In order that consistent information be provided to the Common Council, you are asked to complete the following:

PERSONAL:

Name	Penny (Pendope) Danosk
Address	7985 5, 57 the St, Franklin WF
Phone Number	414-421-6365
E-Mail	p.danoski 1 @ gmail.com
Length of Time a Franklin Resident	
Alderman or District Number	

AREA OF INTEREST: Please check the line next to the Board, Commission or Committee or area of greatest interest. If listing more than one, please prioritize your top three choices (3 being least priority).

- Architectural Review Board
- Community Development Authority
- **Environmental Commission**
- Fair Commission
- Fire and Police Commission
- Library Board
- Personnel Committee
- Board of Public Works
- **Technology** Commission
- Board of Water Commissioners
- Board of Zoning & Building Appeals

- Civic Celebrations Commission
- Economic Development Commission
- **Finance Committee**
- Board of Health
- Parks Commission
- Plan Commission
 - Quarry Monitoring Committee
 - Board of Review
- **Tourism Commission**
 - Waste Facilities Monitoring Committee

Why are you interested in joining this (these) particular Board and/or Commission? Thy husband and I live just south of very concerned and about the De Are , pp can't afford Quarries BB Basement 0r any other

VOLUNTEER OR WORK EXPERIENCE

(Begin with your most recent employment and continue with all past 10 years of employment. Please attach additional paper or include resume, if available.)

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Date started:		Starting Position	on:
Date left:		Position upon	leaving:
Description of duties:			

ADDITIONAL EXPERIENCE OR QUALIFICATIONS: List any other experience, skills, or other qualifications, including hobbies, which you believe should be considered in evaluating your qualifications for volunteering.

since payne A Dolan moved into Franklin. We believe, 1989

I am aware that all of the information provided and this document itself is a public record which will be released to a requestor; that I authorize such release and that I waive any right to any notice of such release and/or any right of notice to augment the information provided upon this document upon such request or release.

Signature: Mar Paula Date: 5-28-20

VOLUNTEER FACT SHEET

NOTIFICATION AND AGREEMENT

I certify that the information provided by me in this Application is true and complete to the best of my knowledge. I understand that if I am appointed, any false statements or omissions can be cause for reconsideration or termination of the appointment.

The City of Franklin is hereby authorized to verify the information I have supplied and to conduct any review or investigation of my personal history. By signing below I also authorize the City of Franklin and it's assigns to perform a background check on all information provided by me on this application, including but not limited to, information related to past or pending criminal charges, past criminal convictions, education and employment history, and the status of property tax, fines, and fee payments I owe the City. I further authorize any holder of information pertaining to the information supplied by me on this application to release such information to the City, which shall remain confidential to the extent provided for pursuant to Wisconsin law. I understand and agree that the City shall not be held liable in any respect for any actions taken by the City to check such information. I further understand and agree that the record of the information obtained during the background check is a public record and is subject to release upon a request for the record, subject to the considerations to be made under and the application of the Wisconsin open records laws.

It is the intent of the City of Franklin to comply with all state and federal requirements and to operate within the law in the implementation of all facets of equal opportunity and affirmative action. In the recruitment, selection, utilization, or termination of Board and Commission appointments, there will be no discrimination on the basis of race, color, religious belief, age, gender, sexual orientation, national origin, citizenship status, disability, marital status, pregnancy. **Do not include information of this nature in the application**. It is the City of Franklin's intention that all qualified applicants be given equal opportunity and that selection decisions be based on position-related factors.

I understand that should a Board or Commission appointment offer be extended to me and accepted I will be subject to and will fully adhere to the policies, rules, and regulations of the City of Franklin and State of Wisconsin, including but not limited to those related to ethical standards, public records, and public meetings.

Applicant's Signature	 Date:

Applicant's Name (Printed)

Applications are kept on file for 2 years.



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Search:

Date	Time	Shot #	Seismo Loc	ΡΡV	AO
7/23/2020	10:30 am	52	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
7/23/2020	10:33 am	52	Franklin Quarry (7301 S 51st Street)	0.075	107
7/23/2020	10:33 am	52	Franklin Quarry (7526 S. 51st Street)	0.050	66
7/23/2020	10:33 am	52	Franklin Quarry (SE of Quarry)	0.033	66
7/21/2020	9:00 am	51	Franklin Quarry (5800 ALLWOOD)	T/N	N/T
7/21/2020	9:00 am	51	Franklin Quarry (7301 S 51st Street)	N/T	N/T
7/21/2020	9:00 am	51	Franklin Quarry (7526 S. 51st Street)	N/T	N/T
7/21/2020	9:00 am	51	Franklin Quarry (SE of Quarry)	N/T	N/T
7/14/2020	10:02 am	50	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
7/14/2020	10:02 am	50	Franklin Quarry (7301 S 51st Street)	0.090	108

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Date	Time	Shot #	Seismo Loc	ΡΡV	A0
8/14/2020	8:27 am	54	Franklin Quarry (7526 S. 51st Street)	0.065	106
8/14/2020	8:30 am	54	Franklin Quarry (SE of Quarry)	N/T	L/N
8/14/2020	12:00 pm	55	Franklin Quarry (5800 ALLWOOD)	N/T	T/N
8/14/2020	12:06 pm	55	Franklin Quarry (7301 S 51st Street)	0.123	113
8/14/2020	12:06 pm	55	Franklin Quarry (7526 S. 51st Street)	0.060	117
8/14/2020	12:06 pm	55	Franklin Quarry (SE of Quarry)	0.023	115
7/24/2020	8:29 am	53	Franklin Quarry (5800 ALLWOOD)	0.065	111
7/24/2020	8:29 am	53	Franklin Quarry (7301 S 51st Street)	0.040	66
7/24/2020	8:29 am	53	Franklin Quarry (7526 S. 51st Street)	0.170	107
7/24/2020	8:29 am	53	Franklin Quarry (SE of Quarry)	0.265	111
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Date	Time	Shot #	Seismo Loc	ΡΡV	AO
8/20/2020	12:41 pm	57	Franklin Quarry (5800 ALLWOOD)	0.135	108
8/20/2020	12:41 pm	57	Franklin Quarry (7301 S 51st Street)	N/T	N/T
8/20/2020	12:41 pm	57	Franklin Quarry (7526 S. 51st Street)	0.048	109
8/20/2020	12:41 pm	57	Franklin Quarry (SE of Quarry)	0.133	108
8/18/2020	10:45 am	56	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
8/18/2020	10:47 am	56	Franklin Quarry (7301 S 51st Street)	0.075	106
8/18/2020	10:47 am	56	Franklin Quarry (7526 S. 51st Street)	0.068	104
8/18/2020	10:47 am	56	Franklin Quarry (SE of Quarry)	0.030	106
8/14/2020	8:30 am	54	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
8/14/2020	8:27 am	54	Franklin Quarry (7301 S 51st Street)	0.073	104
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Franklin Quarry



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Date	Time	Shot #	Seismo Loc	Δ	AO
9/01/2020	9:54 am	60	Franklin Quarry (7526 S. 51st Street)	0.140	105
9/01/2020	9:54 am	60	Franklin Quarry (SE of Quarry)	0.038	06
8/27/2020	11:00 am	59	Franklin Quarry (5800 ALLWOOD)	N/T	T/N
8/27/2020	10:57 am	59	Franklin Quarry (7301 S 51st Street)	0.093	109
8/27/2020	10:57 am	59	Franklin Quarry (7526 S. 51st Street)	0.103	113
8/27/2020	10:57 am	59	Franklin Quarry (SE of Quarry)	0.053	108
8/24/2020	11:10 am	58	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
8/24/2020	11:11 am	58	Franklin Quarry (7301 S 51st Street)	0.120	91
8/24/2020	11:11 am	58	Franklin Quarry (7526 S. 51st Street)	0.195	103
8/24/2020	11:11 am	58	Franklin Quarry (SE of Quarry)	0.053	93

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Date	Time	Shot #	Seismo Loc	ΡΡV	V
9/09/2020	11:50 am	62	Franklin Quarry (5800 ALLWOOD)	N/T	L/N
9/09/2020	11:49 am	62	Franklin Quarry (7301 S 51st Street)	0.065	66
9/09/2020	11:49 am	62	Franklin Quarry (7526 S. 51st Street)	0.060	108
9/09/2020	11:49 am	62	Franklin Quarry (SE of Quarry)	0.025	98
9/03/2020	10:30 am	61	Franklin Quarry (5800 ALLWOOD)	N/T	T/N
9/03/2020	10:34 am	61	Franklin Quarry (7301 S 51st Street)	0.125	116
9/03/2020	10:34 am	61	Franklin Quarry (7526 S. 51st Street)	0.053	120
9/03/2020	10:30 am	61	Franklin Quarry (SE of Quarry)	N/T	L/N
9/01/2020	10:00 am	60	Franklin Quarry (5800 ALLWOOD)	N/T	T/N
9/01/2020	9:54 am	60	Franklin Quarry (7301 S 51st Street)	0.063	96

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Date	Time	Shot #	Seismo Loc	Δdd	AO
9/15/2020	10:58 am	63	Franklin Quarry (5800 ALLWOOD)	0.100	107
9/15/2020	11:00 am	63	Franklin Quarry (7301 S 51st Street)	N/T	N/T
9/15/2020	10:58 am	63	Franklin Quarry (7526 S. 51st Street)	0.063	112
9/15/2020	10:58 am	63	Franklin Quarry (SE of Quarry)	0.158	108
9/09/2020	11:50 am	62	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
9/09/2020	11:49 am	62	Franklin Quarry (7301 S 51st Street)	0.065	66
9/09/2020	11:49 am	62	Franklin Quarry (7526 S. 51st Street)	0.060	108
9/09/2020	11:49 am	62	Franklin Quarry (SE of Quarry)	0.025	98
9/03/2020	10:30 am	61	Franklin Quarry (5800 ALLWOOD)	N/T	N/T
9/03/2020	10:34 am	61	Franklin Quarry (7301 S 51st Street)	0.125	116
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Stantec Consulting Services Inc. 1165 Scheuring Road De Pere, Wisconsin 54115 Tel: (920) 592-8400 Fax: (920) 592-8444

July 29, 2020

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

REFERENCE: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 2nd Quarter 2020 Stantec Project: 193707487

Dear Mr. Eddy:

The enclosed information summarizes monitoring activities completed during the second quarter of 2020 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. A description of services is presented in Attachment A and the background of the project is provided in Attachment B. 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.

A total of four observation events were completed during the monitoring period. One each month was unannounced and thus limited to the perimeter of the quarry, and there was an additional announced inspection in April that also included visual observations in the quarry. Two of the four visits observed a small amount of dust on Rawson Avenue from trucks that were departing the site from the northwest access point and travelling to the east. The street sweeper was observed operating on Rawson Avenue on three of the four inspections. No noticeable dusts were observed on the other roads surrounding the quarry and there was no observed debris on the roads.

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 for the quarter and are presented in Attachment C. Note that there were no blasting events in January or February. Figure 1 illustrates the locations of the blasts in the first quarter.

Highlights of the seismic data include the following:

- Between April 1 and June 30, 2020, a total of 35 blasting events occurred. A total of 30 (86%) 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



July 29, 2020 Page 2 of 4

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 2Q2020

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.
 - 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 were below this level. This is in conformance with the PDD.
- The corresponding blast data measured by Stantec with the Sauls Seismic monitors closely aligned with the readings at each Payne & Dolan sponsored Vibra-Tech monitors. However, the PPV readings were typically slightly higher by the Payne & Dolan monitor compared to the Stantec monitor, indicating the Payne & Dolan monitors may be providing a slightly more conservative PPV measurement. It should also 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.
- 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 April 1 through June 30, 2020 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

- 38 complaints total (Note: some complaints were for multiple reasons)
- 7 complaints regarding noise
- 0 complaints regarding dust
- 1 complaint miscellaneous
 - operating outside of regular business hours
 - complaints regarding blast events

Complaints - Blast Related

37

- 37 complaints corresponding to actual blast events
- 0 complaints corresponding to possible blast events
- 1 complaint not corresponding to actual blast events
- 9 complaints complainant location identified
 - 16 households that complained once each
 - 2 households that complained two times
 - household that complained three times
 - o 3 households that complained four times
 - household that complained five times
 - complaint no name and address provided (requested confidentiality)

1



July 29, 2020 Page 3 of 4

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 2Q2020

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

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

Blast Events

•

- 35 blast events during monitoring period 2Q2020 (shot numbers 12 through 46)
 - 10 blast events corresponding to complaints
 - 0 weather: rain
 - o 6 weather: partly to mostly cloudy, or cloudy
 - o 4 weather: fair or scattered clouds
 - 3 time: prior to 12:00 pm (noon)
 - o 7 time: after 12:00 pm
- 1 blast event with two complaints (June 6, 2020)
- 1 blast event with eight complaints (April 20, 2020)
- 1 blast event with nine complaints (May 1, 2020)
- 1 blast event with 13 complaints (April 9, 2020)

Quarry Blast Locations Producing Complaints

- 5 northeastern area of quarry
- 5 southern 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 were some noise complaints this quarter.
- Most of the complaints (82%) in this quarter originate from residences south of Drexel Avenue.
- 30 of the complaints (79%) were related to three blasts (#14 on April 9, #20 on April 20 and #24 on May 1). All three of these blasts occurred in the southern portion of the quarry. A total of three complaints for these three blasts were east of 51st Street; all others were south of Drexel Avenue for these three events.
- No complaints came from west of the Root River.
- Complaints were made on days with varying types of weather (fair or cloudy).
- Due to COVID-19, Wisconsin was under a "safer at home" order from March 25 to May 13, 2020. Residents may have been at home more during the day than historically typical. All of the blast events with more than two complaints occurred during this period. In addition, the three events with the highest number of complaints occurred during this period.



July 29, 2020 Page 4 of 4

Reference: City of Franklin, WI – Franklin Aggregates Quarry Monitoring Summary Period: 2Q2020

Please feel free to contact Mike Roznowski at 920.278.3200 or <u>mike.roznowski@stantec.com</u>; or Kristen Gunderson-Inden at 262-643-9156 or <u>kristen.gunderson-inden@stantec.com</u> if you have any questions or concerns.

Respectfully, **STANTEC CONSULTING SERVICES INC.**

Autha

Kristen Gunderson-Inden Environmental Scientist

Millo B. Ropende

Michael B. Roznowski, CHMM Senior Principal

Attachments

- nts A Franklin Quarry Seismic Monitoring Description of Services
 - B Franklin Quarry Seismic Monitoring Project Background
 - C Summary of Seismic Data 2nd Quarter 2020
 - Figure 1 Seismic Blasting and Complaint Locations ,2nd Quarter 2020



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
 - o Dust control measures and issues on-site that may affect off-site receptors
 - Dust control issues directly adjacent off-site
 - o 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:
 - 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, 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 - 1ST QUARTER 2020

	F	Payne & Dolan	Blast Monitoring Data				Stante Monitor	c Blast ing Data	Comparise and Si Monitor	on of P&D antec ing Data	Com	nplaint I	nformation			w	eather (for	complaints	only)		
Date and 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	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)
4/2/2020 10:58	12	east	5800 ALLWOOD	2,899	N/D	N/D	N/D	N/D			No										
4/2/2020 10:58	12	east	7301 S 51st Street	1,597	0.053	109	N/D	N/D													
4/2/2020 10:58	12	east	7526 S. 51st Street	780	0.203	107															
4/2/2020 10:58	12	east	SE of Quarry	1,217	0.065	106															
4/8/2020 11:07	13	east	5800 ALLWOOD	3,874	N/D	N/D	N/D	N/D			No										
4/8/2020 11:07	13	east	7301 S 51st Street	1,124	0.06	108	0.05	108	0.010	0											
4/8/2020 11:07	13	east	7526 S. 51st Street	1,696	0.045	114															
4/8/2020 11:07	13	east	SE of Quarry	2,548	N/D	N/D								1			1				1
4/9/2020 11:59	14	south	5800 ALLWOOD	1,525	0.088	110	0.09	110	-0.002	0	Yes	13	south (1 to east)	WNW	18	36	29	42	m. cloudy	0	43
4/9/2020 11:59	14	south	7301 S 51st Street	2,963	0.02	116	N/D	N/D													
4/9/2020 11:59	14	south	7526 S. 51st Street	1,988	0.065	110															
4/9/2020 11:59	14	south	SE of Quarry	1,324	0.138	113															
4/13/2020 13:02	15	east	5800 ALLWOOD	3,841	N/D	N/D	N/D	N/D			No										
4/13/2020 13:02	15	east	7301 S 51st Street	1,161	0.05	122	0.05	106	0.000	16											
4/13/2020 13:02	15	east	7526 S. 51st Street	1,703	0.048	114															
4/13/2020 13:02	15	east	SE of Quarry	2,538	N/D	N/D															
4/14/2020 11:17	16	east	5800 ALLWOOD	3,811	N/D	N/D	N/D	N/D			No										
4/14/2020 11:17	16	east	7301 S 51st Street	772	0.128	110	0.09	106	0.038	4											
4/14/2020 11:17	16	east	7526 S. 51st Street	1,199	0.09	107															
4/14/2020 11:17	16	east	SE of Quarry	2,176	N/D	N/D															
4/14/2020 11:19	17	east	5800 ALLWOOD	3,811	N/D	N/D	N/D	N/D			No										
4/14/2020 11:19	17	east	7301 S 51st Street	772	0.065	116	0.05	107	0.015	9											
4/14/2020 11:19	17	east	7526 S. 51st Street	1,199	0.048	116															
4/14/2020 11:19	17	east	SE of Quarry	2,176	N/D	N/D															
4/15/2020 12:35	18	east	5800 ALLWOOD	3,460	N/D	N/D	N/D	N/D			No										
4/15/2020 12:35	18	east	7301 S 51st Street	1,090	0.078	106	0.05	106	0.028	0											
4/15/2020 12:35	18	east	7526 S. 51st Street	1,092	0.043	109															
4/15/2020 12:35	18	east	SE of Quarry	1,912	0.028	108															
4/15/2020 12:43	19	east	5800 ALLWOOD	2,965	N/D	N/D	N/D	N/D			No										
4/15/2020 12:43	19	east	7301 S 51st Street	1,524	0.043	104	N/D	N/D													
4/15/2020 12:43	19	east	7526 S. 51st Street	913	0.105	101															
4/15/2020 12:43	19	east	SE of Quarry	1,414	0.08	93	0.00	446	0.007					14/01/1	4.6			20			
4/20/2020 13:29	20	south	5800 ALLWOOD	1,482	0.075	111	0.08	113	-0.005	-2	Yes	8	south	WSW	16	29	29	20	m. cloudy	0	61
4/20/2020 13:29	20	south	7301 S 51st Street	3,005	0.025	101	N/D	N/D													
4/20/2020 13:29	20	south	7526 S. 51st Street	2,024	0.105	119															
4/20/2020 13:29	20	south	SE OT Quarry	1,338	0.1/3	109	NI/D	N/D			No						<u> </u>				
4/23/2020 12:17	21	east	5800 ALLWOOD	3,/31	N/D	N/D	N/D	N/D			NO										
4/23/2020 12:17	21	east	7526 S. 51st Street	801	0.14	107	0.12	102	0.020	9											
4/23/2020 12:17	21	east	7526 S. 51St Street	1,079	0.07	107															
4/23/2020 12:1/	21	east	SE OT QUARRY	2,054	0.023	110															

		Payne & Dolan	n Blast Monitoring Data				Stante Monitor	c Blast ing Data	Comparise and Si Monitor	on of P&D tantec ing Data	Com	nplaint I	nformation			w	eather (for	complaints	only)		
Date and 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	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)
4/23/2020 12:22	22	east	5800 ALLWOOD	3,994	N/D	N/D	N/D	N/D			No										
4/23/2020 12:22	22	east	7301 S 51st Street	1,012	0.095	113	0.09	104	0.005	9											
4/23/2020 12:22	22	east	7526 S. 51st Street	1,695	0.043	111															
4/23/2020 12:22	22	east	SE of Quarry	2,601	N/D	N/D															
4/28/2020 10:38	23	east	5800 ALLWOOD	3,808	N/D	N/D	N/D	N/D			No										
4/28/2020 10:38	23	east	7301 S 51st Street	1,194	0.058	111	N/D	N/D													
4/28/2020 10:38	23	east	7526 S. 51st Street	1,705	0.048	118															
4/28/2020 10:38	23	east	SE of Quarry	2,524	0.023	107															
5/1/2020 12:23	24	south	5800 ALLWOOD	1,317	0.085	107	0.09	109	-0.005	-2	Yes	9	south	SE	14	0	29	36	m. cloudy	0	60
5/1/2020 12:23	24	south	7301 S 51st Street	3,170	0.03	102	N/D	N/D													
5/1/2020 12:23	24	south	7526 S. 51st Street	2,181	0.063	110															
5/1/2020 12:23	24	south	SE of Quarry	1,440	0.098	112															
5/5/2020 10:30	25	north	5800 ALLWOOD	3,911	N/D	N/D	N/D	N/D			No										
5/5/2020 10:30	25	north	7301 S 51st Street	1,644	0.08	118	0.06	109	0.020	9											
5/5/2020 10:30	25	north	7526 S. 51st Street	2,203	0.073	119															
5/5/2020 10:30	25	north	SE of Quarry	2,925	0.023	116															
5/8/2020 12:10	26	east	5800 ALLWOOD	3,835	N/D	N/D	N/D	N/D			Yes	1	east	NNW	13	21	29	49	p. cloudy	0	40
5/8/2020 12:10	26	east	7301 S 51st Street	775	0.118	114	0.09	112	0.028	2											
5/8/2020 12:10	26	east	7526 S. 51st Street	1,248	0.078	111															
5/8/2020 12:10	26	east	SE of Quarry	2,220	N/D	N/D															
5/8/2020 12:14	27	east	5800 ALLWOOD	4,066	N/D	N/D	N/D	N/D			Yes	1	east	NNW	13	21	29	49	p. cloudy	0	40
5/8/2020 12:14	27	east	7301 S 51st Street	993	0.09	111	0.1	106	-0.010	5											
5/8/2020 12:14	27	east	7526 S. 51st Street	1,740	0.06	118															
5/8/2020 12:14	27	east	SE of Quarry	2,664	N/D	N/D															
5/12/2020 11:19	28	east	5800 ALLWOOD	3,746	N/D	N/D	N/D	N/D			Yes	1	east	E	8	1	29	38	fair	0	52
5/12/2020 11:19	28	east	7301 S 51st Street	879	0.263	106	0.2	110	0.063	-4											
5/12/2020 11:19	28	east	7526 S. 51st Street	1,259	0.07	112															
5/12/2020 11:19	28	east	SE of Quarry	2,184	0.023	114															
5/15/2020 12:11	29	east	5800 ALLWOOD	3,882	N/D	N/D	N/D	N/D			Yes	1	east	W	10	0	29	53	p. cloudy	0	73
5/15/2020 12:11	29	east	7301 S 51st Street	795	0.128	101	0.09	104	0.038	-3											
5/15/2020 12:11	29	east	7526 S. 51st Street	1,347	0.058	116															
5/15/2020 12:11	29	east	SE of Quarry	2,310	0.023	114															
5/15/2020 12:58	30	east	5800 ALLWOOD	3,882	N/D	N/D	N/D	N/D			No										
5/15/2020 12:58	30	east	7301 S 51st Street	795	0.153	104	0.09	109	0.063	-5											
5/15/2020 12:58	30	east	7526 S. 51st Street	1,347	0.083	116															
5/15/2020 12:58	30	east	SE of Quarry	2,310	N/D	N/D															
5/20/2020 13:47	31	east	5800 ALLWOOD	3,880	N/D	N/D	N/D	N/D			No										
5/20/2020 13:47	31	east	7301 S 51st Street	774	0.135	103	0.14	107	-0.005	-4											
5/20/2020 13:47	31	east	7526 S. 51st Street	1,318	0.078	109															
5/20/2020 13:47	31	east	SE of Quarry	2,289	0.023	106															

	I	Payne & Dolan	n Blast Monitoring Data				Stante Monitor	c Blast ing Data	Comparise and Si Monitor	on of P&D tantec ing Data	Con	nplaint I	nformation			w	eather (for	complaints	only)		
Date and 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	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)
5/20/2020 13:53	32	east	5800 ALLWOOD	3,793	N/D	N/D	N/D	N/D			No		•								•
5/20/2020 13:53	32	east	7301 S 51st Street	1,225	0.055	105	N/D	N/D													
5/20/2020 13:53	32	east	7526 S. 51st Street	1,724	0.053	109															
5/20/2020 13:53	32	east	SE of Quarry	2,530	0.023	106															
5/26/2020 12:07	33	east	5800 ALLWOOD	3,773	N/D	N/D	N/D	N/D			No										
5/26/2020 12:07	33	east	7301 S 51st Street	899	0.19	101	0.1	103	0.090	-2											
5/26/2020 12:07	33	east	7526 S. 51st Street	1,330	0.068	107															
5/26/2020 12:07	33	east	SE of Quarry	2,246	0.02	99															
5/26/2020 12:11	34	east	5800 ALLWOOD	3,882	N/D	N/D	N/D	N/D			No										
5/26/2020 12:11	34	east	7301 S 51st Street	1,222	0.043	92	0.05	98	-0.007	-6											
5/26/2020 12:11	34	east	7526 S. 51st Street	1,796	0.055	103															
5/26/2020 12:11	34	east	SE of Quarry	2,622	N/D	N/D															
6/1/2020 9:55	35	east	5800 ALLWOOD	3,769	N/D	N/D	N/D	N/D			No										
6/1/2020 9:55	35	east	7301 S 51st Street	918	0.155	111	0.09	108	0.065	3											
6/1/2020 9:55	35	east	7526 S. 51st Street	1,350	0.065	110															
6/1/2020 9:55	35	east	SE of Quarry	2,258	N/D	N/D															
6/1/2020 13:14	36	east	5800 ALLWOOD	3,157	N/D	N/D	N/D	N/D			No										
6/1/2020 13:14	36	east	7301 S 51st Street	1,364	0.095	109	0.1	106	-0.005	3											
6/1/2020 13:14	36	east	7526 S. 51st Street	1,042	0.193	111															
6/1/2020 13:14	36	east	SE of Quarry	1,676	0.083	101															
6/3/2020 12:17	37	east	5800 ALLWOOD	3,937	N/D	N/D	N/D	N/D			No										
6/3/2020 12:17	37	east	7301 S 51st Street	1,632	0.063	106	0.07	104	-0.007	2											
6/3/2020 12:17	37	east	7526 S. 51st Street	2,210	0.05	116															
6/3/2020 12:17	37	east	SE of Quarry	2,941	0.025	116															
6/4/2020 12:27	38	east	5800 ALLWOOD	3,865	N/D	N/D	N/D	N/D			No										
6/4/2020 12:27	38	east	7301 S 51st Street	1,230	0.045	117	0.05	109	-0.005	8											
6/4/2020 12:27	38	east	7526 S. 51st Street	1,791	0.048	113															
6/4/2020 12:27	38	east	SE of Quarry	2,611	0.023	108							1								
6/8/2020 13:39	39	south	5800 ALLWOOD	1,324	0.11	106	0.12	108	-0.010	-2	Yes	1	south	SE	15	0	29	40	fair	0	80
6/8/2020 13:39	39	south	7301 S 51st Street	3,163	N/D	N/D	N/D	N/D													
6/8/2020 13:39	39	south	7526 S. 51st Street	2,167	0.048	110															
6/8/2020 13:39	39	south	SE of Quarry	1,419	0.09	108															
6/12/2020 13:08	40	south	5800 ALLWOOD	1,406	0.078	112	0.08	113	-0.002	-1	Yes	2	south	ENE	12	20	30	62	fair	0	57
6/12/2020 13:08	40	south	7301 S 51st Street	3,082	N/D	N/D	N/D	N/D													
6/12/2020 13:08	40	south	7526 S. 51st Street	2,072	0.093	106															
6/12/2020 13:08	40	south	SE of Quarry	1,330	0.195	110															
6/16/2020 10:02	41	east	5800 ALLWOOD	3,209	N/D	N/D	N/D	N/D			No										
6/16/2020 10:02	41	east	7301 S 51st Street	1,310	0.085	106	0.09	100	-0.005	6											
6/16/2020 10:02	41	east	7526 S. 51st Street	1,024	0.13	106															
6/16/2020 10:02	41	east	SE of Quarry	1,701	0.058	101															

Franklin Aggregates Quarry Vibration Monitoring

	I	Payne & Dolan	Blast Monitoring Data				Stante Monitor	c Blast ing Data	Comparise and Si Monitor	on of P&D antec ing Data	Con	nplaint	Information			w	eather (for	complaints	only)		
Date and 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	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)
6/18/2020 10:14	42	east	5800 ALLWOOD	3,965	N/D	N/D	N/D	N/D			No										
6/18/2020 10:14	42	east	7301 S 51st Street	1,502	0.07	112	0.08	102	-0.010	10											
6/18/2020 10:14	42	east	7526 S. 51st Street	2,113	0.055	113															
6/18/2020 10:14	42	east	SE of Quarry	2,884	0.023	112															
6/19/2020 11:45	43	east	5800 ALLWOOD	3,808	N/D	N/D	N/D	N/D			No										
6/19/2020 11:45	43	east	7301 S 51st Street	1,433	N/D	N/D	N/D	N/D													
6/19/2020 11:45	43	east	7526 S. 51st Street	1,939	N/D	N/D															
6/19/2020 11:45	43	east	SE of Quarry	2,690	N/D	N/D															
6/23/2020 11:15	44	east	5800 ALLWOOD	4,058	N/D	N/D	N/D	N/D			No										
6/23/2020 11:15	44	east	7301 S 51st Street	429	0.118	110	0.09	106	0.028	4											
6/23/2020 11:15	44	east	7526 S. 51st Street	1,050	0.048	113															
6/23/2020 11:15	44	east	SE of Quarry	2,184	N/D	N/D															
6/25/2020 11:31	45	east	5800 ALLWOOD	4,062	N/D	N/D	N/D	N/D			Yes	1	south	Variable	3	0	29	36	fair	0	79
6/25/2020 11:31	45	east	7301 S 51st Street	1,530	0.123	113	0.1	104	0.023	9										1	
6/25/2020 11:31	45	east	7526 S. 51st Street	2,199	0.06	111														1	
6/25/2020 11:31	45	east	SE of Quarry	2,986	0.028	111														1	
6/29/2020 10:41	46	east	5800 ALLWOOD	3,725	N/D	N/D	N/D	N/D			No		-		-			-			
6/29/2020 10:41	46	east	7301 S 51st Street	1,828	0.06	107	0.06	101	0.000	6											
6/29/2020 10:41	46	east	7526 S. 51st Street	2,253	0.058	107															
6/29/2020 10:41	46	east	SE of Quarry	2,879	N/D	107															
Totals	35	blast events			<u>.</u>						10	38	events with complaints / total complaints								

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



FIGURE 1

SEISMIC BLASTING AND COMPLAINT LOCATIONS, 1ST QUARTER 2020



Figure No.

Title					
Seis 2nd	smic Blasting I Quarter 202	g and Co 0	omplai	int Lo	ocations
Client/Pr	oject				19370748
Vicin	or Franklin ity of Payne and	Dolan Qua	arry		
Project I	ocation		Prei	nared by A	IS on 2020-07-26
C. of Fr	anklin, Milwaukee Co., WI		110	TR by MN IR by K	IP on 2020-07-28 GI on 2020-07-28
	Ν				
(0	500	1,	000
Ţ	7	(At original	l document 1:12,000	size of 1)	1x17)
Legen	d				
Blast L	ocation			Blast (Complaint
•	Blast #14				Blast #14
•	Blast #20				Blast #20
0	Blast #24				Blast #24
0	Blast #26				Blast #26
•	Blast #27				Blast #27
•	Blast #28				Blast #28
•	Blast #30				Blast #30
•	Blast #39				Blast #39
	Blast #40				Blast #40
•	Blast #45				Blast #45
۲	Non-complaint	Blast Locati	ions		
Seismi	c Monitoring Loco	ation			
\bigotimes	Vibra-Tech(VT1)	and Stante	ec(S1)		
B	Vibra-Tech(VT2)				
©	Vibra-Tech(VT3)				
\bigcirc	Vibra-Tech(VT4)	and Stante	ec(S2)		



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



City of Franklin, Wi Franklin Aggregates - Quarry Observation Form announced Wild Wold Y JULY 12, 20, 20, 20, 20, 20, 20, 20, 20, 20, 2		Local weather conditio (KWIGREEN18 - L Sect temperature dew point pressure humidity	Weather observations Wind appear	Date and time of observations perform Signature:
of Franklin, Wi - Quarry Observation Form - Unity 12, 20, 20, 2, 20, 2, 20, 2, 20, 20, 20,	7.5	ion - Arcturan Station, Greendak 61 67 $^{\circ}F$ 2010 $^{\circ}F$ 2010 $^{\circ}F$ 100 $^{\circ}F$	on-site: s to be FROM the following direct par / sunny rtly cloudy ercast	City . Franklin Aggregate rvations: Wild Moduly ed by: K. hwdlus announced
o Franklin Aggregates) w Stantec Consulting Ser Inght wind Inght wind W FWIN LL: W inthe to no wind inches/h Page		e, WI) ACUI WEAU wind description: wind speed wind gusts rainfall rate rainfall total	ction:	of Franklin, WI s - Quarry Observation L J JULY 22, 20 2 SUM-INdLM
	Page 1 o	W W 3 NH NH nph NH inches/hour	Strong wind light wind ' little to no wind	Form

Franklin Aggregates – Quarry Observation Form	City of Franklin, WI
---	----------------------

.J. <u>Other</u> ?	T.I. Photos		1.9. Blasting	propert	1f Stormu	1.e Dilet or	1.d. Dust or	1.c. Opacit	propert	Toadwa	1. Observation (off-site)
	or Videos: Obtained?	I. Any other operational issues that an off-site impact?	Obvious seismic activity detected?	Y? Noticeable erosion?	and Obvious at the contract of	metal Mathematical and a sweeper operating during observations?	ntrol: Stroot support	V: Obvious airborne dirt/dust opported to the first	Y: Obvious airborne dirt/dust originating from quarry y?	on roadway: Obvious debris (i.e., aggregate; sand) on any?	ons in the vicinity of: West Rawson Avenue
-	×						×				YES
		x	8	8	X	8	×		R	8	NO
(u										NIA
+ POF Rou	2 nhoto	X					U. Minu				Comments Attached

011011				Uner	2.N.
MUTION		X	7	Photos or Videos: Obtained?	2.9
		Ъ		General: Any other operational issues that an off-site impact?	2.f.
				Blasting: Obvious seismic activity detected?	2.e.
		Z		<u>Stormwater</u> . Obvious off-site runoff impacts directly from property? Noticeable erosion?	2.d.
		8	-	Decity: Obvious airborne dirt/dust generated by traffic on off-site roadway?	2.0.
		8		Opacity: Obvious airborne dirl/dust originating from quarry property?	2.6.
		8		Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?	2.a.
Comments Attached	NIA	NO	YES	off-site)	2.0

City of Franklin, WI Franklin Aggregates – Quarry Observation Form

ervations in the vicinity of: West Drexel Avenue ff-site)	YES	NO	NIA	Comments Attached
Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		X		
Opacity: Obvious airborne dirt/dust originating from quarry property?		б		
Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?		8		
Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?		×		
Blasting: Obvious seismic activity detected?		X		
General: Any other operational issues that an off-site impact?		X		-
Photos or Videos: Obtained?	X			homs
Other?				

4.01	bservations in the vicinity of: <u>South 68th Street</u> (off-site)	YES	NO	NIA	Comments Attached
4.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		x		
4.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		*		
4.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?		*		
4.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?	*	*		
4.e.	Blasting: Obvious seismic activity detected?		×		
4.f.	General: Any other operational issues that an off-site impact?		×		
4.g.	Photos or Videos: Obtained?	×			1000
4.h.	Other?	+			10 000

Page 3 of 7

Franklin Aggreg	0
ates – Quarry Observat	ty of Franklin, WI
tion Form	

5.j. Other? Mt	5.i. Photos or Videos: Obt	5.h. <u>General</u> : Any other op impact?	5.g. <u>Stormwater</u> : Obvious property?	5.f. Dust control: Wheel w	5.e. Dust control: Water tru	5.d. Dust control: Water tr	5.c. Dust control: Street sv	5.b. Opacity: Noticeable ai appears to be travelin	5.a. Debris on paved drive on driveway?	(on-site)
tinuse	ained?	rational issues that may cause an off-site	ff-site runoff impacts directly from	sh operating during visit?	ck (cannon) operating during visit?	ck operating during observations?	eeper operating during observations?	borne dirt/dust from this area of property off-site?	vay: Obvious debris (i.e., aggregate; sand)	
	γ									Į
		X	Ø	r	6	v	V	6	x	
	Pooluin									

agate; sand) s property ations? ns? s an off-site an off-site b an off-site
X X X X X X X

	7.h.	.g.	1.1.	e.	.d.	.c.	.b.	ė.	·. • =====
N/A - unannounced did not go l	Other?	Photos or Videos: Obtained?	General: Any other operational issues that may cause an off-site mpact?	Stormwater: Obvious off-site runoff impacts diffectly from property?	Dust control: Water being used at crushing/screening/conveying perations to help minimize dust generation?	Dust control: Water truck (cannon) operating during visit?	<u>Dust control</u> : Water truck operating during observations?	<u>Deacity</u> : Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?	servations in the vicinity of: <u>Operational portion of quarry (not</u> ! NE and NW sections, which are observed separately) I-site)
N.S.H.									YES
R'									NO
									NIA
									Comments Attached

Page 5 of 7

City of Franklin, WI Franklin Aggregates – Quarry Observation Form



			City of Franklin, WI Franklin Aggregates – Quarry Observati Quarry observation comment(s): FAST JUIT/ JUITA NO JUINGLY IM MAY WEST JUIT (1945) MAY WEST JUIT (1945)
Page 7 of 7			rvation Form Iniuse (use)
Date and time of observations:	Wednesday	Avgvst 5 20	20 @ 855 AM PM
---	---	-------------------------	------------------------------------
Observations performed by:	K Gunders	son-Inden	, Stantec Consulting Services Inc.
Signature:	\sim	$\overline{}$	
Observations were:	announced	unannounced	(to Franklin Aggregates)
Weather observations on-site:		10 Licania	Hurst Link
Wind appears to be Fl	ROM the following direct	ction: <u>VV/VUries</u>	TVITY Ugita
clear / sunn	у	heavy rain	strong wind
partly cloudy	у	light rain	light wind
overcast		no precipitation	little to no wind
Other:			
Local weather conditions at the (KWIGREEN18 - L Section - Arct	e time of the visit: uran Station, Greendale	ACCVWCOH	hev - Franklin, WI
temperature	61 °F	wind description:	WSW
dew point	53 °F	wind speed	mph
pressure	30,09 inches	wind gusts	mph
humidity _	75 %	rainfall rate	inches/hour
		rainfall total	inches

1.01	off-site)	YES	NO	N/A	Comments Attached
1.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		×		
1.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		X	140	and the
1.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?	X			TWERS U
1.d.	Dust control: Street sweeper operating during observations?	an kanin at i	7		to La
1.e.	Dust control: Water truck operating during observations?		ø		
1.f.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?	N	X		
1.g.	Blasting: Obvious seismic activity detected?		9		14.
1.h.	General: Any other operational issues that an off-site impact?		2		31.1
1.i.	Photos or Videos: Obtained?	X			Etw
1.j.	Other?				Mare

2.Ot	off-site)	YES	NO	N/A	Comments Attached
2.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?	1. 1	X		
2.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		\times		
2.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?		α		
2.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?		X		
2.e.	Blasting: Obvious seismic activity detected?		X		
2.f.	General: Any other operational issues that an off-site impact?		X		
2.g.	Photos or Videos: Obtained?	X			of Raws
2.h.	Other?				- sales

Page 2 of 7

5.	Observations in the vicinity of: <u>Northeast corner of property</u> (former Vulcan entrance/exit; Former Black Diamond Asphalt; wheel wash) (no-site)	YES	NO	N/A	Comments Attached
5.a.	Debris on paved driveway: Obvious debris (i.e., appreciate; sand)		~		
	on driveway?		N		
5.b.	<u>Opacity</u> : Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?		X		
5.c.	Dust control: Street sweeper operating during observations?		Ø		
5.d.	Dust control: Water truck operating during observations?		×		
5.e.	Dust control: Water truck (cannon) operating during visit?		x		
5.f.	Dust control: Wheel wash operating during visit?		X		
5.g.	Stormwater: Obvious off-site runoff impacts directly from property?		x		
5.h.	General: Any other operational issues that may cause an off-site impact?		x		
5.i.	Photos or Videos: Obtained?	\sim			locked exit Lo
5.j.	Other?				and be

6.	Observations in the vicinity of: <u>Northwest corner of property</u> (P&D entrance/exit and paved driveway; P&D Asphalt) (on-site)	YES	NO	N/A	Comments Attached	
6.a.	Debris on paved driveway: Obvious debris (i.e., aggregate; sand) on driveway?		Xalla			
6.b.	Opacity: Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?	Х	Ø		Slight d	Ust
6.c.	Dust control: Street sweeper operating during observations?		×		1140,00 10	CAUT
6.d.	Dust control: Water truck operating during observations?		×			
6.e.	Dust control: Water truck (cannon) operating during visit?		X			•
6.f.	Stormwater: Obvious off-site runoff impacts directly from property?	and for	2			
6.g.	General: Any other operational issues that may cause an off-site impact?		×			
6.h.	Photos or Videos: Obtained?	\Diamond			trucks a	EHU
6.i.	Other?					

Page 4 of 7

3.01	off-site)	YES	NO	N/A	Comments Attached
3.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?	terre trate const 1	\propto		
3.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		×		
3.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?		×		
3.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?		X		
3.e.	Blasting: Obvious seismic activity detected?		×	Sec. 1	
3.f.	General: Any other operational issues that an off-site impact?		×		
3.g.	Photos or Videos: Obtained?	×	1	an CR	LOOKING
3.h.	Other?				UT SIV

4.06	off-site)	YES	NO	N/A	Comments Attached
4.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		Ý		
4.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		x	1. 16 18 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 1	
4.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?	dines a .	x		
4.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?	a life age	X	Mariane	
4.e.	Blasting: Obvious seismic activity detected?		x	e er er er er	
4.f.	General: Any other operational issues that an off-site impact?	- (Selection	X	and the second	and the second
4.g.	Photos or Videos: Obtained?	X	Sec. 16	-	tooklig
4.h.	Other?				in han

7.	Observations in the vicinity of: Operational portion of quarry (not the NE and NW sections, which are observed separately) (on-site)	YES	NO	N/A	Comments Attached
7.a.	<u>Opacity</u> : Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?				
7.b.	Dust control: Water truck operating during observations?		here and the		e ann antiù
7.c.	Dust control: Water truck (cannon) operating during visit?		nar gora i si siya		
7.d.	Dust control: Water being used at crushing/screening/conveying operations to help minimize dust generation?	a series and series	an ann an 1980.		
7.e.	Stormwater: Obvious off-site runoff impacts directly from property?	an Constants	on plantipe in t		
7.f.	General: Any other operational issues that may cause an off-site impact?				
7.g.	Photos or Videos: Obtained?				
7.h.	Other?				1

NIA = unannounced visite did not enter guarry

Page 5 of 7

Quarry personnel met with durir	ng visit:	
Clint Weninger	Aggregate Area Man	ager YES NO
Dave Klein	Aggregate Superviso	YES NO
Dennis Northrup	Site Foreman	YES NO
Other personnel met with (name	e and title):	
Quarry operational records revi	ewed during visit:	Comments
Title / Type of Record(s)	Appears Property Maintained	V onantense
Form: Air • "Portable Crusher #2"		
Daily Environmental Tracking Form: Air • "Franklin North Quarry"		
/ NI/	t unannounce alial not e	ed visite nter quarry
		Page 6

Quarry observation comment(s):

Minor dust in right shoulder lane on Rawson when trucks depart to east no noticeble dust from traffic in main driving lanes Page 7 of 7

ignature:			an and a second second		
bservations were:	Announce	ed	unannounced	(to Franklin Aggr	egates)
eather observations on-	site: be FROM the fo	llowing directior			
_X	sunny	he	eavy rain	strong	wind
partly	cloudy	lig	ht rain	light w	ind
overca	ast	no	precipitation	little to	no wind
A CONTRACT OF A					
Other:	- 4 4 4 - 4 im - 2 5 4 4	a visit:	Accur eather.	Groniteli	2
Other: ocal weather conditions WIGREEN18 - L Section temperature	at the time of th - Arcturan Statio 76 +	ne visit: n, Greendale, W °F	ACWW LAHALA, /1) wind description:	frontulin WSW	1
Other: ocal weather conditions WIGREEN18 - L Section temperature dew point	at the time of th - Arcturan Station $\frac{76}{70}$	ne visit: n, Greendale, W °F °F	ACWW LAHACA, /1) wind description: wind speed	Fronticlin WSW 5)
Other: ocal weather conditions WIGREEN18 - L Section temperature dew point pressure	at the time of the - Arcturan Statio $\frac{76}{70}$ $\frac{70}{29,83}$	ne visit: n, Greendale, W ° F ° F ° F inches	ACCUW LAHALA, //) wind description: wind speed wind gusts	FromIllin WSW 5 12	mph
Other: Ocal weather conditions WIGREEN18 - L Section temperature dew point pressure humidity	at the time of the - Arcturan Statio 76^+ 70^- $29,83^-$ 85^-	ne visit: n, Greendale, W °F °F inches %	Accew wind description: wind speed wind gusts rainfall rate	Frontidii WSW 5 12 Ø	mph mph inches/hour
Other: Ocal weather conditions WIGREEN18 - L Section temperature dew point pressure humidity	at the time of the - Arcturan Station 76^+ 70^- $29,83^-$ 85^-	ne visit: n, Greendale, W °F °F inches %	Accew wind description: wind description: wind speed wind gusts rainfall rate rainfall total	Promitulii WSW 5 12 0 0	mph mph inches/hour inches
Other: ocal weather conditions WIGREEN18 - L Section temperature dew point pressure humidity	at the time of the - Arcturan Station $\frac{76}{70} + \frac{70}{29,83}$	ne visit: n, Greendale, W ° F ° F inches %	Accuw when, I) wind description: wind speed wind gusts rainfall rate rainfall total	FromIllin WSW 5 12 0 0	mph mph inches/hour inches
Other: ocal weather conditions WIGREEN18 - L Section temperature dew point pressure humidity	at the time of th - Arcturan Station 76^+ 70^- $29,83^-$ 85^-	ne visit: n, Greendale, W ° F ° F inches %	Accuw when, /I) wind description: wind speed wind gusts rainfall rate rainfall total	Fromikulin WSW 5 12 0 0	mph mph inches/hour inches

1.0	bservations in the vicinity of: <u>West Rawson Avenue</u> (off-site)	YES	NO	N/A	Comments Attached
1.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?	and we	X	paula in	A 14 000-540 1.70
1.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?		X	V.	
1.c.	Opacity: Obvious airborne dirt/dust generated by traffic on off-site roadway?	×	T	Υ.	mines
1.d.	Dust control: Street sweeper operating during observations?		× ×	-358	Soiry 4
1.e.	Dust control: Water truck operating during observations?		× ×		
.f.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?		X		
.g.	Blasting: Obvious seismic activity detected?		X		1
.h.	General: Any other operational issues that an off-site impact?		X		
.i.	Photos or Videos: Obtained?	X			looking
.j.	Other?	/ \			win

2.0	bservations in the vicinity of: <u>South 51st Street</u> (off-site)	YES	NO	N/A	Comments Attached
2.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		×		
2.b.	Opacity: Obvious airborne dirt/dust originating from quarry property?	0	ý		
2.c.	<u>Opacity</u> : Obvious airborne dirt/dust generated by traffic on off-site roadway?	1 100	X		
2.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?		X		
2.e.	Blasting: Obvious seismic activity detected?		X		
2.f.	General: Any other operational issues that an off-site impact?		×		
2.g.	Photos or Videos: Obtained?	X			S of Rowson
2.h.	Other?	/*			

Page 2 of 7

3.Ob (3. Observations in the vicinity of: <u>West Drexel Avenue</u> (off-site)		NO	N/A	Comments Attached
3.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?	Shine - 1	X		
3.b.	<u>Opacity</u> : Obvious airborne dirt/dust originating from quarry property?	ale int	×		
3.c.	<u>Opacity</u> : Obvious airborne dirt/dust generated by traffic on off-site roadway?	a Station	X	1945-82 M	
3.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?	and and a star	×	. Sugar	
3.e.	Blasting: Obvious seismic activity detected?	0 2021	X	1	
3.f.	General: Any other operational issues that an off-site impact?	p- 10	×		
3.g.	Photos or Videos: Obtained?	X			100Kfn OFSI
3.h.	Other?				

4.0b	servations in the vicinity of: <u>South 68th Street</u> off-site)	YES	NO	N/A	Comments Attached
4.a.	Debris on roadway: Obvious debris (i.e., aggregate; sand) on roadway?		X		
4.b.	<u>Opacity</u> : Obvious airborne dirt/dust originating from quarry property?		q	arti ni an Da fi	
4.c.	<u>Opacity</u> : Obvious airborne dirt/dust generated by traffic on off-site roadway?	printi da	A	1	
4.d.	Stormwater: Obvious off-site runoff impacts directly from property? Noticeable erosion?	nànhiù	x	a de la come	
4.e.	Blasting: Obvious seismic activity detected?		X		
4.f.	General: Any other operational issues that an off-site impact?		X		-
4.g.	Photos or Videos: Obtained?	A			looken
4.h.	Other?				Tuality

1

5. C	Observations in the vicinity of: <u>Northeast corner of property</u> former Vulcan entrance/exit; Former Black Diamond Asphalt; wheel vash) on-site)	YES	NO	N/A	Comments Attached
5.a.	<u>Debris on paved driveway</u> : Obvious debris (i.e., aggregate; sand) on driveway?		Ý		
5.b.	<u>Opacity</u> : Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?		ý	Sec. Come	
5.c.	Dust control: Street sweeper operating during observations?	research for	Y		
5.d.	Dust control: Water truck operating during observations?	en and	X		
5.e.	Dust control: Water truck (cannon) operating during visit?	Contraction of the	p		
5.f.	Dust control: Wheel wash operating during visit?	-	X		
5.g.	Stormwater: Obvious off-site runoff impacts directly from property?		\sim		
5.h.	General: Any other operational issues that may cause an off-site impact?		φ		
5.i.	Photos or Videos: Obtained?	X			entry
5.j.	Other?				7

6.	Observations in the vicinity of: Northwest corner of property (P&D entrance/exit and paved driveway; P&D Asphalt)	YES	NO	N/A	Comments Attached
	(on-site)	S. 1. 1. 1.	0.0		
6.a.	Debris on paved driveway: Obvious debris (i.e., aggregate; sand) on driveway?		\otimes		
6.b.	Opacity: Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?	The second	\propto		
6.c.	Dust control: Street sweeper operating during observations?		X		
6.d.	Dust control: Water truck operating during observations?		X		
6.e.	Dust control: Water truck (cannon) operating during visit?		X		
6.f.	Stormwater: Obvious off-site runoff impacts directly from property?		\mathcal{D}		
6.g.	General: Any other operational issues that may cause an off-site impact?		γ		
6.h.	Photos or Videos: Obtained?	X			PICOT
6.i.	Other?				twee

A W Page 4 of 7

7. (Observations in the vicinity of: <u>Operational portion of quarry (not</u> he NE and NW sections, which are observed separately)	YES	NO	N/A	Comments Attached
(on-site)	133	121 210	1	
7.a.	Opacity: Noticeable airborne dirt/dust from this area of property appears to be traveling off-site?		X	- ange an	-
7.b.	Dust control: Water truck operating during observations?	×	Ka 130	art Mar	norde
7.c.	Dust control: Water truck (cannon) operating during visit?		\propto		7
7.d.	Dust control: Water being used at crushing/screening/conveying operations to help minimize dust generation?	×			
7.e.	Stormwater: Obvious off-site runoff impacts directly from property?	deces - control	Ø		
7.f.	General: Any other operational issues that may cause an off-site impact?	-	Q		
7.g.	Photos or Videos: Obtained?	þ			havi na
7.h.	Other?				

Quarry personnel met with during visit:

Clint Weninger	Aggregate Area Manager	YES NO
Dave Klein Kyle Bosch	Aggregate Supervisor	YES NO
Dennis Northrup	Site Foreman	YES NO
Other personnel met with (name and title):		
	and place persons here	
		Const Second

Quarry operational records reviewed during visit:

Title / Type of Record(s)	Appears Properly Maintained	Comments
Daily Environmental Tracking Form: Air • "Portable Crusher #2"	emailed scruen shot	ek.
Daily Environmental Tracking Form: Air • "Franklin North Quarry"	7	+

Page 6 of 7

Quarry observation comment(s):

north end. blast Am n Page 7 of 7









PLAN INDEX							
SHEET NUMBER	DESCRIPTION						
1	AERIAL						
2	EXISTING CONDITIONS						
3	FINAL CONDITIONS						
4	CROSS SECTIONS						
5	FINAL CONDITIONS - CONCEPTUAL						













Legend Property Boundary Planned Development District Planned Development District Mining Limit Grading Extent Proposed Lake Contour Major - 50' interval Inside PDD - 10' interval Contour Minor - 10' interval Inside PDD - 2' interval Section Lines ÷ n Franklin Aggregate Site /2 Section 10, West 1/2 Sectic T5N-R21E, City of Franklin Milwaukee County, Wisconsin CONDITIONS Ē FINAL Ļ Eas F PA AND CONT CONT CONT THE THE THIS PRINT IS PROPERTY OF DOLAN, INC. A CONTENTS CC HORT ARE C CONFIDENTIA SHOULD NOT OUTSIDE OF T OUTSIDE OF T + Holan • Payne-GRAPHIC SCALE

1" = 250'

Cross Section A - RockFace

703' +/-25' Safety Ledge 695' +/-

705' +/-695' +/-







GRAPHIC SCALE 1" = 250'







FRANKLIN AGGEGATES

City of Franklin, Milwaukee County, WI

FINAL REVISION – September 1, 2020

I. Purpose and Scope

The purpose of this reclamation plan is to describe the activities necessary to reclaim the Franklin Aggregates Quarry site to a condition whereby future development is feasible after completion of mineral extraction activities. The plan was designed to achieve final site reclamation that is in compliance with uniform reclamation standards while fulfilling all the applicable requirements as outlined in PDDs #23 & #24, the City of Franklin Non-Metallic Mining Reclamation Ordinance and the state wide reclamation law referred to as NR-135. Implementation of this reclamation plan shall be completed within three (3) years after the cessation of extraction operations.

Reclamation of the site will result in environmental protection, a stable non-eroding site, productive end land uses, the potential to enhance wildlife habitat and increase land values and tax revenues.

The proposed land use to which this site will be reclaimed is Green/Open Space. This proposed land use (outside of the envisioned lake) is to be considered a temporary use. The final end use for the reclaimed site is not being proposed at this time. The ultimate land development and end use (beyond grading, vegetation and other requirements detailed in this plan) will be subject to future land use requirements.

No final end-use development proposals shall be implemented prior to submission of detailed end-use plans pursuant to then applicable City of Franklin ordinance requirements, and the granting of detailed zoning and land use approvals in accordance with such applicable ordinance requirements.

This approach of reclaiming the site to a temporary Green/Open Space land use, will allow for the site to be reclaimed to a proposed land use as required by NR-135 while maintaining flexibility in the land use and development of the site to meet the communities future needs.

Payne & Dolan has a history of completing successful reclamation at this site. After the crushing, stockpiling and loadout operations that were located adjacent to the Root River for many years where moved unto the floor of the quarry in 2003, Payne & Dolan successfully reclaimed the former operations area. See attached Fact Sheet for additional information.

II. Proposed Earthwork and Reclamation

Prior to beginning mineral extraction, the topsoil and other overburden materials covering the nonmetallic mineral deposit are removed and stockpiled separately for future reclamation. Available topsoil and other overburden materials have been stored in berms adjacent to the north, south, and east portions of the active mineral extraction operations. Some overburden materials have also been placed in the bottom of the quarry in areas that have previously been mined.

Reclamation of the site will commence after all non-metallic minerals have been removed from the site. Reclamation of the site will include a 250 acre lake with restored slopes and rock faces surrounding the lake (see Sheet 3 – Final Conditions and Sheet 4 – Cross Sections). The stockpiled topsoil and other overburden materials will be placed over the reclaimed areas surrounding the lake, graded to conform with the surrounding land and seeded. The necessary topsoil and overburden are re-distributed across the parcel and fine graded to present a uniform appearance. Reclaimed slopes will be seeded upon completion of the fine grading. The berms surrounding the extraction area will be removed and regraded (i.e. leveled) as shown on the reclamation plan view (Sheet 3 – Final Conditions). Excess overburden materials; including but not limited to silt, clay, sand, dirt, rock, gravel and other earth materials lying on top of the limestone; not used in the reclamation of the slopes surrounding the quarry will be placed in the bottom of the extraction area.

The reclamation plans has been designed to maintain pre-mine drainage patterns to the greatest extent possible and to improve upon existing conditions where feasible. Existing grading and stormwater features such as road side ditches, storm water drainage pipe, and the stormwater retention pond shall remain. However, the stormwater currently pumped from the quarry to the Root River will cease after the surrounding slopes are reclaimed and the quarry is allowed to fill with water <u>and stormwater from within the site</u> to create the lake.



Photo Showing Approximate Location of Stormwater Drainage Pipe and Retention Pond

Note: Constructed per Stormwater Management Plan dated August 8, 1997

Payne & Dolan will perform the necessary grading to achieve the final topography and drainage patterns as outlined in the attached reclamation plan view (Sheet 3 – Final Conditions). Grading activities along the west extent of the property shall be limited so as to minimize the grading that would occur towards the Root River.



Photo Showing High Road Along West Edge of Quarry (looking South)

Note: A majority of the grading for the reclaimed slope along western edge of quarry will occur from the outside edge of the "high road" that extends around the quarry in this area.

III. Geologic Composition of the Site and Depth of the Nonmetallic Mineral Deposit

The mineral deposit currently be extracted consists of Silurian age limestone & dolomite, approximately 210 - 250 feet thick, of which over 90% of which will be extracted from under the water table. The amount of overburden overlying the limestone varies across the site but averages approximately 40 feet. The overburden consists of primarily clay and silt.

Groundwater elevation and subsequent lake water elevation was originally obtained from a technical report published by the Southeastern Wisconsin Regional Planning Commission <u>(Source: Groundwater Resources of Southeastern Wisconsin, Technical Report Number 37, 2002, SEWRPC and WSGNS, p 81)</u>. This information provided in this report for this location has been confirmed by two consultants; GAS (now Graef) and -most recently by GZA GeoEnvironmental.

Also, groundwater elevations in a well monitored by the Unites States Geological Survey located on $S92^{nd}$ Street just south of Grange Ave. has shown little movement of the groundwater table from 1/7/2000 - 33.01 ft below the ground surface (bgs) to 1/28/2016 - 31.19 ft. bgs.



IV. Revegetation Plan

After the overburden materials have been placed over the reclaimed slopes, a minimum of 6" of topsoil (PDD's #23 and #24 specify a 4" minimum) will be spread over the reclaimed slopes, fine graded, seeded and mulched. Seeding activities will be carried out in accordance with accepted seeding specifications provided in the reclamation plan. Marginally steep slopes (greater than 3:1) will have either a minimum of 8" of topsoil or additional erosion control measures, such as coir (coconut fiber) erosion mat, to stabilize the slope during revegetation.

If any slopes toward the Root River must be re-graded, a seed mixture containing native grasses as provided by the City of Franklin or a WI DOT No. 70 series seed mix, shall be used. A mycorrhizal inoculant or acceptable alternative will be used when seeding any slopes toward the Root River.

SPECIES		S SPECIES BOTANICAL NAME	PURITY &	MIXTURE PROPORTIONS in percent			IS
			minimum %	NO. 70	NO. 70A	NO. 75	NO. 80
	Canada Anemone	Anemone canadensis	PLS	2			
	Butterflyweed	Asclepias tuberosa	PLS		2		
	New England Aster	Aster novae-angliae	PLS	2	2		
	Partridge-pea	Chamaecrista (Cassia) fasciculata	PLS		2		
	Purple Prairie Clover	Dalea (Petalostemum) purpurea	PLS	2	2	4	
	Canada Tick-trefoil	Desmodium canadense	PLS	2			
	Flowering Spurge	Euphorbia corollata	PLS		2		
	Wild Geranium	Geranium maculatum	PLS	2			
ŝ	Western Sunflower	Helianthus occidentalis	PLS	3	2		
RBI	Rough Blazingstar	Liatris aspera	PLS		2		
요	Prairie Blazingstar	Liatris pycnostachya	PLS	2			
	Lupine	Lupinus perennis	PLS		3		
	Wild Bergamot	Monarda fistulosa	PLS	2			
	Horse Mint	Monarda punctata	PLS		2		
	Yellow Coneflower	Ratibida pinnata	PLS	2	2		
	Blackeyed Susan	Rudbeckia hirta	PLS			1	
	Showy Goldenrod	Solidago speciosa	PLS	2	2		
	Spiderwort	Tradescantia ohiensis	PLS	2	2		
	Golden Alexanders	Zizia aurea	PLS	2			
	Big Bluestem	Andropogon gerardi	PLS	15	15	10	
	Sideoats Grama	Bouteloua curtipendula	PLS	15	20	20	25
	Canada Wildrye	Elymus Canadensis	PLS	15	15	35	23
6	Slender Wheatgrass	Elymus trachycaulus	PLS				20
ŝ	Junegrass	Koeleria macrantha	PLS		5		
RAS	Annual Ryegrass	Lolium multiflorum	[1]			10	10
G	Switchgrass	Panicum virgatum	PLS				10
	Salt Grass	Puccinella distans	[1]				2
	Little Bluestem	Schizachyrium (Andropogon) scoparium	PLS	15	20	10	10
	Indiangrass	Sorgastrum nutans	PLS	15		10	
s	Sky Blue Aster	Aster azureus	PLS	[2]	[2]		
RBE	White Wild Indigo	Baptisia leucantha	PLS	[2]	[2]		
EFC	Pale Purple Coneflower	Echinacea pallida	PLS	[2]	[2]		
RNAT	White Prairie Clover	Petalostemum candidum	PLS	[2]	[2]		
LTE	Stiff Goldenrod	Solidago rigida	PLS	[2]	[2]		
A	Hoary Vervain	Verbena stricta	PLS	[2]	[2]		

TABLE 630-2 NATIVE SEED MIXTURES

^[1] Provide the minimum purity and germination specified in 630.2.1.5.1.1.1(3) in the table of highway seed mixtures.

Prepared soil will be seeded at any time during the growing season when soil conditions are suitable but not longer than 7 days after the final grading of reclaimed slopes. Seeding activities should not be carried out immediately following rain, when the ground is too dry, or during windy periods.

Trees that are located within the grading limits as shown on Sheet 3 – Final Conditions shall be removed during the reclamation grading. Trees located outside of the grading limits shall remain.

All seeding and mulching will be done in accordance with the State of Wisconsin Department of Transportation Standard Specifications for Seeding and Mulching, Sections 630 and 627, or as updated and amended.

[QMC recommends use of a wildflower drill such as Tye, Brillion, or modified Truax instead of hydroseeding]



V. Erosion Control and Post Operational Maintenance

Upon completion of the mineral extraction operations, operator shall obtain a land disturbance permit, or any other permits required by the City of Franklin, prior to the commencement of the proposed earthwork for reclamation as described above.

Erosion control measures will be implemented as necessary to minimize off-site erosion until such time as permanent placement and shaping of overburden and topsoil and seeding is possible. Best Management Practices (BMP's) such as check dams, straw bales, silt fence, surface water diversions, energy dissipaters, mulch or artificial cover, cover crop of vegetation, buffer areas or other appropriate measures will be taken as necessary to limit off-site erosion. All erosion and sediment control practices will be periodically checked for stability and operation on a regular basis by Payne & Dolan and made available to the City.

Erosion control measures shall be inspected within 24 hours of the end of each rainfall event that exceeds 0.25", or daily during periods of prolonged rainfall, or weekly during periods without rainfall. Immediately repair and/or replace any and all damaged, failed, or inadequate erosion control measures. Operator shall maintain records of all inspections and any remedial actions taken on-site.

Remove any sediment reaching a public or private roadway, parking lot, sidewalk, or other pavement. Completely remove any accumulations not requiring immediate attention at least once daily at the end of the workday.

Frequently dispose of all waste and unused construction materials in licensed solid waste or wastewater facilities. Do not bury, dump, or discharge, any garbage, debris, cleaning wastes, toxic materials, or hazardous materials on the site, on the land surface or in detention basins, or otherwise allow materials to be carried off the site by runoff onto adjacent lands or into receiving waters or storm sewer systems.

Environmental pollution mitigation will not be needed if all measures outlined in the reclamation plan are followed and adhered to.

Follow up inspections of all reclaimed and otherwise stabilized surfaces along with all erosion control and sediment control practices will be conducted on a monthly basis to ensure their stability until such time as the vegetation required to support the post-mining land use (Green/Open Space) has been successfully established and the financial assurance has been released.

Seeded areas will be reseeded and fertilized as necessary to establish and maintain a dense self-sustaining cover over reclaimed slopes. Re-apply soil stabilizers, tackifiers, polymers and anionic polyacrylamides as needed to prevent erosion of exposed soil. Erosion and sediment control measures will be repaired and /or replaced as necessary. Other preventative measures not mentioned in this reclamation plan will be taken as necessary to minimize off-site erosion.

Such Best Management Practices shall be removed at time of final stabilization, as defined within Section 15-8.0303 of the City of Franklin's UDO as may be amended.



Typical – Silt Fence

Note: Silt fence or comparable to be installed around perimeter of site along grading limits as shown on Figure 3 – Final Conditions



Typical - Coir (coconut fiber) Erosion Mat

VI. Costs of Reclamation

Reclamation is an on-going process during mineral extraction, with a majority of the reclamation being completed during active mineral extraction. Final reclamation will consist of reclaiming the quarry perimeter upon completion of the mineral extraction activities. Approximately 75 acres will need to be reclaimed and the remaining 250 acres will become a lake.

The estimated costs of reclamation shall approximate the actual costs of reclamation including, but not limited to grading and shaping overburden around the lake perimeter as shown on the reclamation plan, distributing and placing of topsoil, developing public access, installing necessary erosion control measures, seeding, mulching, inspection and maintenance.

Activites	Unit	Cost/Unit	Unit	Total
Grade Topsoil & Subsoil - Rock Face	5,600	\$7.35	FT	\$41,160.00
Grade Topsoil & Subsoil - Slope into Water	8,800	\$23.50	FT	\$206,800.00
Grade Excess Overburden	1,000	\$175	Hour	\$175,000.00
Removal of buildings	2	\$20,000	LS	\$40,000.00
Misc. Cleanup	1	\$20,000	LS	\$20,000.00
Public Access Development	1	\$25,000	LS	\$25,000.00
Erosion Control	1	\$25,000	LS	\$25,000.00
Inspection & Maintenance	1	\$10,000	LS	\$10,000.00
Seed, Fertilize & Mulch (per DOT standards)	75	\$1,700	Acre	\$127,500.00
Total				\$670,460.00

Estimated Costs of Reclamation



Map Showing Rock Face (red) and Reclaimed Slope Location (blue)

Note: All overburden within the quarry extraction area have will have been moved to the floor of the quarry during active extraction operations and thus will not need to be moved during reclamation.

VII. Assessing Successful Reclamation

Payne & Dolan will assess successful reclamation with the approved reclamation plan using the following methods:

- 1. All buildings, structures and equipment associated with the mineral extraction activities, but not the ramps into the quarry, have been removed as part of the reclamation process
- 2. The available overburden and topsoil have been graded to the contours shown on the grading plan, and have been fine graded, seeded and mulched
- 3. Public access has been provided at the location specified on the reclamation plan
- 4. Adequate vegetation has been established to stabilize reclaimed surfaces. Adequate vegetation will be determined by utilizing the guideline outlined in the Wisconsin Technical Note-Agtronomy-WI-1, Guidelines for Herbaceous Stand Evaluation, dated May 15, 1991 or by percent cover, which will be determined as total cover (minimum 70%) within one year of planting as measured by the canopy (vertical projection of plant parts) and will be recorded by species. Revegetation will be measured over the entire revegetated site at no less than 1 randomly placed 10 ft. x 10 ft. quadrant for each 1 acre area.
- 5. The Certification of Reclamation by the City of Franklin as outlined in Chapter 176 Nonmetallic Mining Reclamation.
 - $\hfill\square\ensuremath{\S176-29}\xspace$ Completed reclamation: reporting, certification and effect.
 - A. Reporting. The operator of a nonmetallic mining site may certify completion of reclamation for a portion or all of the nonmetallic mining site pursuant to a reclamation plan prepared and approved pursuant to this chapter and Chapter NR 135, Wisconsin Administrative Code.
 - **B.** Reporting of interim reclamation. The operator of a nonmetallic mining site may report completion of interim reclamation as specified in the reclamation plan for the site prepared and approved pursuant to this chapter and Chapter NR 135, Wisconsin Administrative Code. Reporting of interim reclamation shall be done according to the procedures in Subsection **A**.
 - C. Certification of completed reclamation. The City of Franklin shall inspect a nonmetallic mining site for which reporting of reclamation or interim reclamation has been submitted pursuant to this subsection within 60 days of receipt, and make a determination in writing in accordance with § 176-14A(7)(c). If it is determined that interim or final reclamation is complete, including revegetation, as specified in a reclamation plan that conforms with § 176-13, the City of Franklin shall issue the mine operator a written certificate of completion.
 - D. Effect of completed reclamation. If reclamation is certified by the City of Franklin as complete under Subsection C for part or all of a nonmetallic mining site, then:
 - (1) No fee shall be assessed under § <u>176-27</u> for the area so certified.
 - (2) The financial assurance required by § 176-14 shall be released or appropriately reduced in the case of completion of reclamation for a portion of the mining site.
 - E. Effect of inaction following/report of completed reclamation. If no written response, as required by Subsection C, for an area of the mine site reported as reclaimed or interim reclaimed is given within 60 days of receiving such request, any annual fee paid to the City of Franklin for it under § 176-27 shall be refunded.

VIII. Public Access

Upon completion of reclamation, public access to the reclaimed quarry lake will be located on the north side of the site along Rawson Avenue, as shown on the reclamation plan, (Sheet 3 – Final Conditions). The public access will include greenspace and a ramp for lake access. The lake shall be a public resource, owned in common by all Wisconsin citizens under the State's Public Trust Doctrine.

The public access will be transferred to the City of Franklin and P&D will provide a temporary easement from the public access to the quarry ramp to allow for public access to the lake while the quarry is filling with water.

Such temporary easement shall be made available for public access use on such terms and conditions as are mutually agreed upon by and between Payne & Dolan and the City of Franklin, which shall include an agreement by the City of Franklin to maintain, operate and manage the public access and to defend and hold harmless Payne & Dolan, from and against any claims, actions, or liability arising out of, or relative to public use of the temporary easement, excepting such claims, actions, or liability for which Payne & Dolan would be responsible due to its acts and/or omissions prior to the date of delivery of such temporary easement, but for such agreement. The temporary easement shall expire when water in the quarry reaches the 675 ft. msl elevation. A final contour map of the lake bed shall be provided at that time.

IX. Safety

The reclamation of the site will help insure the long term safety to the general public. The site is currently enclosed by a safety fence to limit access. The safety fence shall remain after reclamation until the quarry has filled with water to the projected final lake level.

Approximately 65% of the reclaimed slope around the perimeter of the lake will have 3:1 safety slopes that extend to a minimum depth of 6 ft. as required by NR-135. The remaining 35% of the perimeter of the lake will consist of a rock face. However, there will still be two access points to the lake in this area: (1) the public access ramp and (2) the existing quarry ramp.

The exposed highwalls will have the unconsolidated material scaled back at least 25 feet from the quarry edge (drop-off) to form safety ledges as shown on Sheet 4 – Cross Sections. As an added measure of safety, exposed rock highwalls will be scaled (scraped) to remove loose rock and to minimize the potential for rock-falls.

During the time it takes the quarry lake to fill with water, the existing fence shall remain around the perimeter of the property until the quarry lake fills to the elevation outlined in the reclamation plan. At that time the fence may be removed <u>by Payne & Dolan</u>, however a fence shall remain along the reclaimed rock face high wall areas (as previously shown) until such time as those areas are developed.

Give the close proximity of the northwestern edge of the quarry to West Rawson Avenue, a berm or strategic placement of large boulders or beam guard in addition to the fence shall be added.



X. Certification of Reclamation

I hereby certify, as a duly authorized representative or agent, that the reclamation at this nonmetallic mining site will be carried out in accordance with the approved reclamation plan submitted by Payne & Dolan, Inc. I also certify that the information contained herein is true and accurate and complies with the local and statewide nonmetallic mining reclamation standards established in NR-135, Wisconsin Administrative Code.

Signature of representative or agent:

Date signed:

Uleny

June 29, 2017September 1, 2020

Clint G. Weninger, P.G. Land Resources Manager Payne & Dolan, Inc.

XI. Soils



Current Soils Map

Source: USDA-NCSS soils information utilizing Google Earth website, 2015

Note: All soils within the quarry extraction area have previously been disturbed.



Historical Soils Map (1918)

Source: USDA Soil Survey of Milwaukee County, WI (1918)

HISTORICAL SOIL TYPES

MI – Miami Loam

I

MIAMI LOAM.

The surface soil consists of 6 to 10 inches of yellowish or brownish-gray loam to fine sandy loam, and the subsoil differs very little from the soil. At 24 to 30 inches the material is a more compact, sticky yellowish-brown sandy clay loam or loam. Gravelly sandy loam is often encountered at 30 to 36 inches. The soil is slightly variable, being a sticky sandy clay loam in some places and a more open sandy loam in others. Gravel sometimes occurs on sharp knolls, and bowlders originally were quite numerous, though most of these have been removed. This soil is intimately associated with the Miami clay loam and silty clay loam, and in places the boundary is largely arbitrary.

Mc – Miami Clay Loam

MIAMI CLAY LOAM,

The Miami clay loam consists of 4 to 8 inches of grayish-brown, compact clay loam or silty clay loam, overlying yellowish-brown to reddish-yellow heavy clay loam or clay. Yellowish-brown sandy clay loam or loam occurs at depths of 22 to 30 inches. From 30 to 36 inches the material contains some gravel and often considerable sand.

Ms – Miami Silty Clay Loam

MIAMI SILTY CLAY LOAM.

The Miami silty clay loam consists of dark grayish brown compact silt loam, 6 to 10 inches deep, and sometimes containing a relatively large proportion of very fine sand, resting on a subsoil of yellowishbrown clay loam. The material is reddish brown and contains limestone fragments below a depth of 24 to 36 inches.

Cc – Clyde Clay Loam

CLYDE LOAM.

The surface soil of the Clyde loam consists of dark-brown to black fine sandy loam, about 8 to 12 inches deep. The upper subsoil is a grayish-yellow or mottled sandy loam containing considerable gravel. The material below 24 to 30 inches is variable, but is generally a sticky clay or yellowish sandy clay loam.

XII. Groundwater Elevation

Groundwater elevation and subsequent lake water elevation was originally obtained from a technical report published by the Southeastern Wisconsin Regional Planning Commission. This information provided in this report for this location has been confirmed by two consultants; GAS (now Graef) and most recently by GZA GeoEnvironmental.

Also, groundwater elevations in a well monitored by the Unites States Geological Survey located on $S92^{nd}$ Street just south of Grange Ave. has shown little movement of the groundwater table from 1/7/2000 - 33.01 ft below the ground surface (bgs) to 1/28/2016 - 31.19 ft. bgs.
Clint Weninger

From:	Bernard Fenelon < bernard.fenelon@gza.com >
Sent:	Friday, February 26, 2016 5:16 PM
То:	Clint Weninger
Subject:	Franklin Quarry Water Levels
Attachments:	Recent Construction Reports for Nearby Wells.pdf; Approximate Site Location on
	SEWRP Water Table Map.pdf; Map with Well Locations and Water Levels.pdf

You had asked for recent water levels around your Franklin quarry. Sue Karls in our office had this information for me more than a week ago and neglected to send it to you. I have attached a map of the locations of and water elevations in three wells drilled between 1997 and 2014 and after the SEWRPC groundwater flow map. In its map (see attached), SEWRPC had the groundwater elevation around the quarry in the range of 690 feet. Based on the surface elevations of the three homes with recent wells and water depths reported in the wells, the recent groundwater depths have been approximately 685 feet (1997 well) and 693 to 694 feet (2014 wells). Therefore, current groundwater elevations around the Franklin quarry are similar to those reported by SEWRPC. Let me know if you have any additional questions.

Bernard G. Fenelon

Sr. Project Manager

GZA | 20900 Swenson Drive, Suite 150 | Waukesha, WI 53186 o: 262-754-2567 | c: 262-424-2045 | <u>bernard.fenelon@gza.com</u> | <u>www.gza.com</u>

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For information about GZA GeoEnvironmental, Inc. and its services, please visit our website at <u>www.gza.com</u>.



Groundwater Elevation Map

Source: Groundwater Resources of Southeastern Wisconsin, Technical Report Number 37, 2002, SEWRPC and WSGNS, p 81.

Map of the regional water table elevations developed by the Southeastern Wisconsin Regional Planning Commission and the Wisconsin State Geological and Natural History Survey. Note that the site is located at the 690 feet msl auxiliary contour.

PROJECT FACT SHEET

Payne & Dolan currently operates Franklin Aggregates, a limestone quarry located in Franklin, Wisconsin. Payne & Dolan recently received approval from the City of Franklin to expand the site. The approval required the processing and operations activities that occured on grade west of the Root River to be relocated and the area to be reclaimed prior to January 1, 2004. The project included (1) relocating the offices, scale and maintenance facilities to a location north of the Root River; (2) relocating the crushing, processing and stockpiling operations to the floor of the quarry; (3) removing the vehicle and equipment river crossings across the Root River; and (4) reclaiming the 25 acre former operations area.

After the office, scale and maintenance facilities were relocated and the crushing equipment and aggregate stockpiles were removed, clay soils and topsoil were re-distributed across the parcel and fine graded to present a uniform appearance. Upon completion of the fine grading, reclaimed slopes were seeded, fertilized and mulched to establish and maintain a dense self-sustaining vegetative cover. Seeding utilized a blend of grasses consisting of Kentucky Bluegrass, Red Fescue, Hard Fescue, Tall Fescue and perennial Ryegrass. Erosion control measures such as rip-rap, erosion mat, and silt fence were installed to minimize off-site erosion until a dense vegetative cover has been established.







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